SCHEDULE HELP TOPICS

PLANNING, SCHEDULING & RISK

INEIGHT

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LESSON 1 – SCHEDULE OVERVIEW

Overview of the Schedule And Risk Process

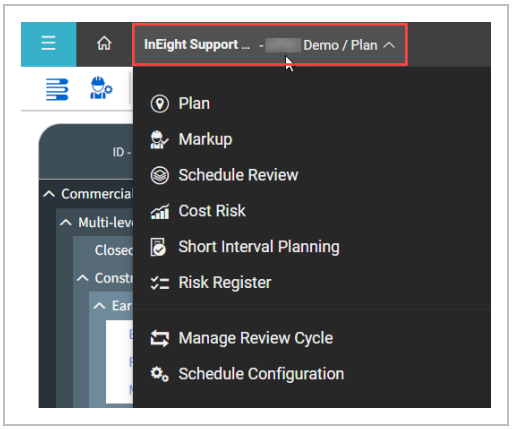
InEight Schedule is a (CPM) Critical Path Method planning and risk management tool. It provides multiple tools to support planning and risk management throughout the lifecycle of a project.

Schedule contains six primary schedule views: Plan, Markup, Schedule Review, Cost Risk, Short Interval Planning, and Risk Register. These views correspond to different processes of the Scheduling ecosystem:

Project View	Description
Plan	Create, detail, and plan out the CPM schedule.
Markup	Assess, critique, and provide feedback on the planned CPM schedule.
Schedule Review	Consolidate markups, conduct risk analysis, and update the CPM Schedule based on review.

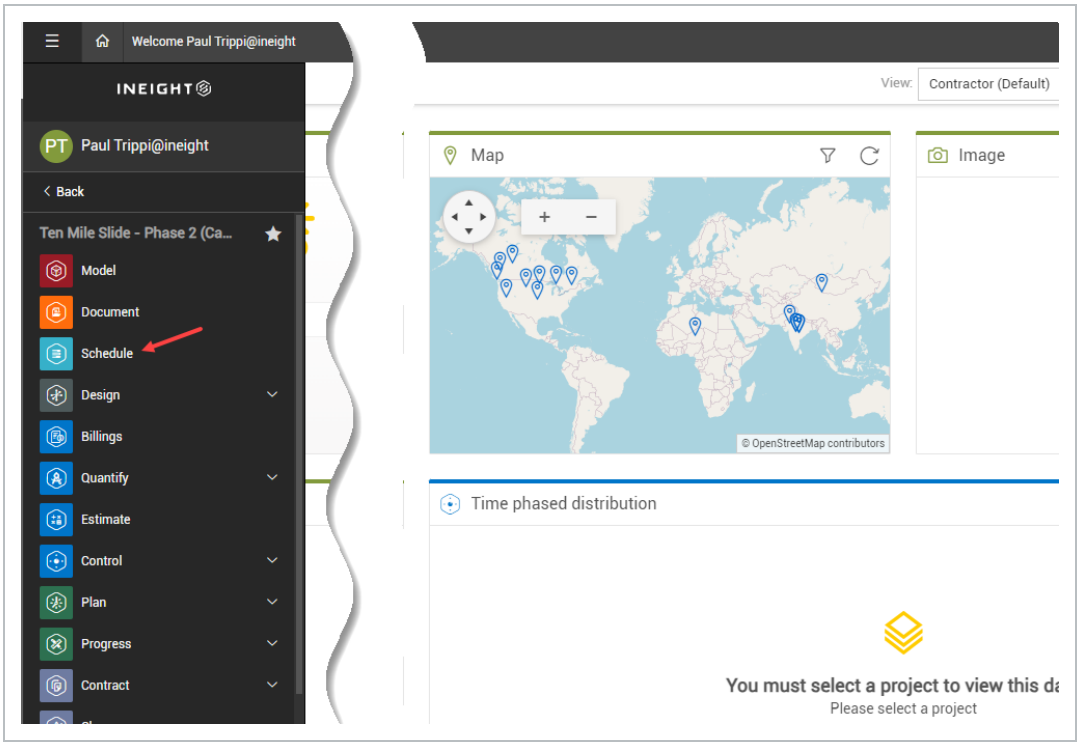
Project View	Description
Cost Risk	Consolidate markups, conduct risk analysis, and update cost based on review.
Short Interval Planning	Conduct short interval planning, detailing daily work for crews and short term plan to get the CPM Activities done.
Risk Register	Risk Matrix tracking all project events surfaced throughout the planning, markup, review, and execution phases of the Project Schedule.

To access each view, open a schedule and go to the menu bar at the top left of the screen.



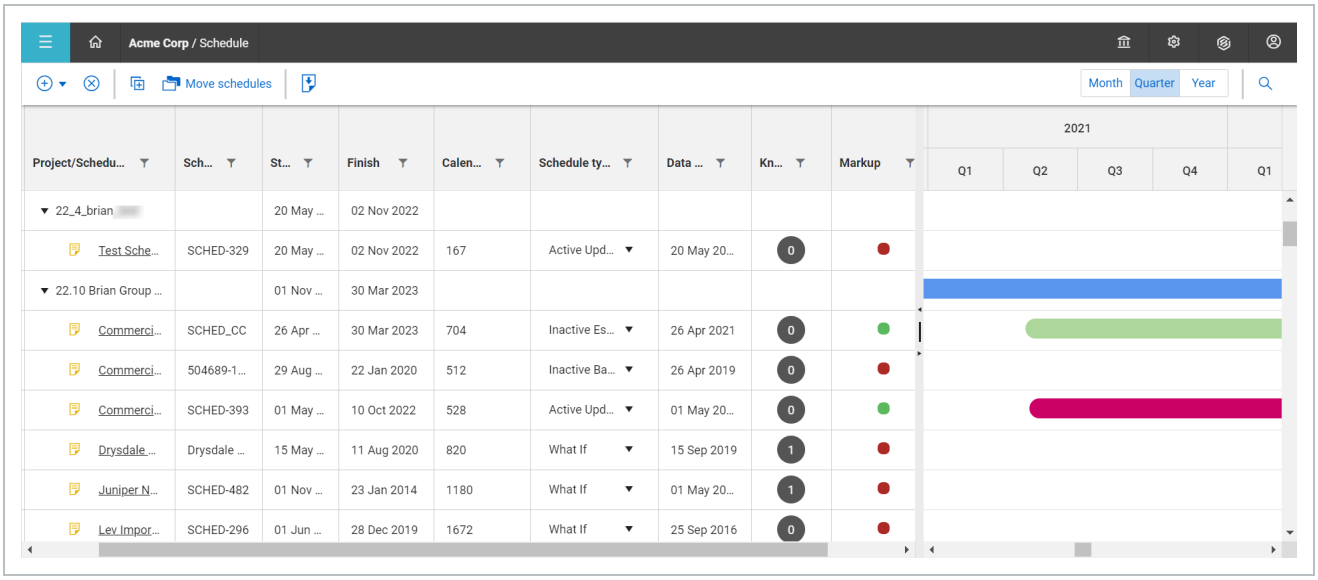
Schedule Navigation

In Project Suite, select **Schedule** in the left navigation slide-out panel to access the Schedule Project List page.

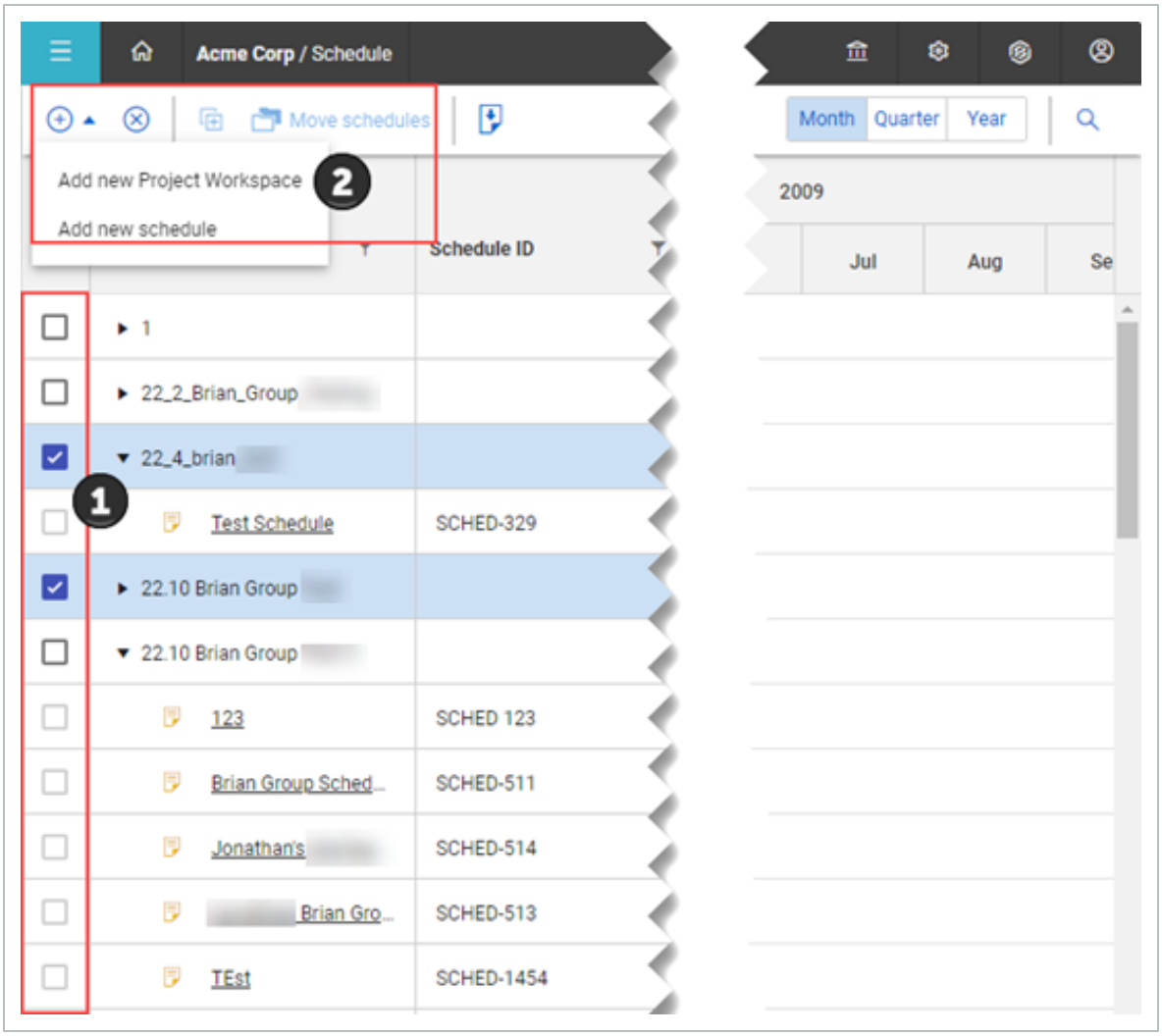


Project List View

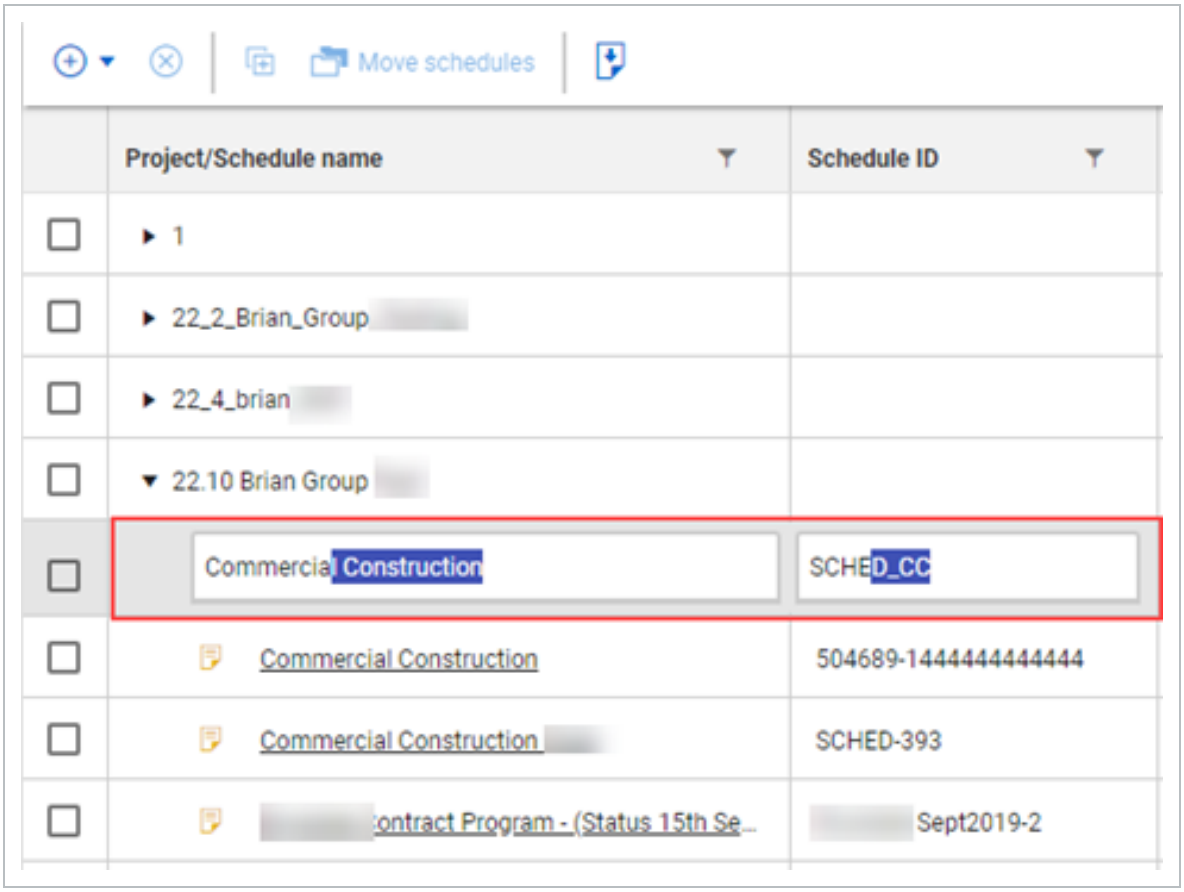
The Schedule home page is where you can see a list of projects and schedules, which includes a Gantt chart that illustrates project work and time periods.



You can select multiple projects and schedules on the Schedule home workspaces page. With this functionality, you can select more than one project or schedule and then select one of the available options on the upper left toolbar, such as delete or move.



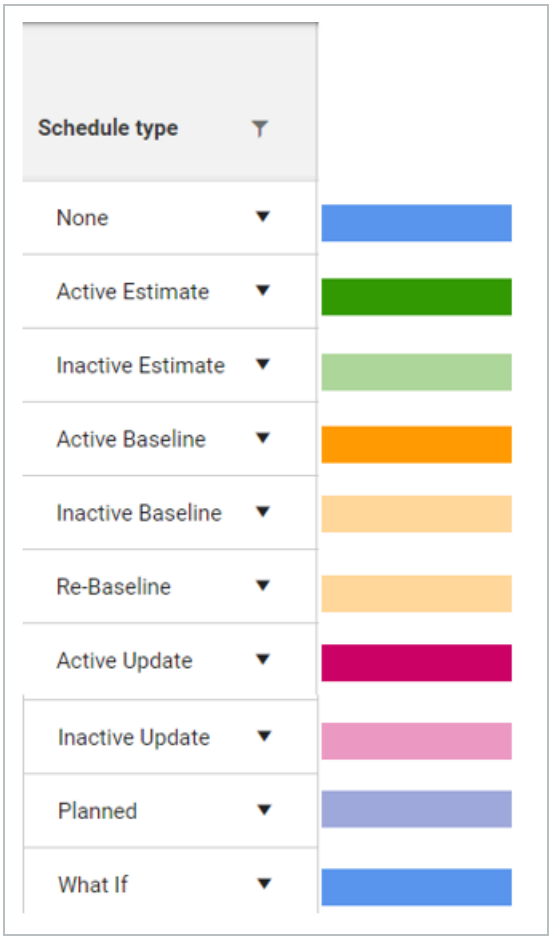
You can edit the Project/Schedule name and Schedule ID fields directly and double-click the Project/Schedule name or Schedule ID fields to make direct edits.



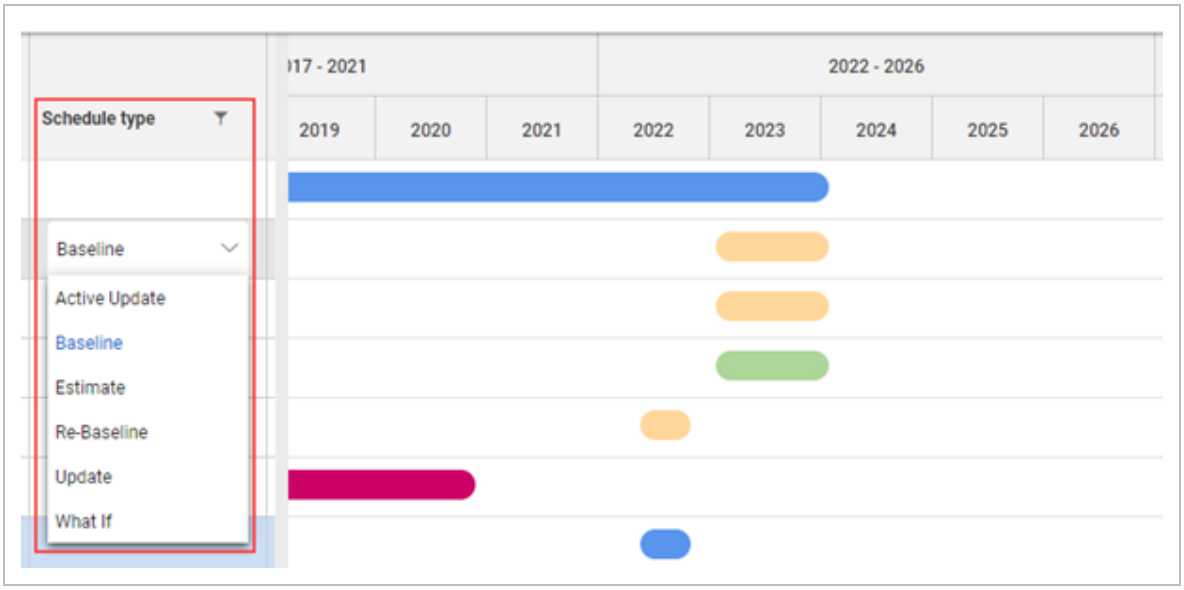
A Gantt chart is built in to the Schedule home page. The schedule Gantt chart illustrates horizontal lines representing work over a period in relation to the time planned for the work.

Schedule type

The schedule type shows a corresponding color scheme in the Gantt chart.

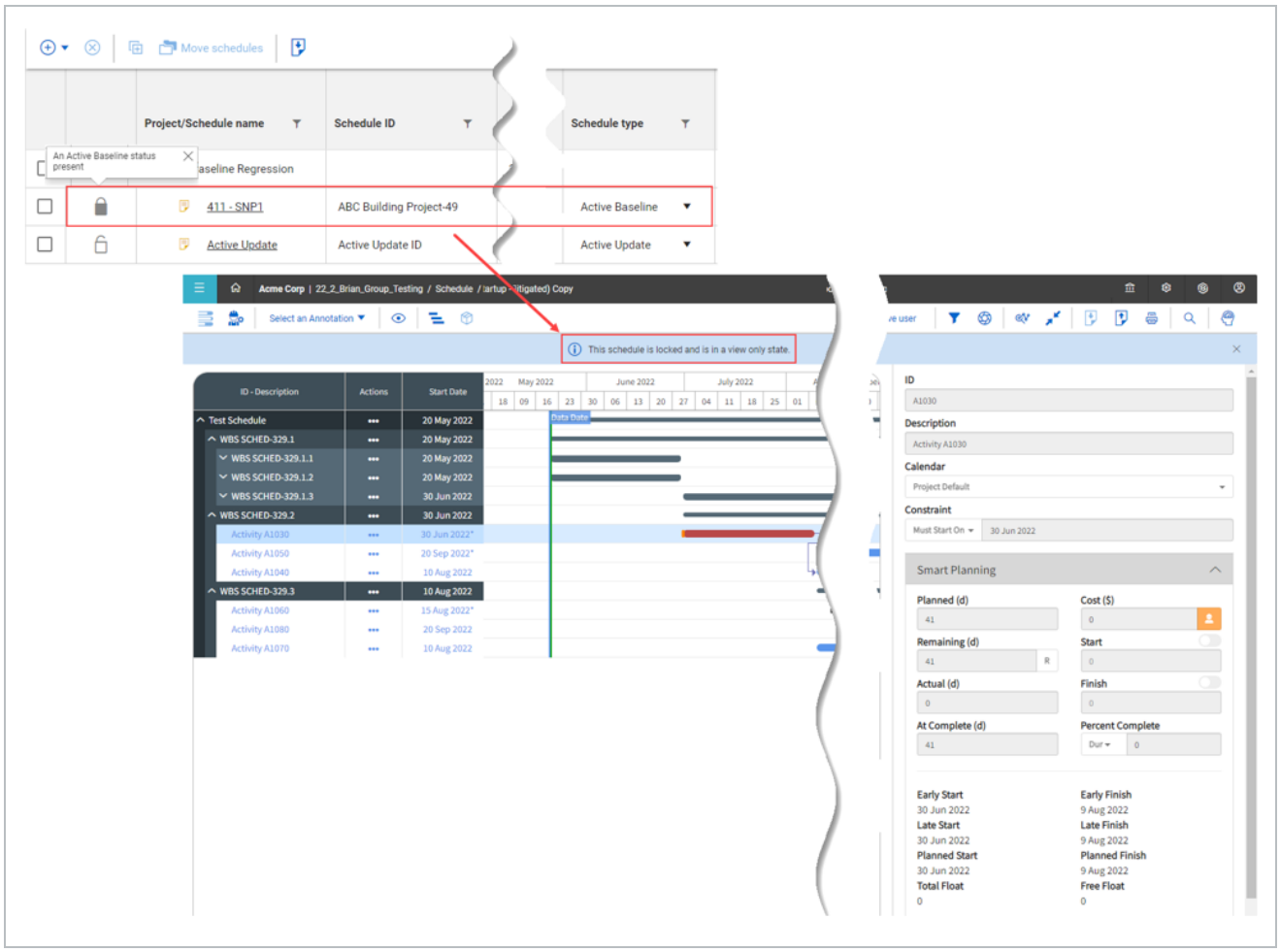


You can change the Schedule type values to change the colors of the horizontal lines in the Gantt chart.



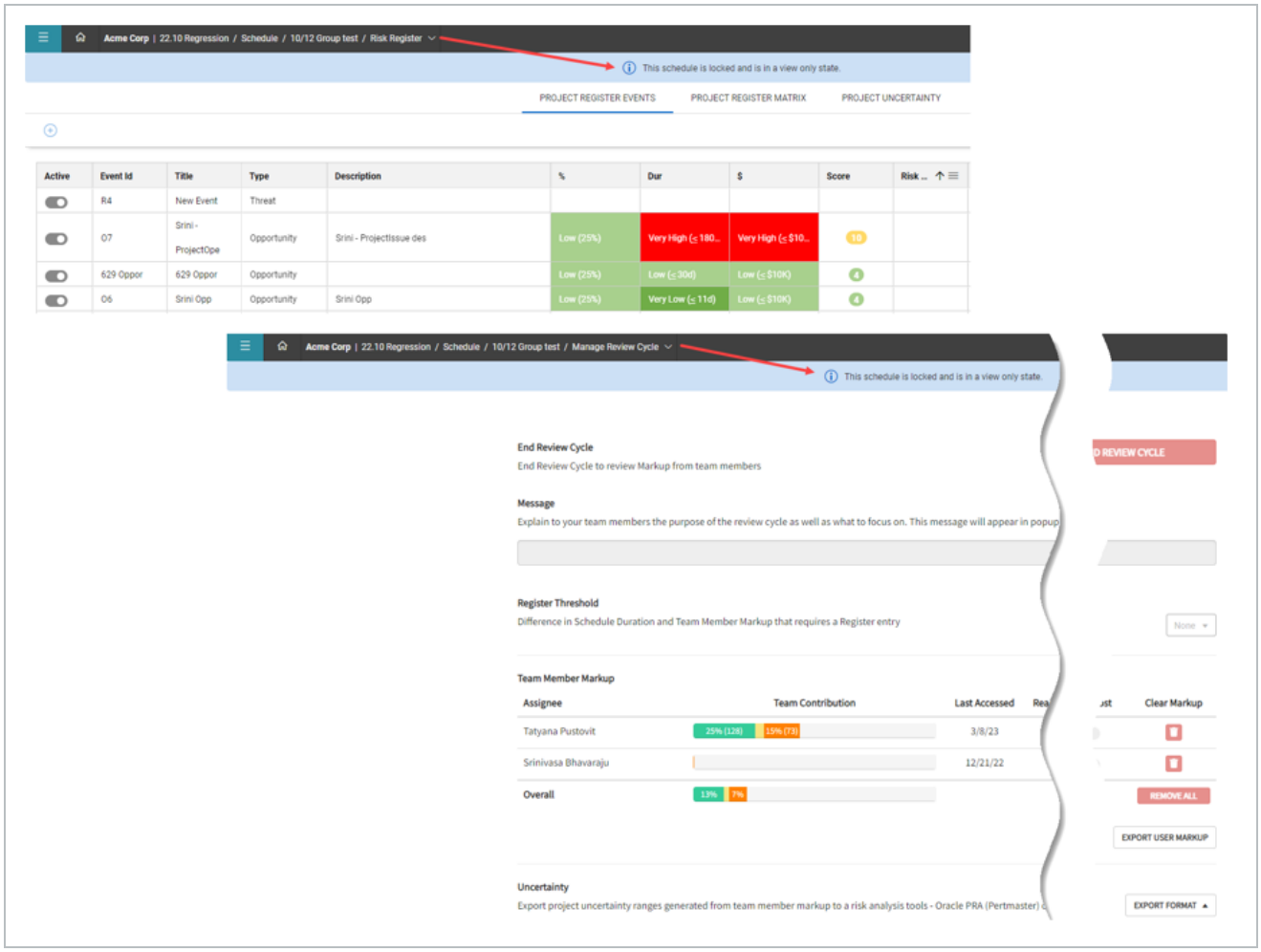
Locked Columns

The active baseline schedule type now automatically locks the schedule and converts it into a read-only state, which includes the Gantt grid, all Iris fields, and the Import icon. The locked read only state is applied to all views and impacts any functionality that involves the changing of data.

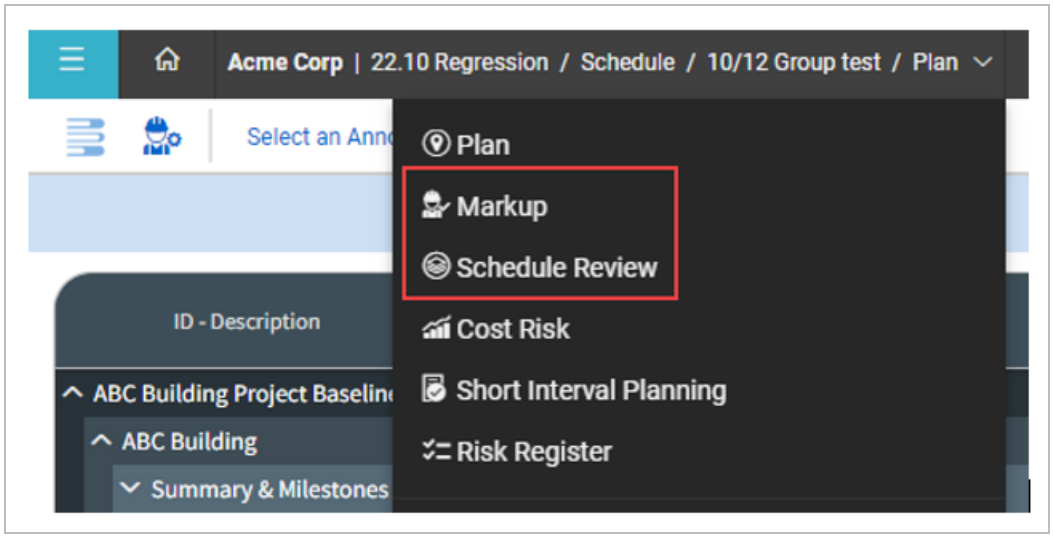


Active baselines are contractual schedule agreements between contractors and owners with infrequent changes. Some scenarios require active baselines to never change, which requires the active baseline to become locked.

The Risk register and Manage Review Cycle views are also in a locked and view only state, but data can still be exported from the Risk register.

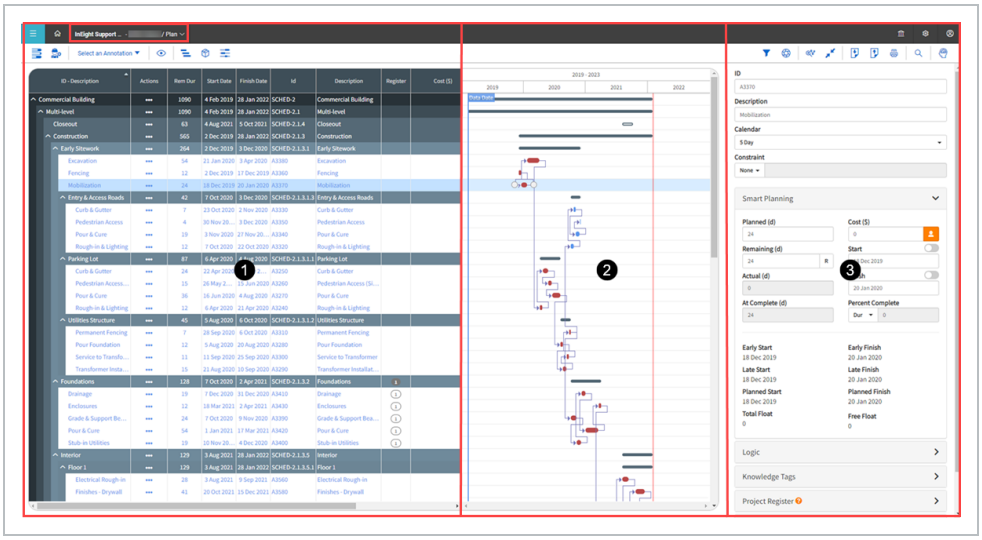


The Markup and Schedule Review views are disabled when the project is in a read-only state.



Plan View

When you open a schedule, you land on the project's Plan view. In this view, you can see the schedule details (such as activities, work package groupings, dates, duration, and float) where you can create, detail and plan out the CPM schedule.



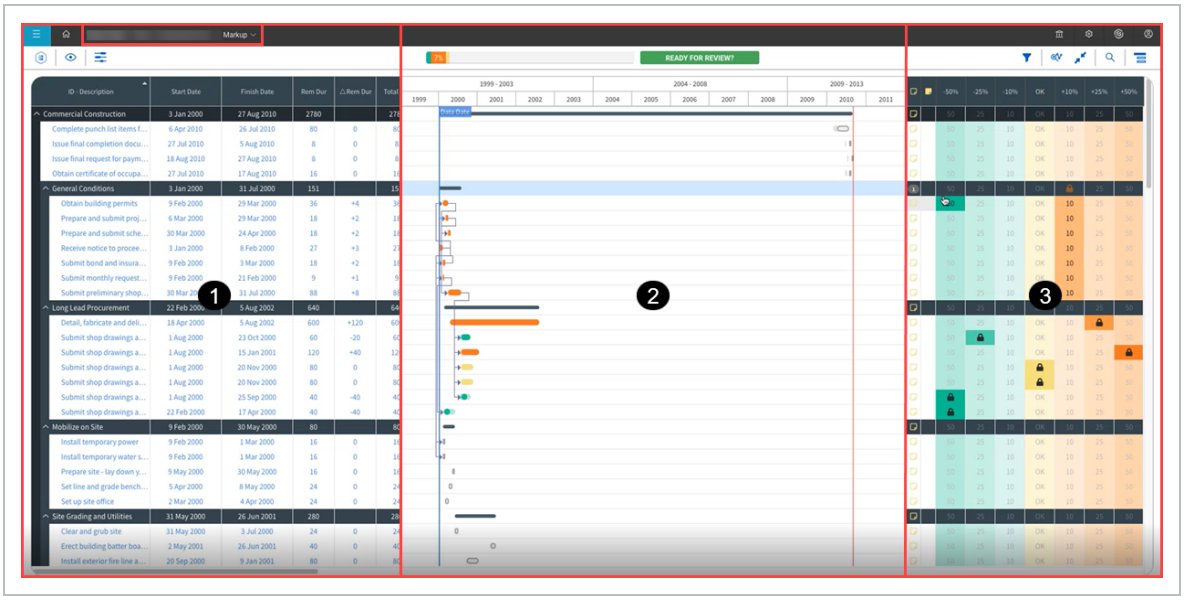
1	Contains customizable Gantt chart columns providing a summary view of schedule details including, but not limited to, activity/work package description, dates, durations, float, and cost.
2	This Gantt chart provides a visual layout of scheduled activities, work packages, and milestones over time. The Gantt chart also has integrated functionality allowing users to adjust dates, schedule logic, and schedule critiques.
3	The Iris contains the fine details of the schedule. Activities, work packages, and milestones that can be detailed out with specific constraints, tags, resources, reviewers, short interval planners, and events. Additionally, the Iris also houses the Smart Planning AI functionality which references and pulls in Knowledge Base information into project work packages and activities.

NOTE You can import or export a schedule in Plan view.

Markup View

The Markup view is where project contributors assigned to activities and work packages can provide feedback on the current planned schedule. You can also assess, critique, and provide feedback on the

planned CPM schedule.

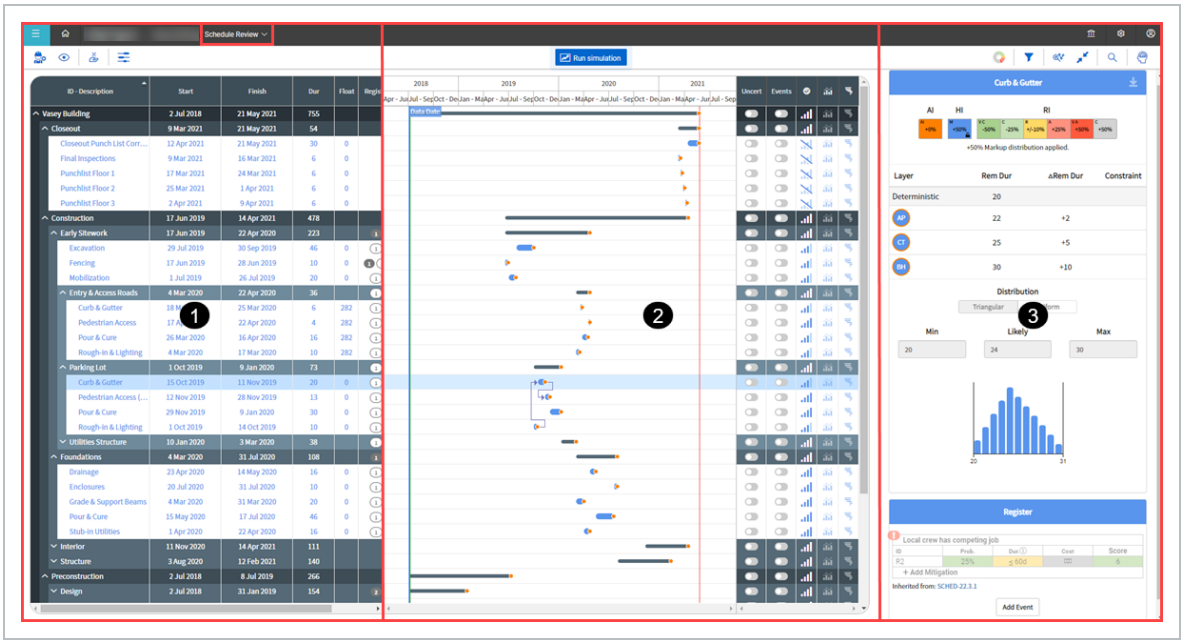


1	Gantt chart columns contain activity metadata: ID-description, dates, remaining duration, total duration, delta [change in] remaining duration, delta [change in] end date, and completed [markup status].
2	This Gantt chart provides a visual layout of how the schedule would be affected by the markups provided.
3	This section contains the markup score card. The score card is a quick way for project contributors to increase, decrease, or confirm the dates and durations for the schedule items assigned. Additionally, project events (such as risks, opportunities, and ideas) can be provided as feedback by contributors.

Schedule Review View

Project View	Description
Schedule Review	Consolidate markups, conduct risk analysis, and update the CPM Schedule based on review

After the project contributors have finished providing their markups, the Review view is where all the feedback is consolidated. Schedulers can take the information and can begin to conduct risk analysis on the schedule, adjust durations, and associate risk events.



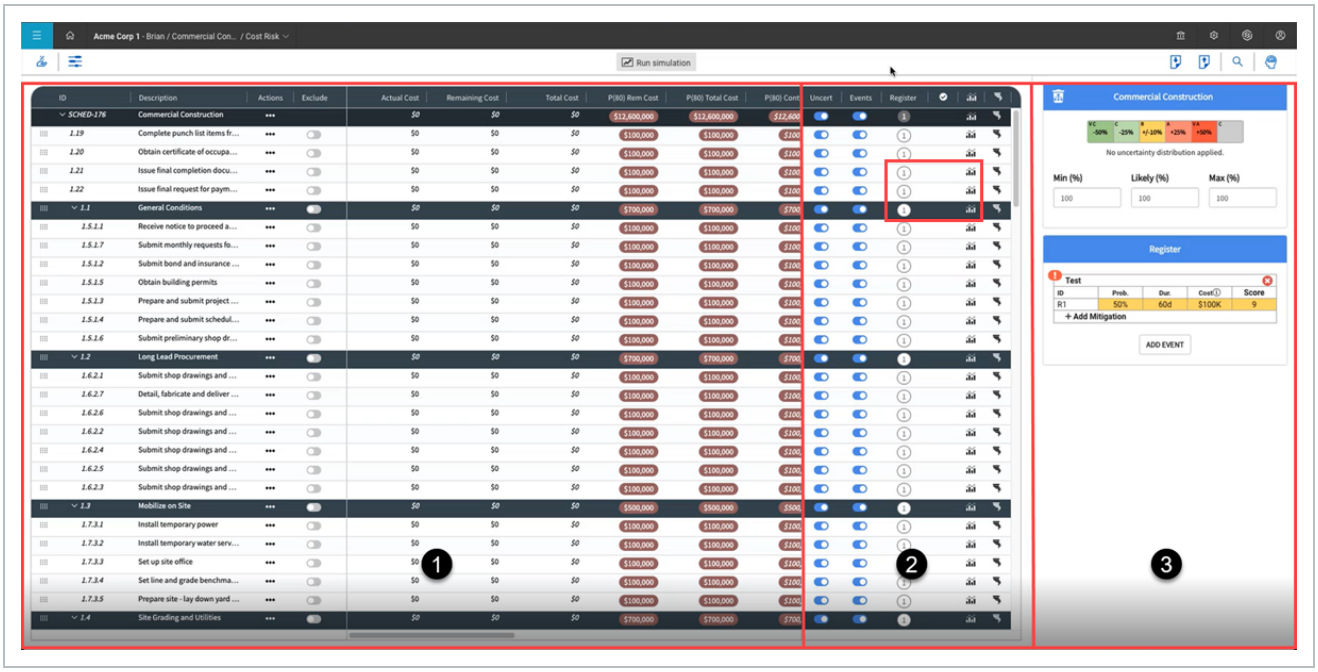
1	Gantt chart columns show the original start and finish dates but can have the uncertainty and events from the markups switched on and off to show the changes and impacts to the schedule.
2	This Gantt chart provides a visual layout using bars that adjust dependent upon the uncertainty and risk applied. In the right-most columns of the Gantt chart are the icons to access the risk histogram and tornado charts.
3	The Iris in this view shows details regarding the markups provided, giving a quick glance at the distribution data from multiple contributor markups. Additionally, the Inference Engine, Human Intelligence, and Risk Intelligence data are housed here to aid in the review process.

With the feedback provided, users can adjust the schedule to reflect the appropriate markups and/or conduct risk analysis with the uncertainty and various events provided.

Cost Risk View

Project View	Description
Cost Risk	Consolidate markups, conduct risk analysis, and update cost based on review

The Cost Risk view is where all the feedback is gathered and consolidated for cost items. When you bring in your cost structure, you can begin to conduct risk analysis on the budget using uncertainty and risk events.

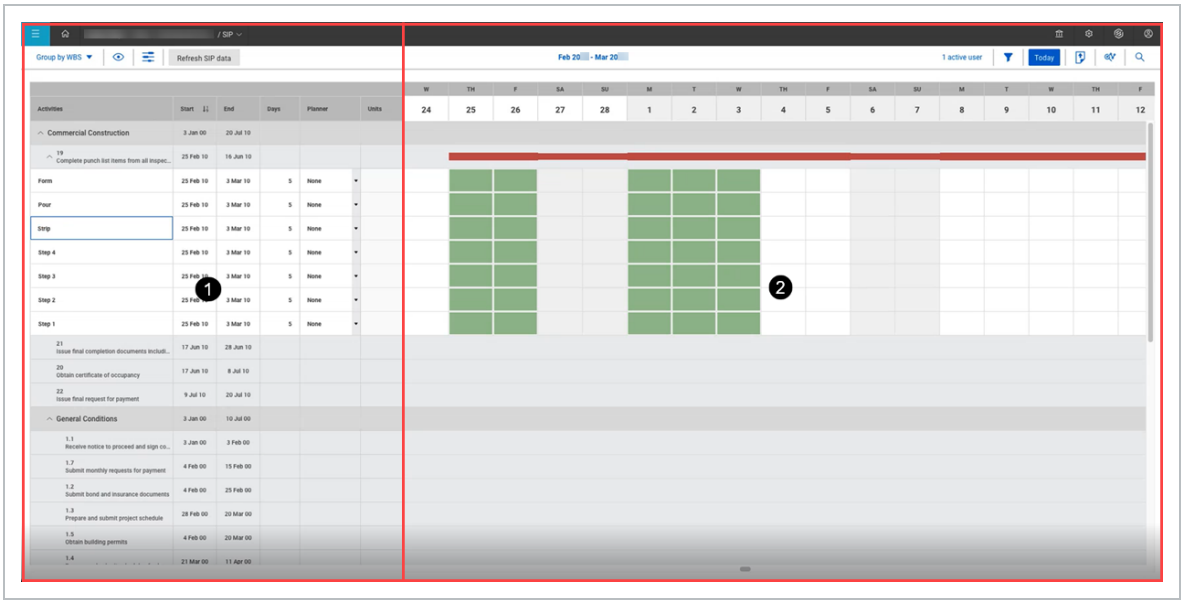


1	Columns for Cost Item information that shows actual, remaining, and totals of items prior to simulations with the option to display risk adjusted amounts based on user selection.
2	Provides toggles to turn on or off uncertainty or events and view events assigned to cost items. Users can also view the risk histogram and tornado chart post simulation runs.
3	The details are shown regarding markups provided, giving a quick glance at the distribution data. With the feedback provided, users can conduct risk analysis with the uncertainty and various events provided.

Short Interval Planning View

Project View	Description
Short Interval Planning	Conduct short interval planning, detailing daily work for crews and short term plan to get the CPM Activities done

In the Short Inverval Planning view, schedulers and field execution planners can plan out their day to day work. CPM activities brought in from the Planning view can be broken down into steps and tracked for progress. Crews can be established with specific production rates and goals.

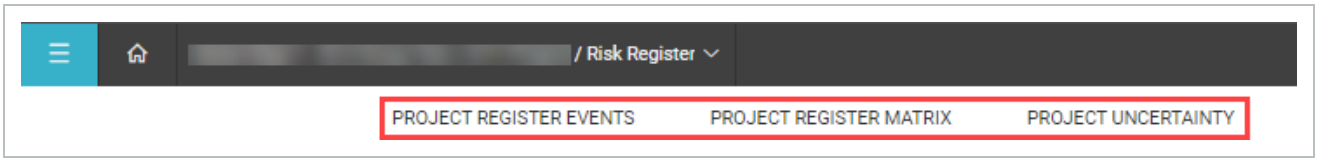


1	Contains all work packages, activities, and steps listed with dates and durations.
2	This visual represents how steps and crew activity are spread out over the coming weeks. Additionally, the original CPM dates have duration bars shown so users can visually see when steps to complete an activity vary from the baseline CPM schedule dates.

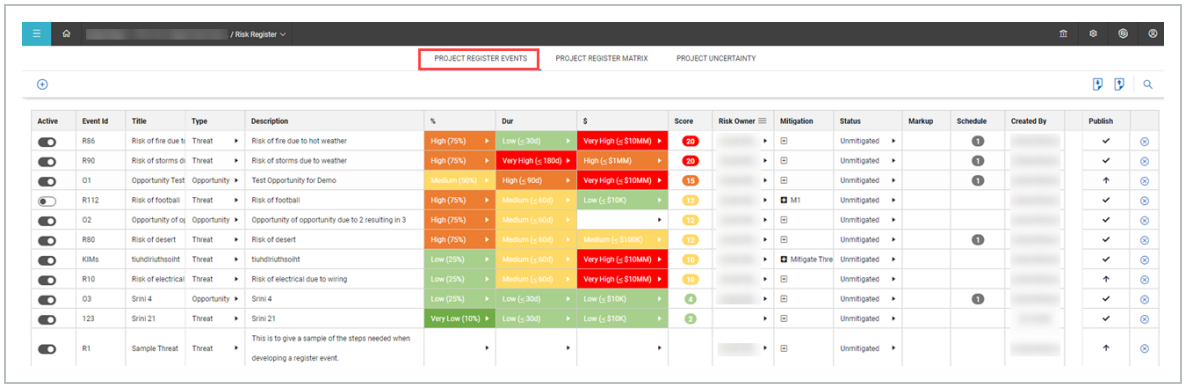
Risk Register View

Project View	Description
Risk Register	Risk matrix tracking all project events surfaced throughout the planning, markup, review, and execution phases of the project schedule

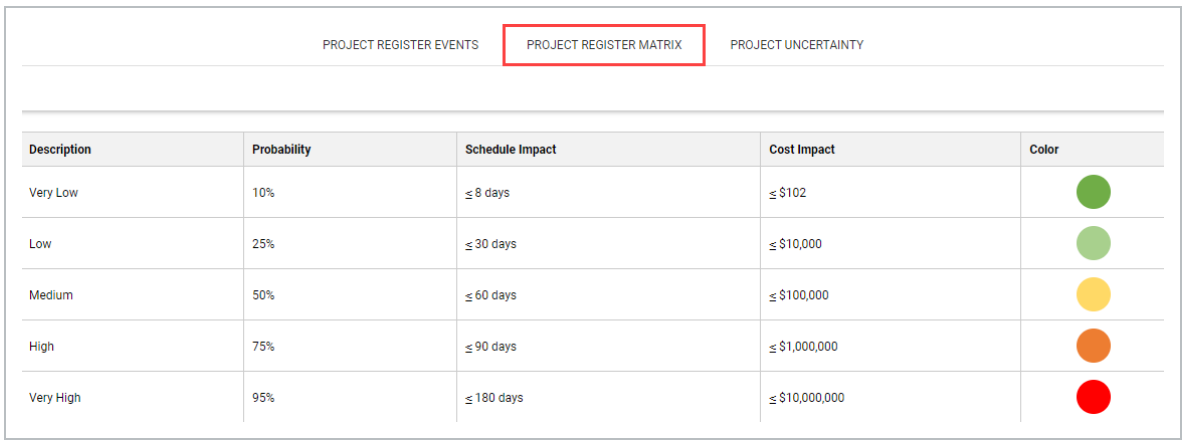
The Risk Register is where the schedule's risk events, matrix settings, uncertainty values are stored and set.



- The Project Register Events tab summarizes all events on the project. Events can be selected and deselected and edited in this register.

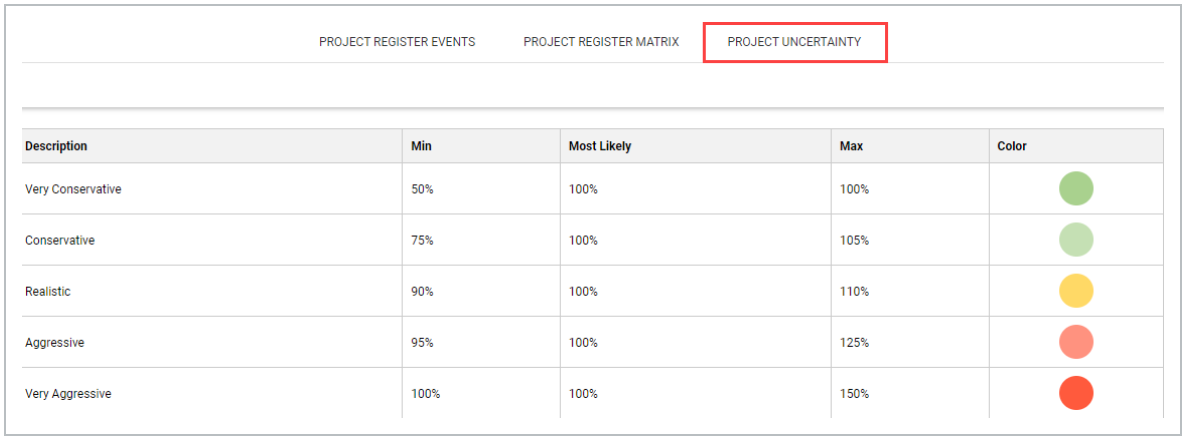


- The Project Register Matrix tab shows the attributes available for events created in the project. These are the default values available when entering data for an event.



Description	Probability	Schedule Impact	Cost Impact	Color
Very Low	10%	≤ 8 days	≤ $102	
Low	25%	≤ 30 days	≤ $10,000	
Medium	50%	≤ 60 days	≤ $100,000	
High	75%	≤ 90 days	≤ $1,000,000	
Very High	95%	≤ 180 days	≤ $10,000,000	

- The Project Uncertainty tab shows the attributes which the Markup & Review Cycle Score Card apply. These are the default values the scorecard will use when markups are being conducted.



Description	Min	Most Likely	Max	Color
Very Conservative	50%	100%	100%	
Conservative	75%	100%	105%	
Realistic	90%	100%	110%	
Aggressive	95%	100%	125%	
Very Aggressive	100%	100%	150%	

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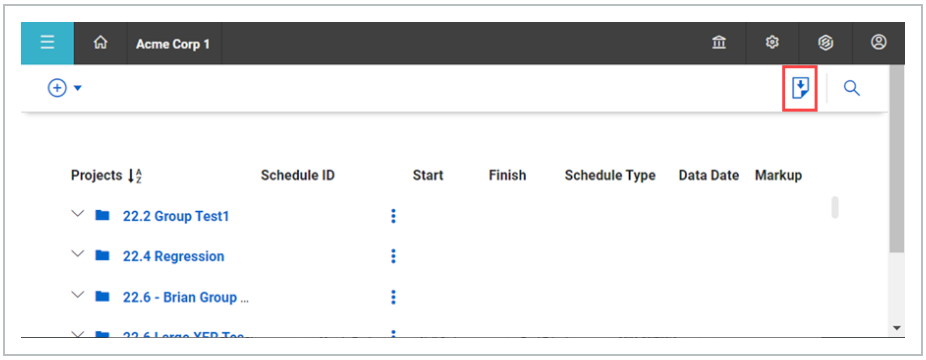
LESSON 2 – PROJECT CREATION

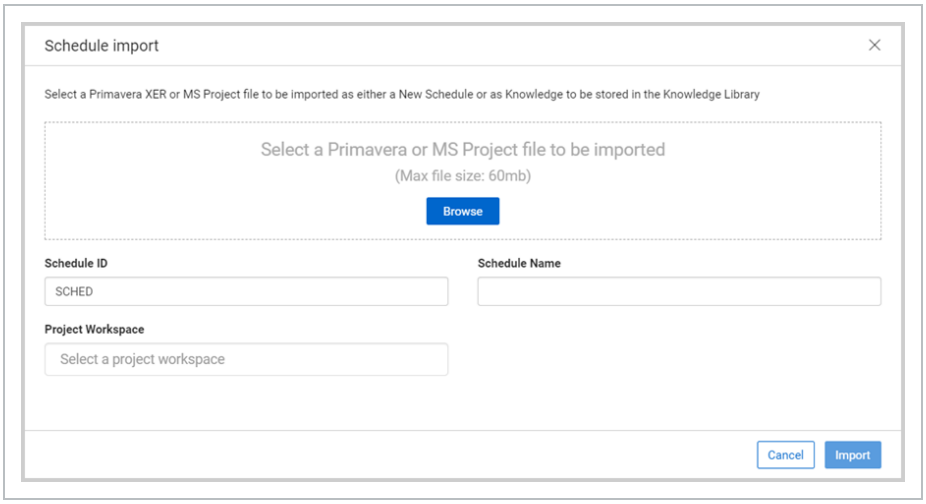
Import a Schedule

Importing a schedule

1. From the Schedule home page, click the **Import** icon.



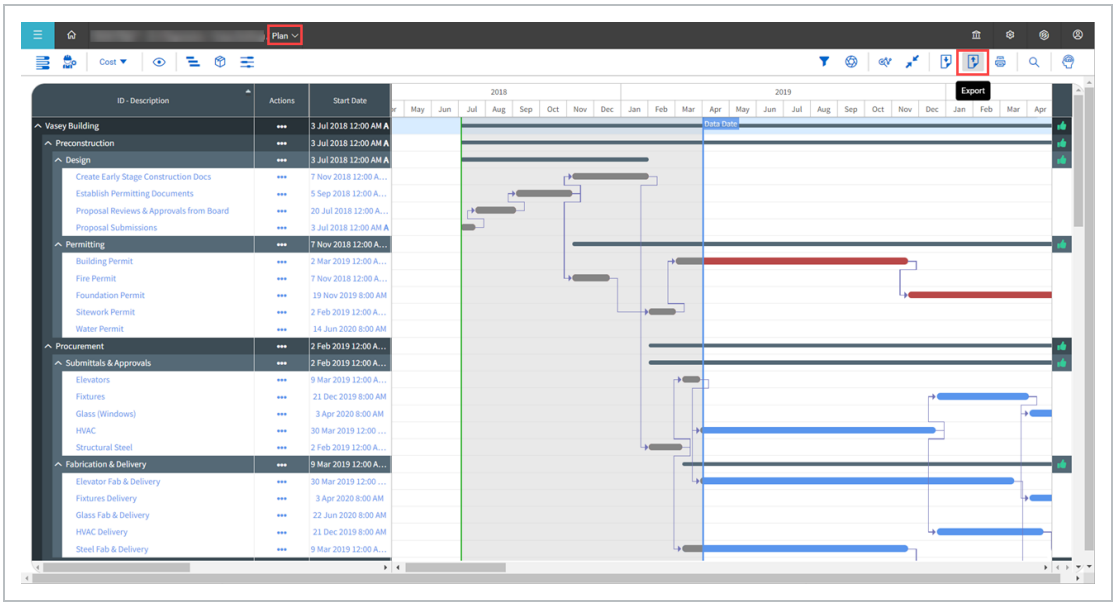
2. Click **Browse** to pick a schedule to upload from your computer or external source.
3. You can enter a Schedule ID, Schedule Name, and select a Project Workspace.
4. Click **Import.**



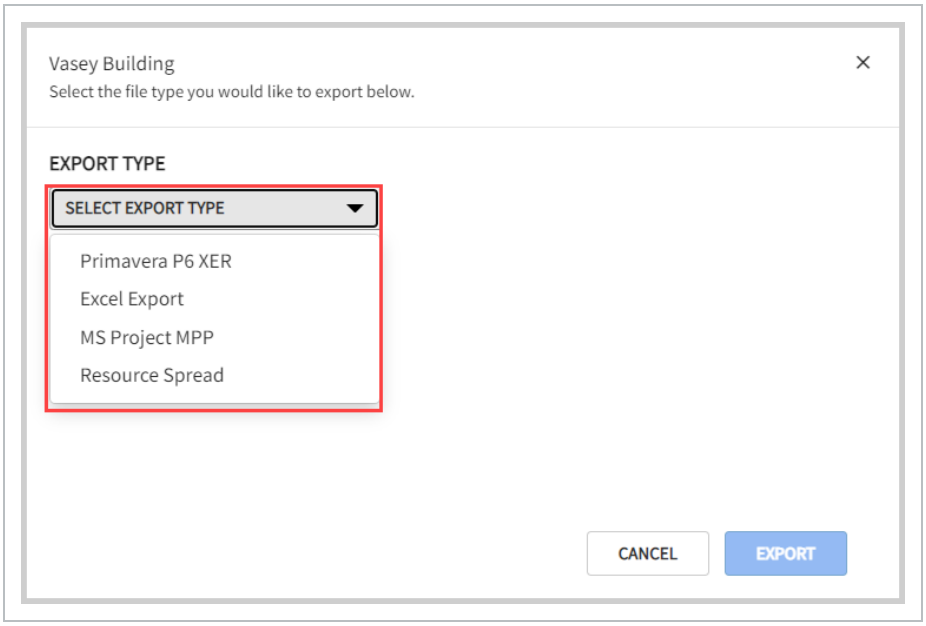
Export a Schedule

Exporting a schedule

1. In Plan view, click the **Export** icon at the top right of the page.



2. Select the export type from the Export Type drop-down options. Click **Export**.

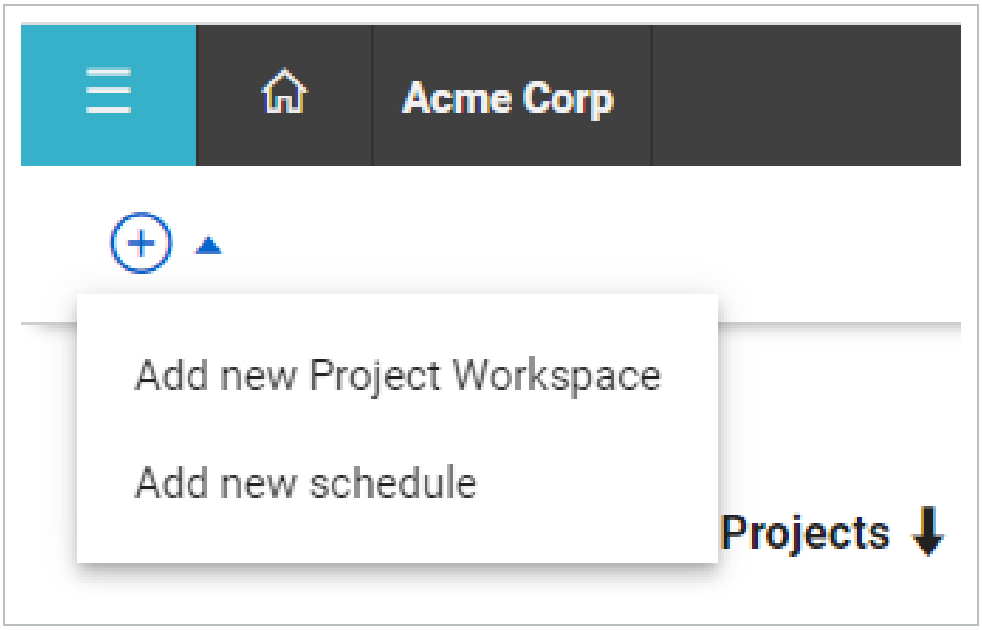


The export file is downloaded to your browser's download folder.

Create a Schedule from Scratch

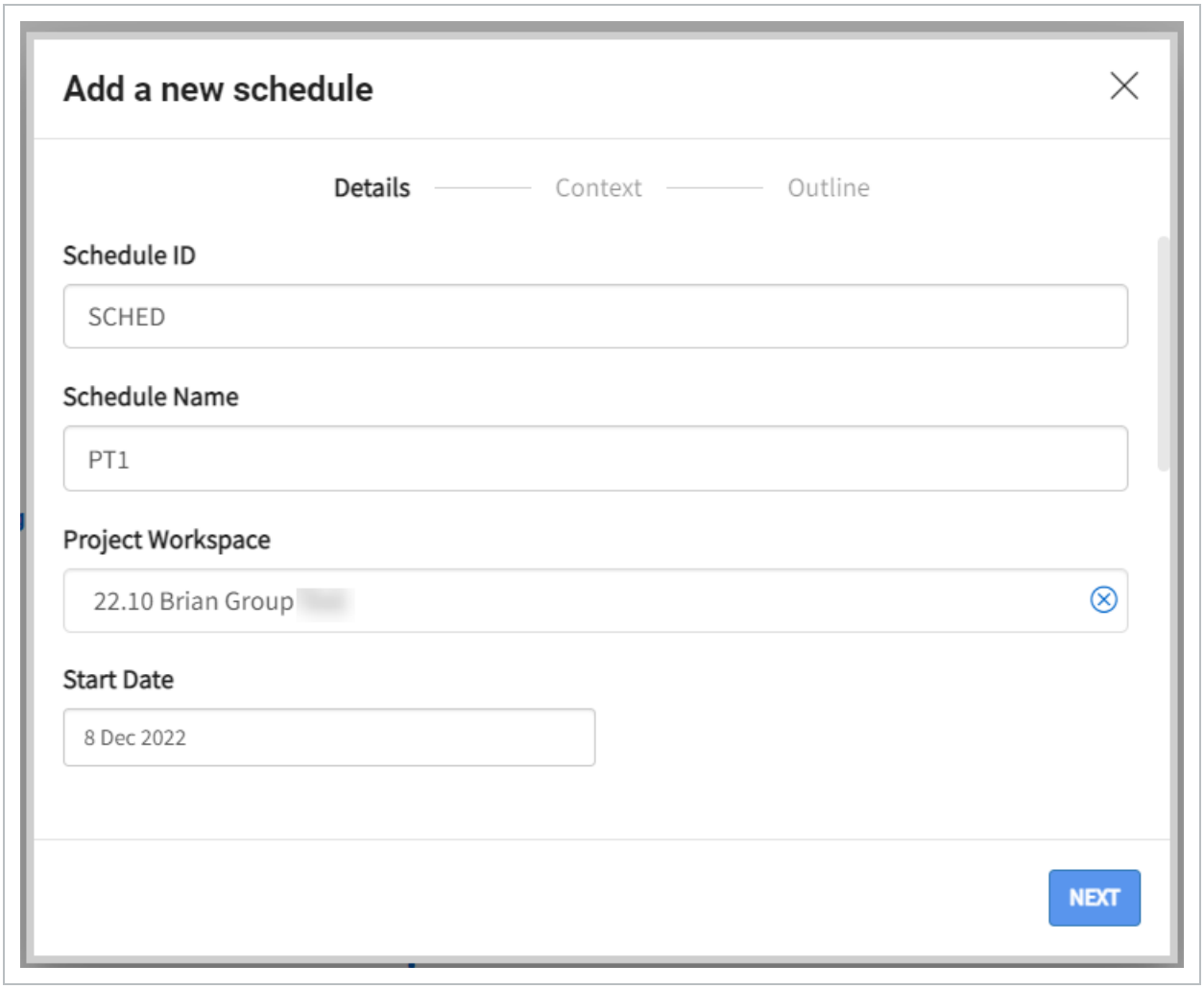
When you create a new schedule, there are two key sections to fill out: Details and Outline.

To start, click **Add New Schedule** in the Schedule register. This opens a window so that you can begin to fill out the schedule details.



Details

The Details section is the first stage for creating a new schedule.



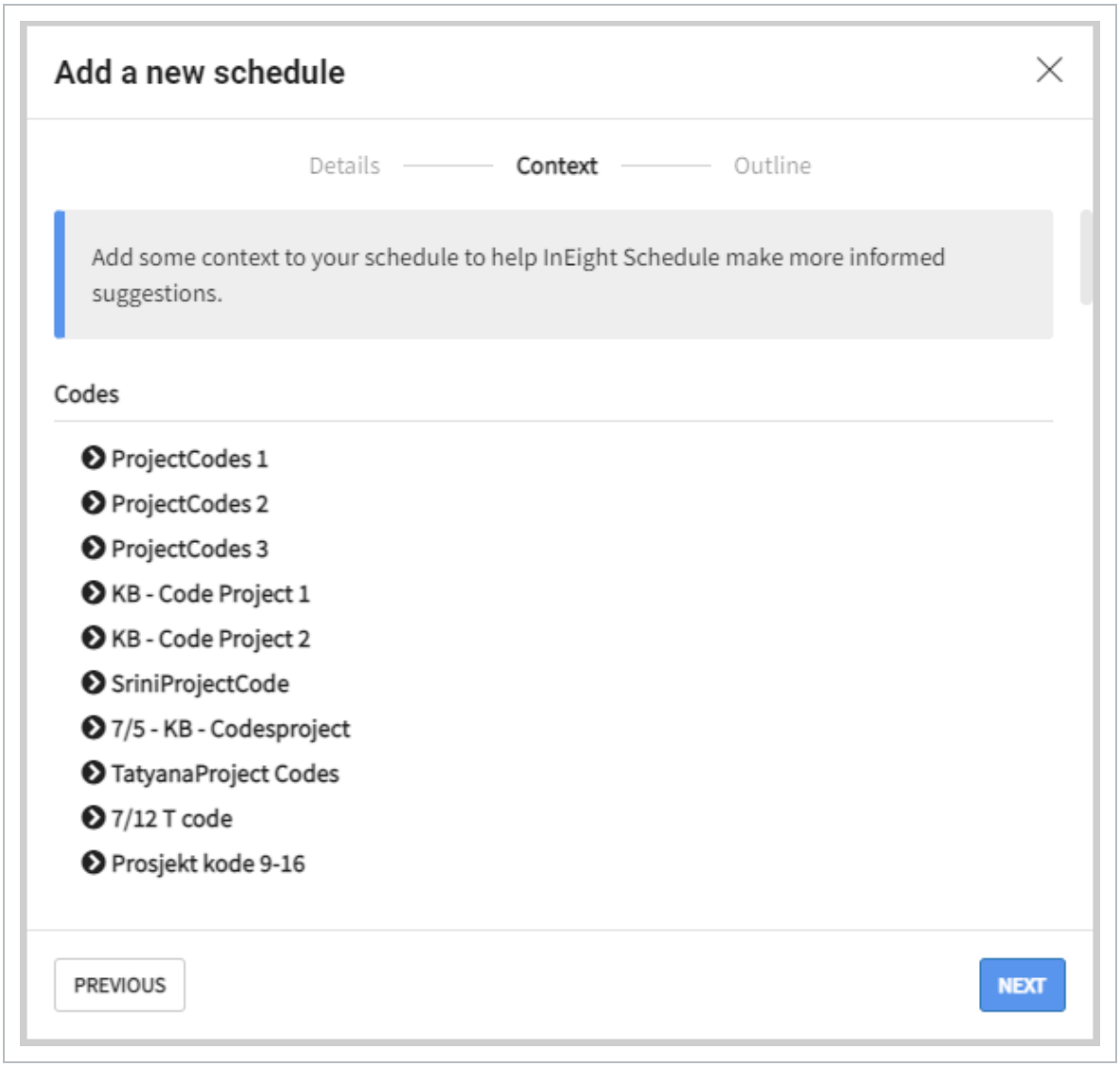
In the details section, complete the following information:

Field	Description
Schedule ID	Unique ID used for schedule identification.
Schedule Name	Official name of the schedule.
Project Workspace	Grouping of multiple schedules.
Start Date	Date the project starts.

Select **Next**.

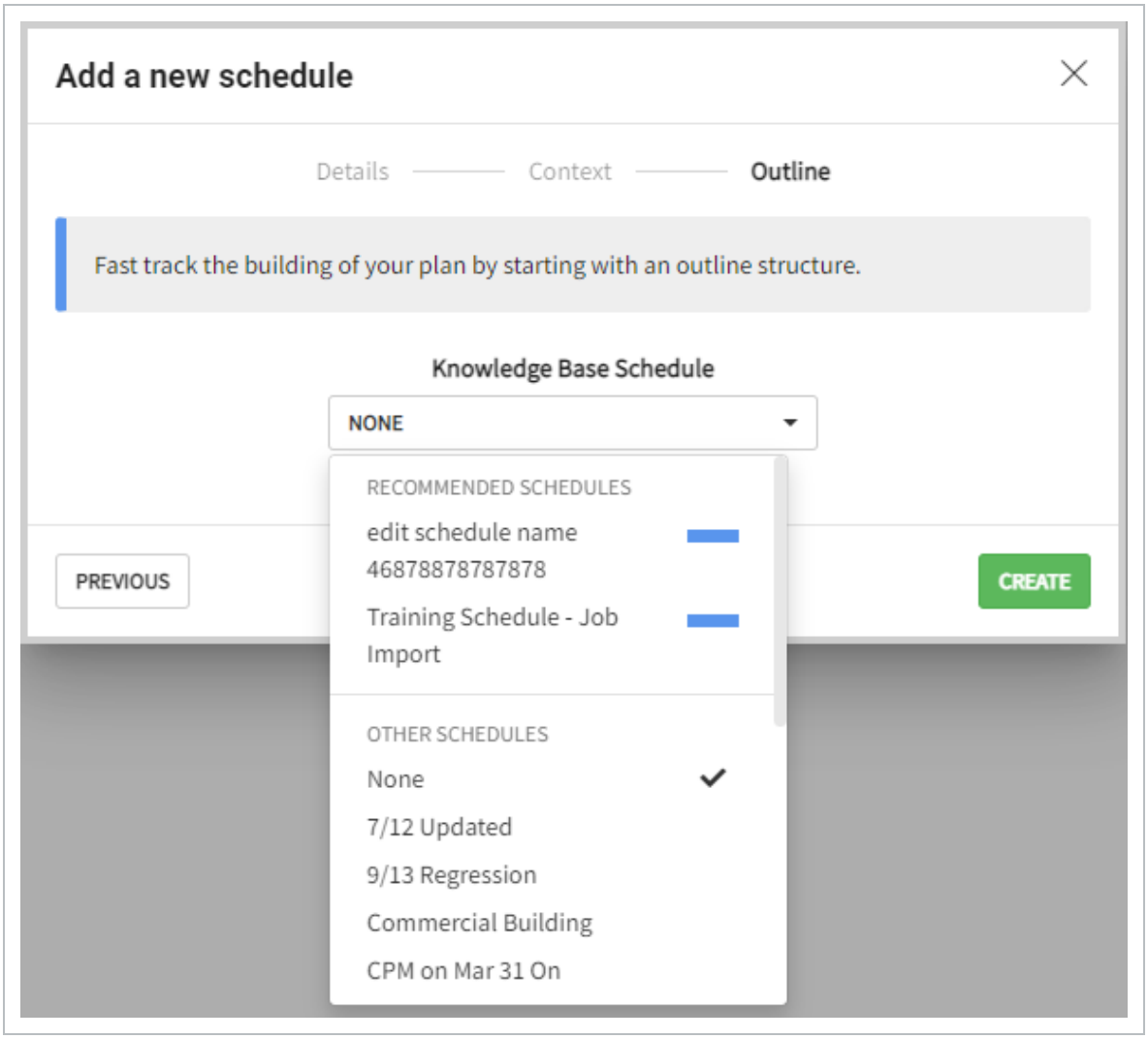
Context

The second stage in creating a schedule is Context. Context lets you select existing project codes and UDFs to apply on a newly created schedule. These selections help with Knowledge Base suggestions throughout the Schedule application.

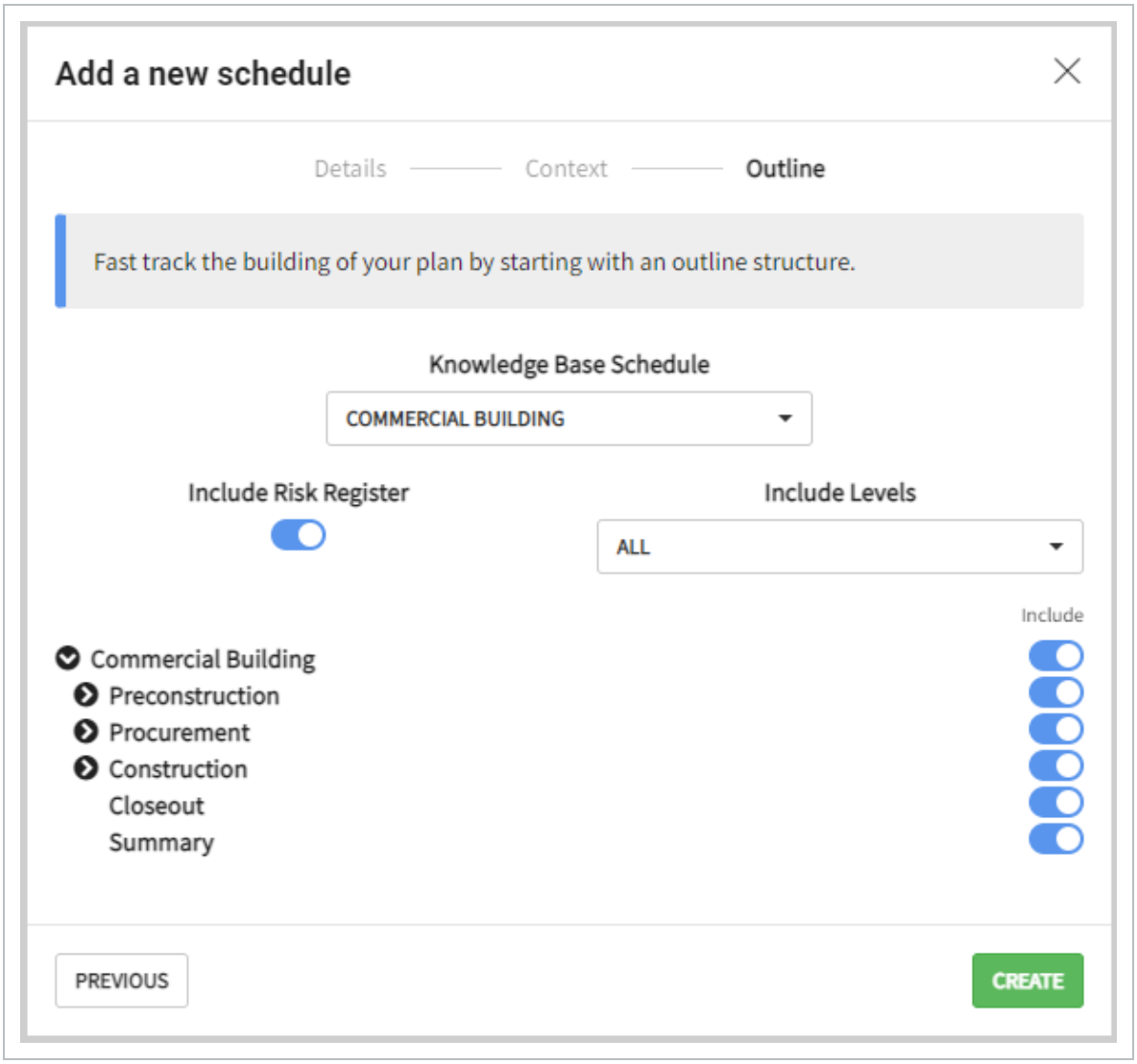


Outline

The third stage in creating a schedule is Outline. In this section, you select an existing Knowledge Library Schedule as reference for the new schedule being built.

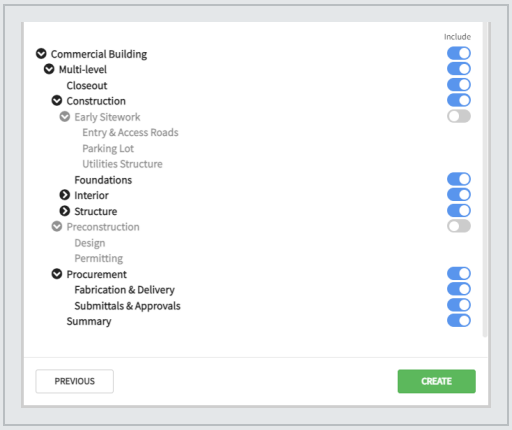


Select a schedule to bring in the work package structure from the Knowledge Base project.

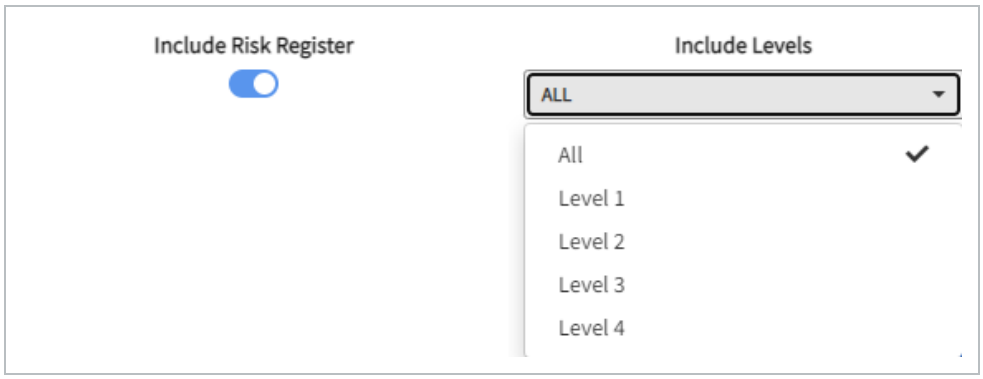


You can select all or parts of the structure levels to use in the schedule being created. This is done by selecting a level from the Include Levels drop-down or by manually toggling work packages in the Include column.

NOTE Turning off a Superior work package will turn off its subordinates.



Also, the include Risk Register toggle lets you specify whether to include risks, and if so, the level of risk to include.

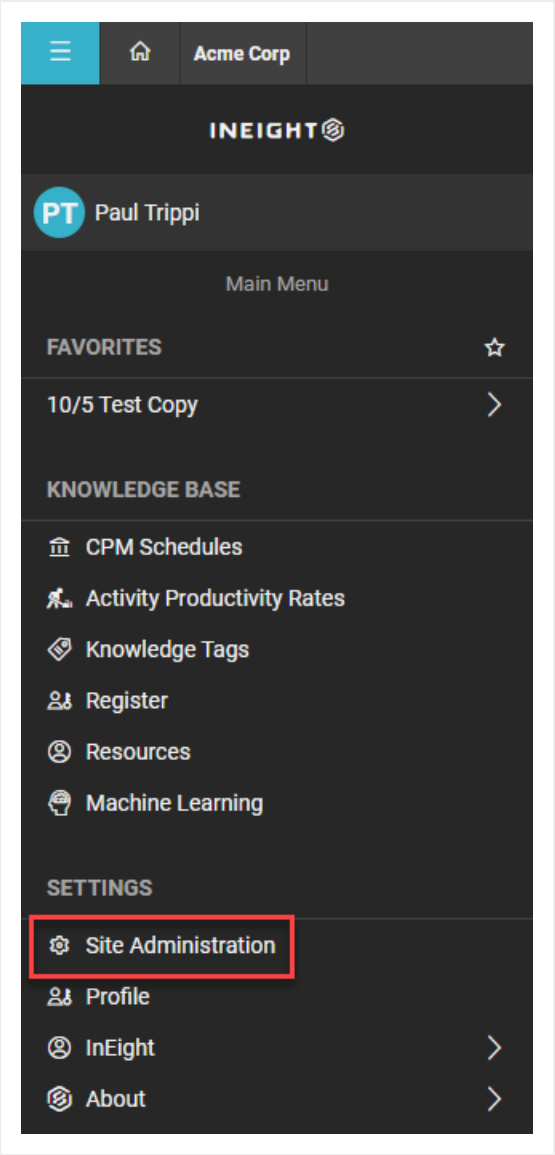


Any risks assigned to the Knowledge Library schedule are brought into the new schedule. Include Risk Register brings in the risk register items from the Knowledge Library Schedule into the new schedule.

NOTE The available risk levels are configured at the organization level.

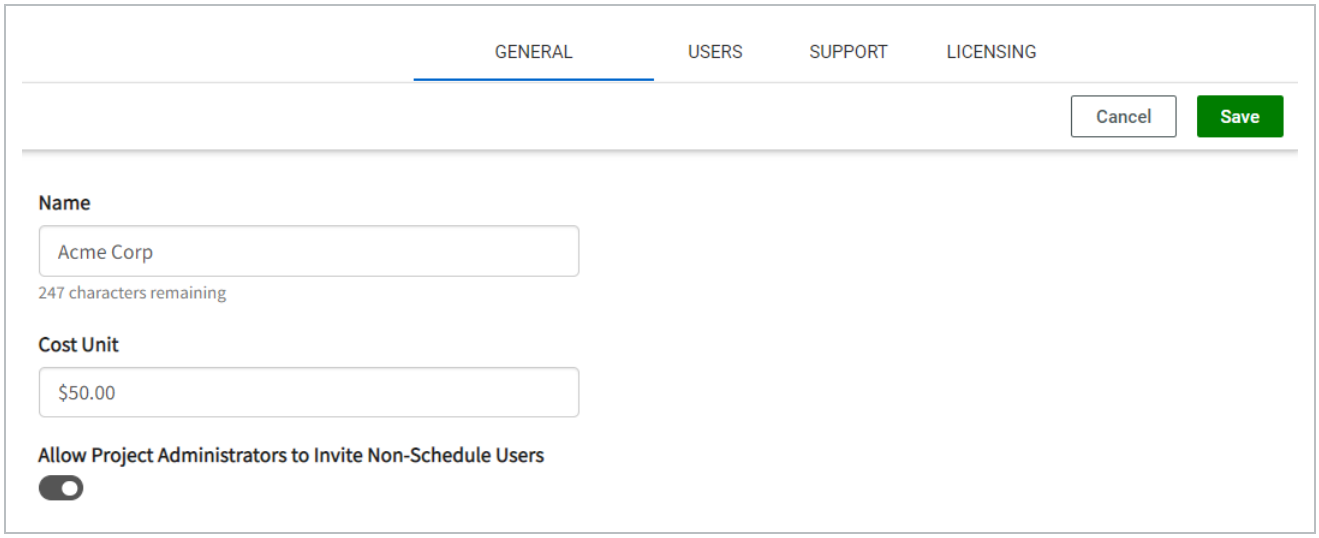
Application Settings

You can access the Application settings by clicking the **Site Administration** button, and can also be accessed in the upper right corner in a project.



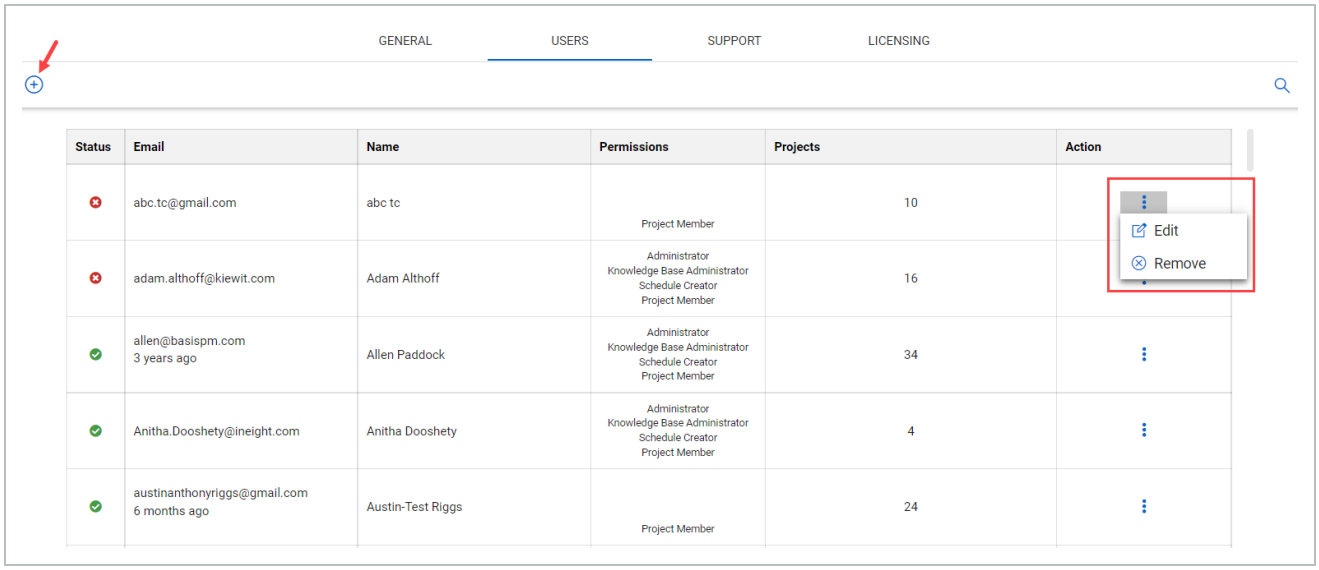
General Settings

From the General tab, project name, Cost Unit and Allow Project Administrators to invite Non-Schedule Users can be updated.



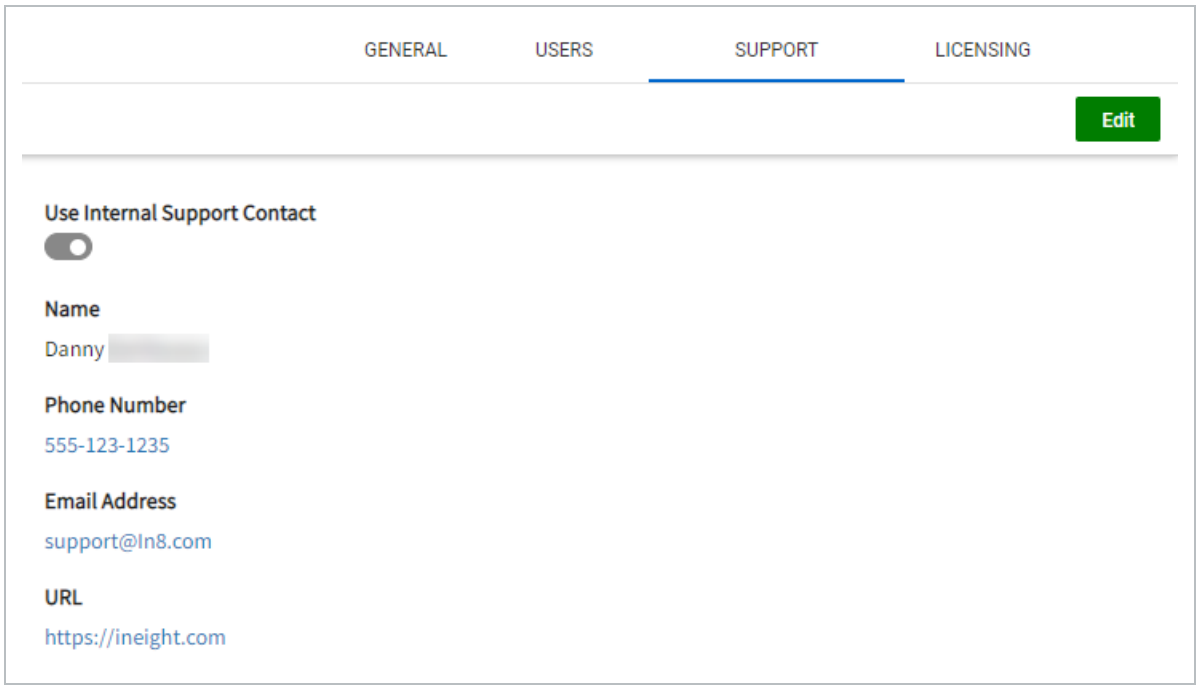
Users

You can add both external and internal users to the project. You can also remove users or update their access levels.



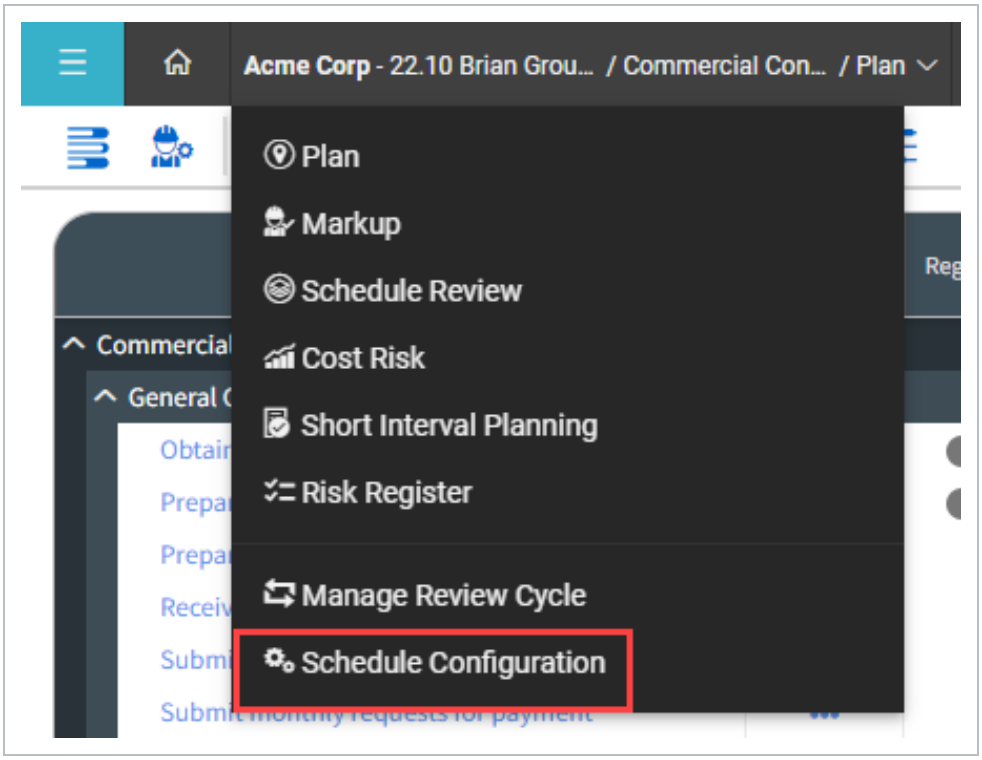
Support

Use the Support tab to view and edit support details.



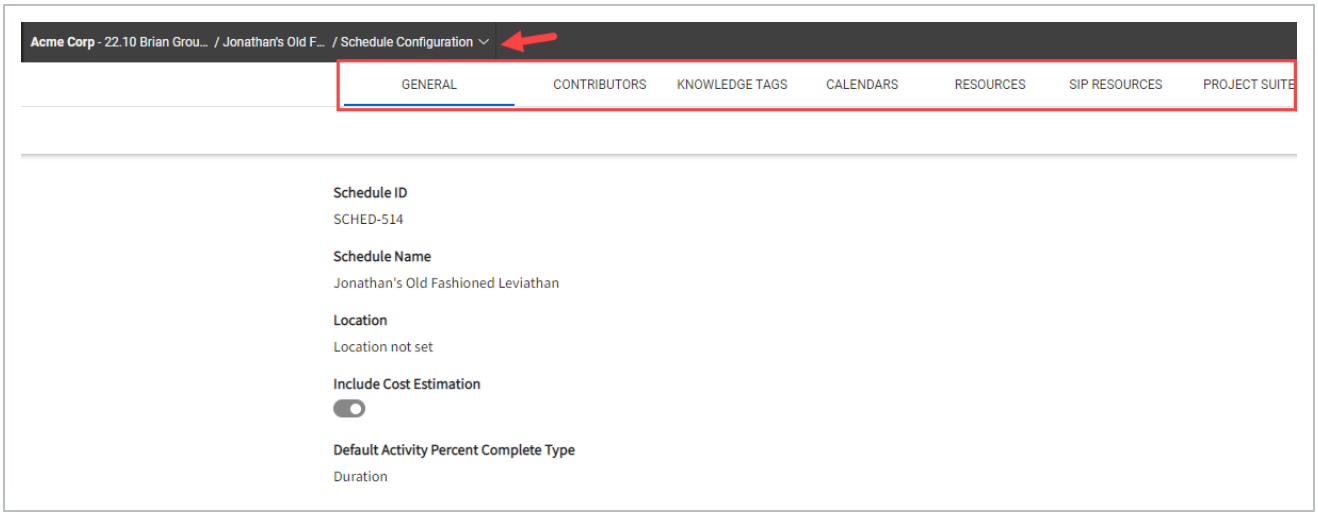
Schedule Configuration Settings

Schedule settings lets you adjust the data date, switch schedule modes, switch how out of sequence progress is handled. These functions can be accessed via the secondary toolbar at the top of Plan view.



Schedule Configuration

Schedule Configuration contains the general information and settings for the current project.

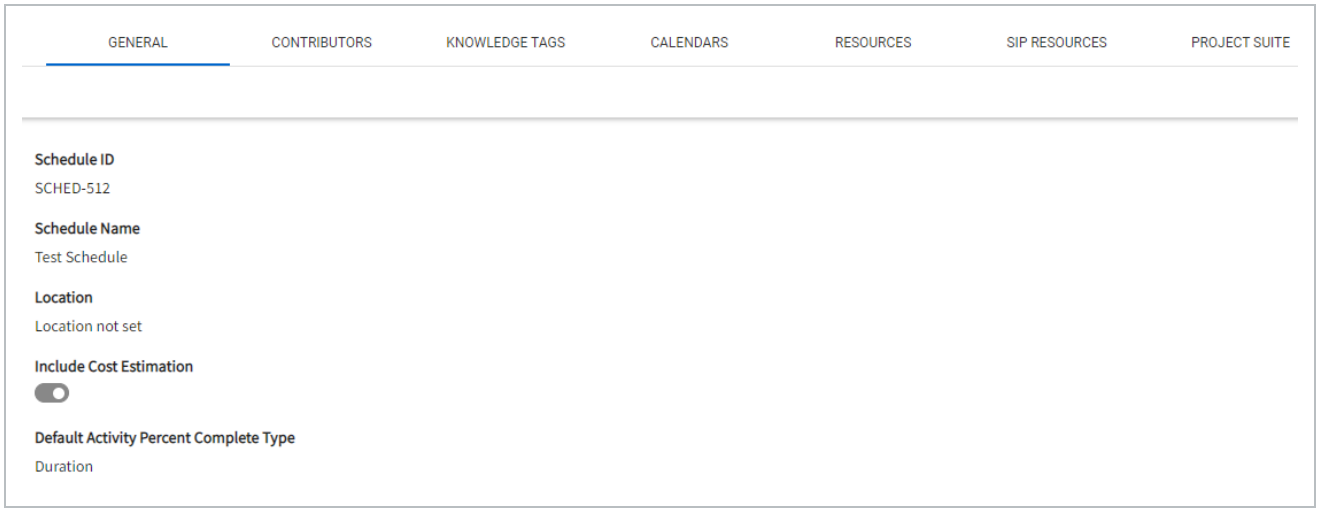


Depending on the tab selected, information and settings pertaining to the tab heading are shown.

Tab	Function/Description
General	Schedule details, such as Project Name, Location, Estimate, Benchmark and work hours.
Contributors	Add, remove, and edit project contributors.
Crews	Set up standard crews for the project.
Knowledge Tags	Manage knowledge tags on the project.
Calendars	Define project calendars and non-workdays.
Resources	Manage project resources.
SIP Resources	Activities from the CPM Schedule show in the Short Interval Planning (SIP) view that are grouped, based on how the Plan view WBS is organized.
Project Suite	Connectivity to other InEight Project Suite Solutions (as needed).

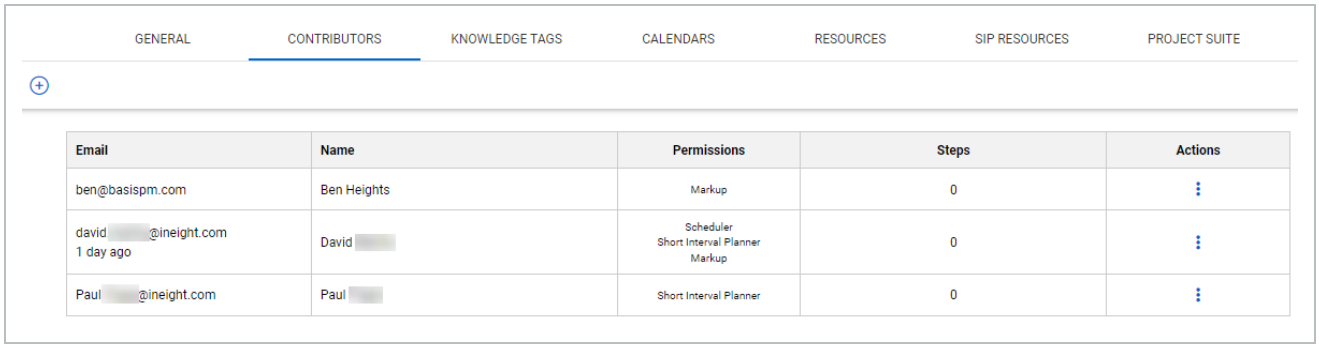
General

On the General tab, you can configure the project details.



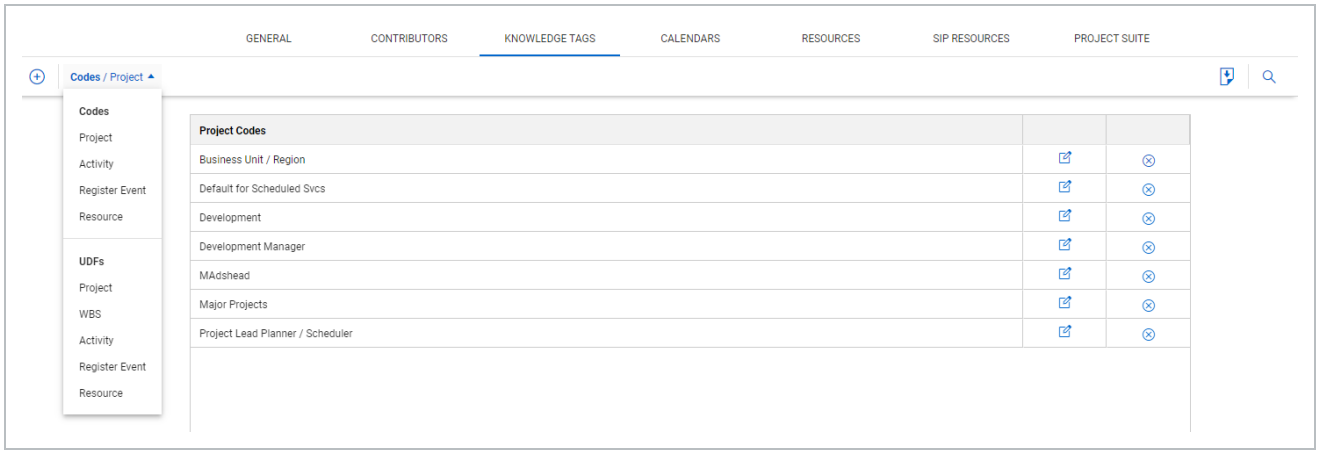
Contributors

On the Contributors tab, both external and internal users can be added to the project. Existing contributors can be removed or have their access level updated.



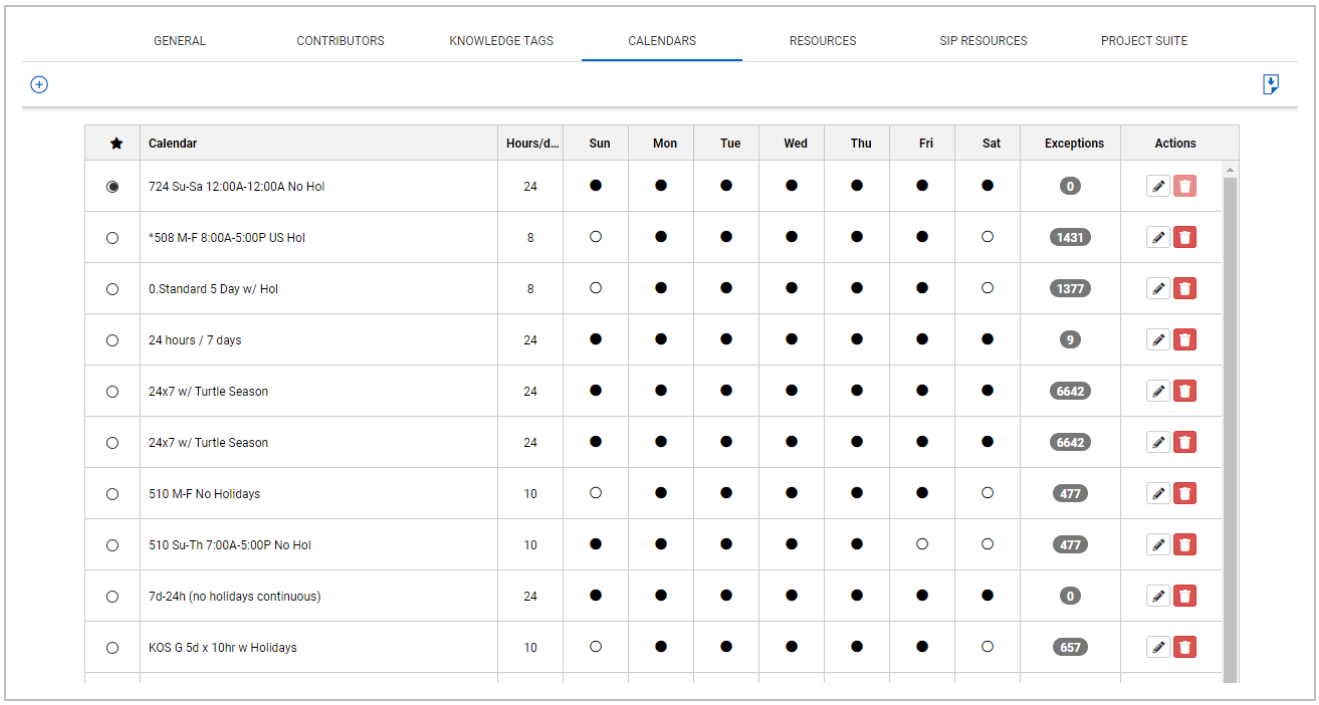
Knowledge Tags

On the Knowledge Tags tab, organizational defined tags can be reviewed, and excluded from consideration by the Schedule inference engine.



Calendars

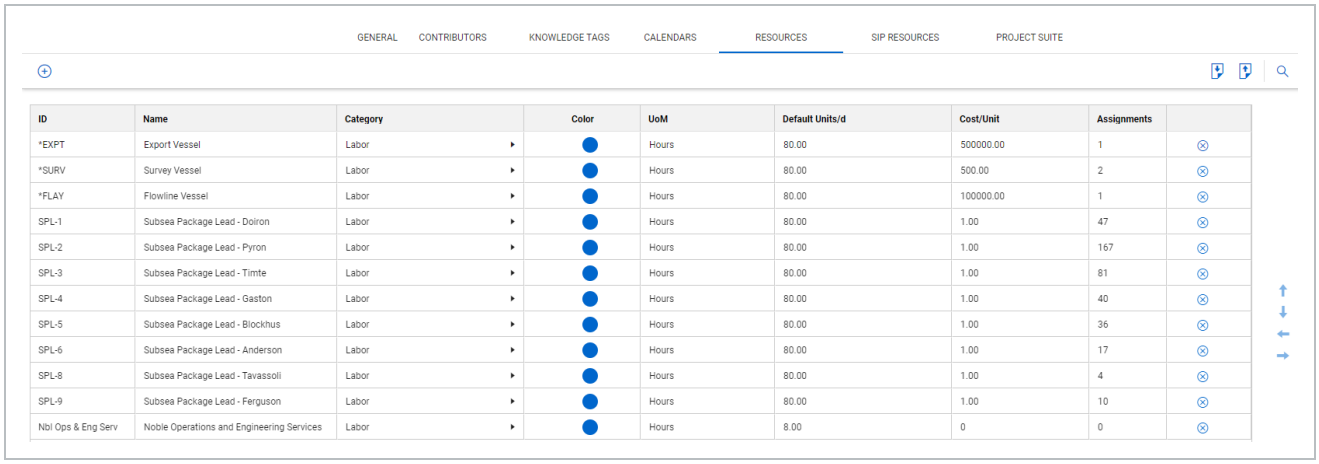
On the Calendars tab, additional calendars can be created, working days can be edited, and a default calendar can be defined. This is also where holidays are defined.



★	Calendar	Hours/d...	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Exceptions	Actions
◉	724 Su-Sa 12:00A-12:00A No Hol	24	●	●	●	●	●	●	●	0	
○	*508 M-F 8:00A-5:00P US Hol	8	○	●	●	●	●	●	○	1431	
○	0.Standard 5 Day w/ Hol	8	○	●	●	●	●	●	○	1377	
○	24 hours / 7 days	24	●	●	●	●	●	●	●	9	
○	24x7 w/ Turtle Season	24	●	●	●	●	●	●	●	6642	
○	24x7 w/ Turtle Season	24	●	●	●	●	●	●	●	6642	
○	510 M-F No Holidays	10	○	●	●	●	●	●	○	477	
○	510 Su-Th 7:00A-5:00P No Hol	10	●	●	●	●	●	○	○	477	
○	7d-24h (no holidays continuous)	24	●	●	●	●	●	●	●	0	
○	KOS G 5d x 10hr w Holidays	10	○	●	●	●	●	●	○	657	

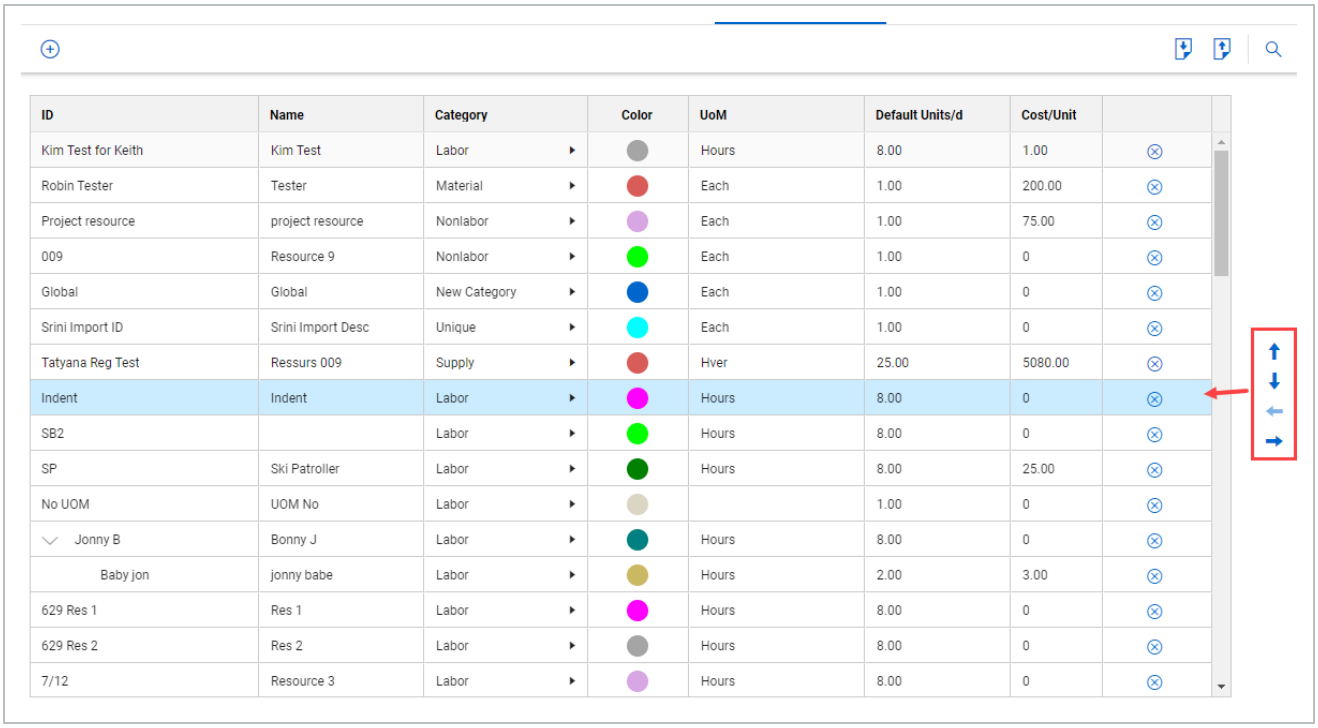
Resources

On the Resources tab, additional resources can be added and searched. Resource details such as ID, Name, Category, Unit, Default Units, and Costs can be edited in the grid by double-clicking the cell. Use the indent arrows on the right to create a child resource from the selected resource or to move the resource to a different part of the grid.



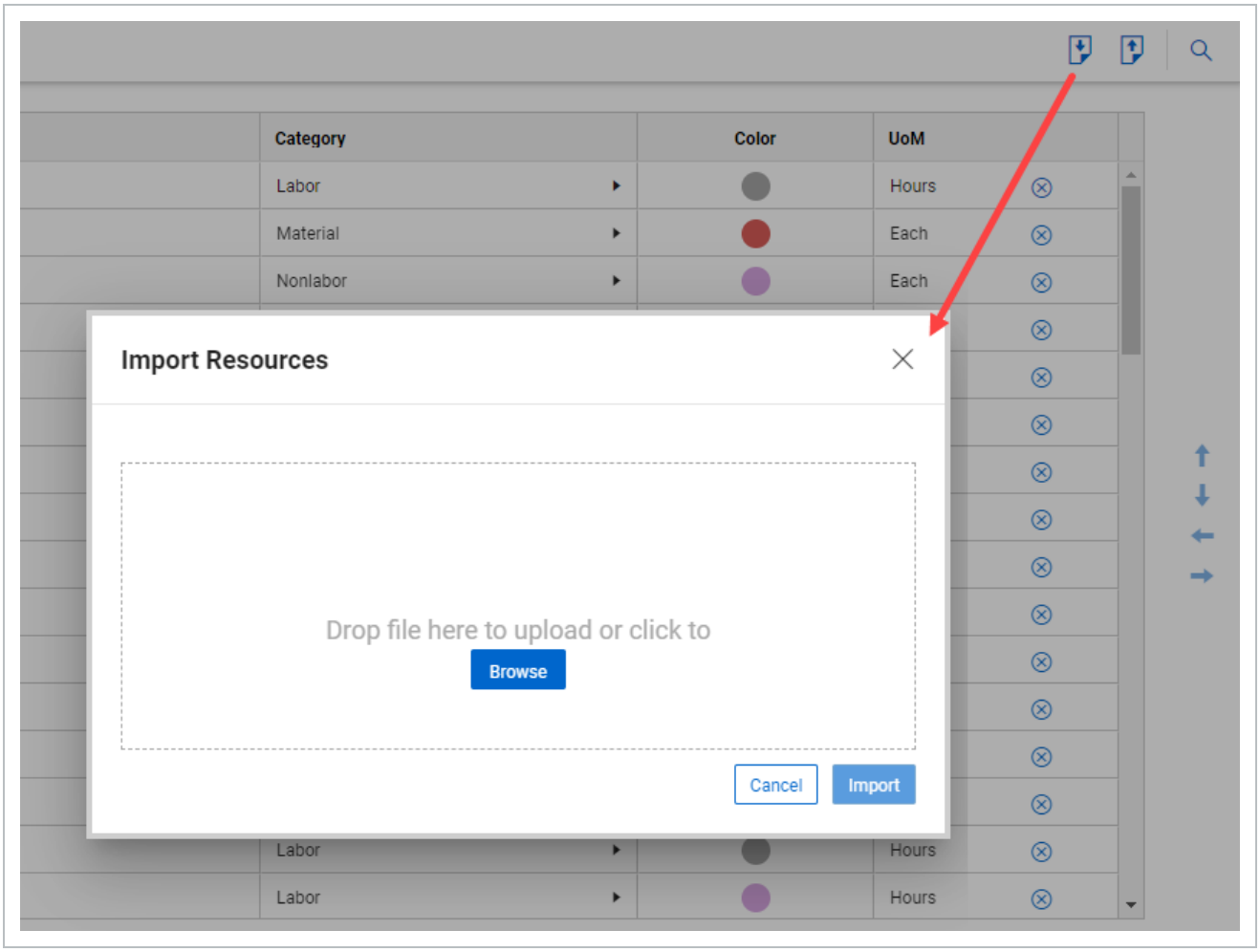
ID	Name	Category	Color	UoM	Default Units/d	Cost/Unit	Assignments	
*EXPT	Export Vessel	Labor	●	Hours	80.00	500000.00	1	⊗
*SURV	Survey Vessel	Labor	●	Hours	80.00	500.00	2	⊗
*FLAY	Flowline Vessel	Labor	●	Hours	80.00	100000.00	1	⊗
SPL-1	Subsea Package Lead - Doiron	Labor	●	Hours	80.00	1.00	47	⊗
SPL-2	Subsea Package Lead - Pyron	Labor	●	Hours	80.00	1.00	167	⊗
SPL-3	Subsea Package Lead - Timte	Labor	●	Hours	80.00	1.00	81	⊗
SPL-4	Subsea Package Lead - Gaston	Labor	●	Hours	80.00	1.00	40	⊗
SPL-5	Subsea Package Lead - Blockhus	Labor	●	Hours	80.00	1.00	36	⊗
SPL-6	Subsea Package Lead - Anderson	Labor	●	Hours	80.00	1.00	17	⊗
SPL-8	Subsea Package Lead - Tavassoli	Labor	●	Hours	80.00	1.00	4	⊗
SPL-9	Subsea Package Lead - Ferguson	Labor	●	Hours	80.00	1.00	10	⊗
Nbl Ops & Eng Serv	Noble Operations and Engineering Services	Labor	●	Hours	8.00	0	0	⊗

Use the indent arrows on the right to create a child resource from the selected resource or to move the resource to a different part of the grid.



ID	Name	Category	Color	UoM	Default Units/d	Cost/Unit
Kim Test for Keith	Kim Test	Labor		Hours	8.00	1.00
Robin Tester	Tester	Material		Each	1.00	200.00
Project resource	project resource	Nonlabor		Each	1.00	75.00
009	Resource 9	Nonlabor		Each	1.00	0
Global	Global	New Category		Each	1.00	0
Srini Import ID	Srini Import Desc	Unique		Each	1.00	0
Tatyana Reg Test	Ressurs 009	Supply		Hver	25.00	5080.00
Indent	Indent	Labor		Hours	8.00	0
SB2		Labor		Hours	8.00	0
SP	Ski Patroller	Labor		Hours	8.00	25.00
No UOM	UOM No	Labor			1.00	0
Jonny B	Bonny J	Labor		Hours	8.00	0
Baby jon	jonny babe	Labor		Hours	2.00	3.00
629 Res 1	Res 1	Labor		Hours	8.00	0
629 Res 2	Res 2	Labor		Hours	8.00	0
7/12	Resource 3	Labor		Hours	8.00	0

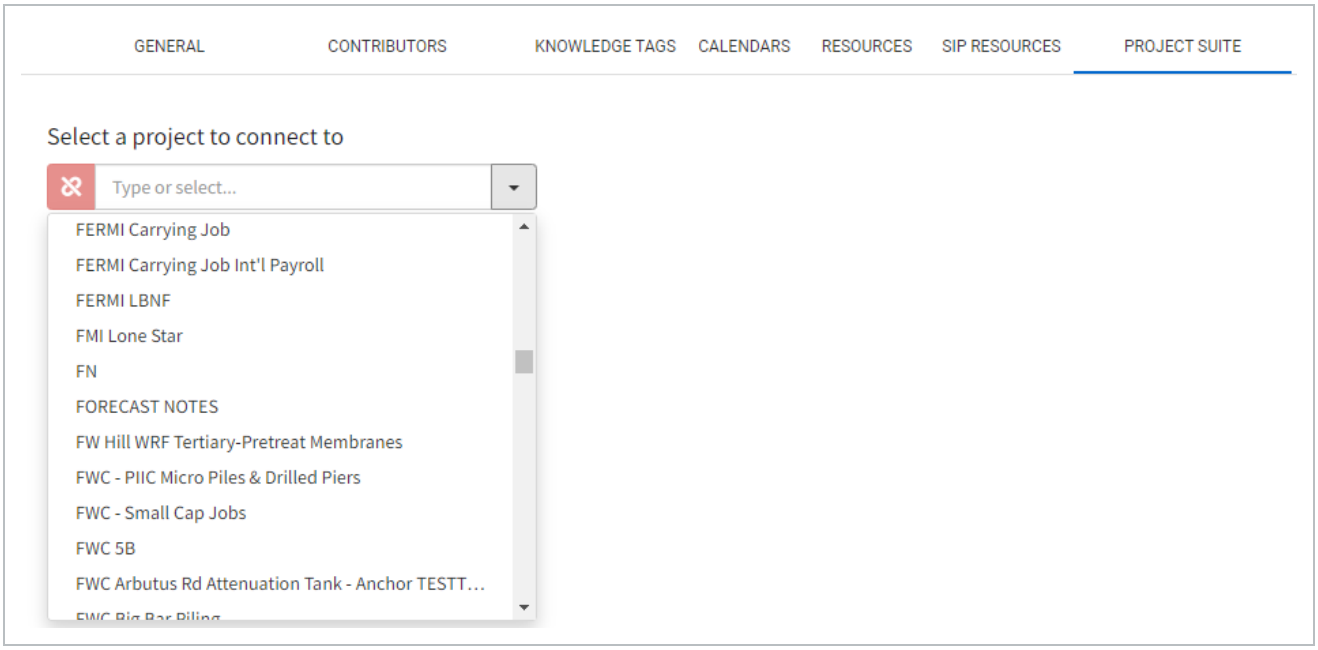
Resources can be imported using the Excel or Knowledge Library import type. Use the toggles from the Knowledge Library import to select resources to import.



SIP Resources

On the SIP Resources tab, SIP Resources can be created, edited, deleted, and searched. SIP Resources also shows which step each resource is being used.

Project Suite



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LESSON 3 – USER ACCESS

User Setup and Roles

Schedule Roles

Schedule Creator

The Schedule Creator role is typically a planner or scheduler at an organization. The user can create schedules and has full rights to those schedules.

Schedule creators can:

- Create / delete their own schedules
- Use Knowledge Library and Smart Planning to inherit schedules and subnets
- Use Productivity Rates
- Assign contributors to schedules for markup
- Manage markup process
- Manage Review and consolidation process
- Contribute to other schedules when assigned as a schedule contributor

Project Member

The Project Member role can be wide range of organizational roles. The organization roles can be Supervisors, Foremen, SME's, External Subs, Customers, anyone that a project would like to contribute to the project. The Project Member role serves as a contributor to projects assigned to them by the administrator or project creator.

Administrator

The Administrator role in Schedule can also be considered the Super User. This role has full rights to everything in the customer instance of Schedule. The typical person in a company that would have these permissions is a senior planner who is a super user or a Planning/Scheduling leadership role.

In addition to the permissions described for the Schedule Creator and Contributor Role the Administrator can do the following:

- Manage the Knowledge Library (Schedules, Productivity Rates, Knowledge Tags, Risks)
- Create, delete, and modify any schedule
- Access to the system settings to add users to the instance

Knowledge Library Administrator

The Knowledge Library Administrator role is primarily responsible for creating and updating Knowledge Library tags, schedules, deliverable rates, and Register Items.

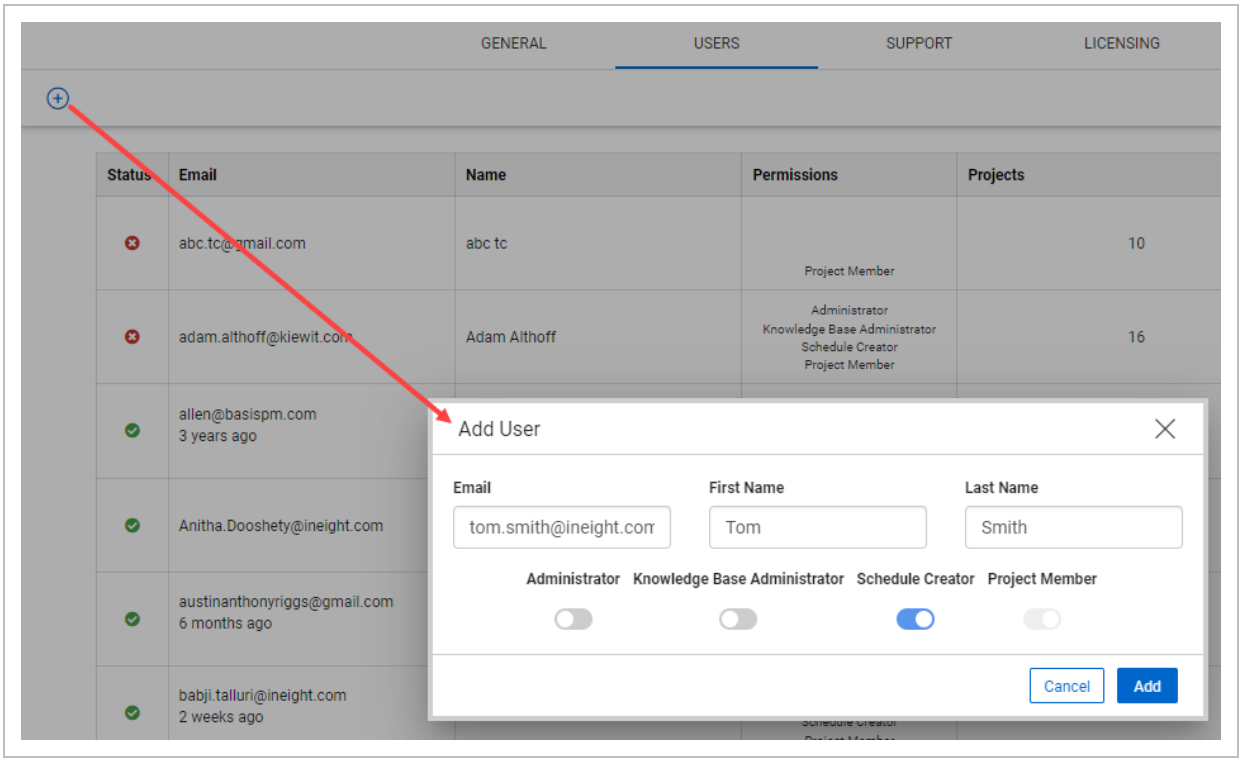
User Creation

Create a New User

1. Click on the **Site Administration** button.

2. Navigate to the **Users** tab.

3. Click the **Add User** icon. Enter email, and first and last name for the user. Then, select the appropriate role. Select **Add** when finished.

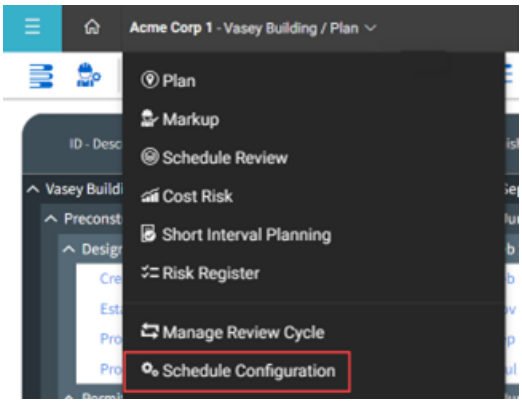


4. The user receives an automatically generated email from iris@basisplanning.com. After the user has logged in, a green checkmark shows next to their name. If necessary, you can close the dialog box to resend the invitation email.

Schedule Contributor Setup

Schedule Contributors

Schedule Contributors are users assigned to the schedule. The contributors and their roles on a schedule are managed from the Schedule Configuration register.



Contributor Role Types

Project Contributor role types pertain to the user and are specific to each project. Users can be assigned different contributor roles for each project.

Markup

The Markup role grants access to markup and review cycles on a schedule. Selecting this on will allow this user to be assigned to activities for markup.

Short Interval Planner

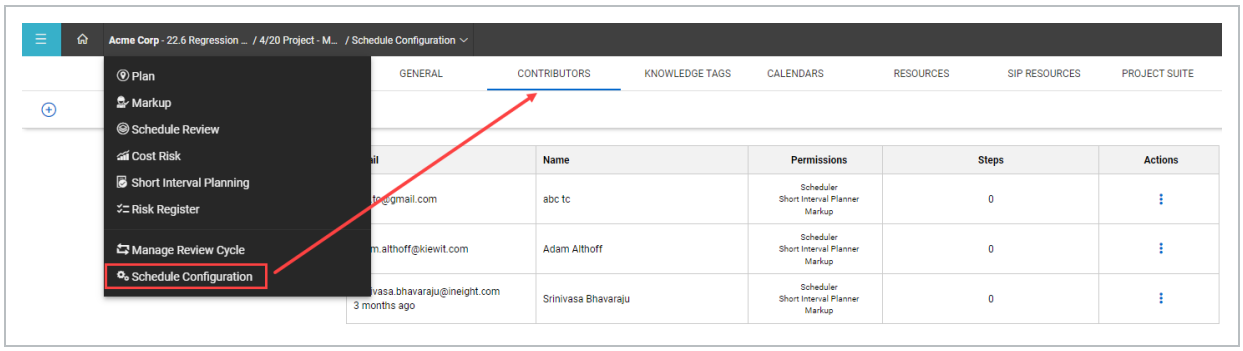
This role grants access to the Short Interval Planning (SIP) section of InEight Schedule. Users in this role can be assigned to activities for field execution planning. For details on how to use the SIP Functionality, see chapter 6.

Scheduler

The Scheduler role has all access and privileges of the Markup and Field Execution Planner roles. Additionally, schedulers can adjust items in the Planning view, such as details in the Iris, logic in the Gantt chart, and resources.

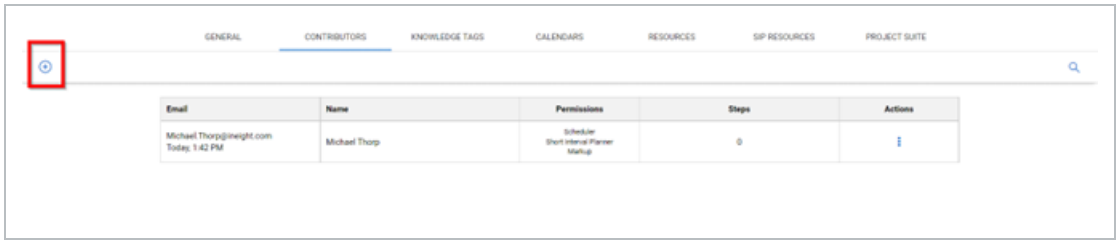
Selecting Project Contributors

1. In Schedule Configuration, go to the **Contributors** tab.



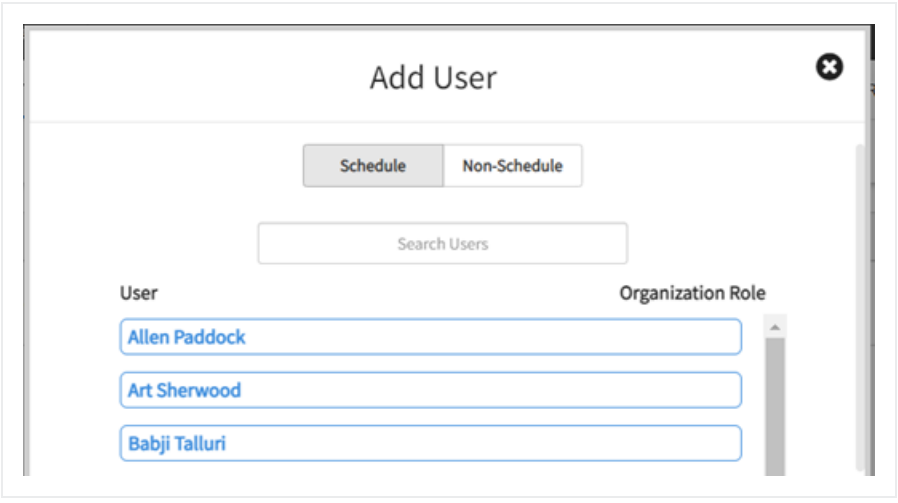
   - All Project Contributors are listed in the register

2. To add a new user, click **Add User**.

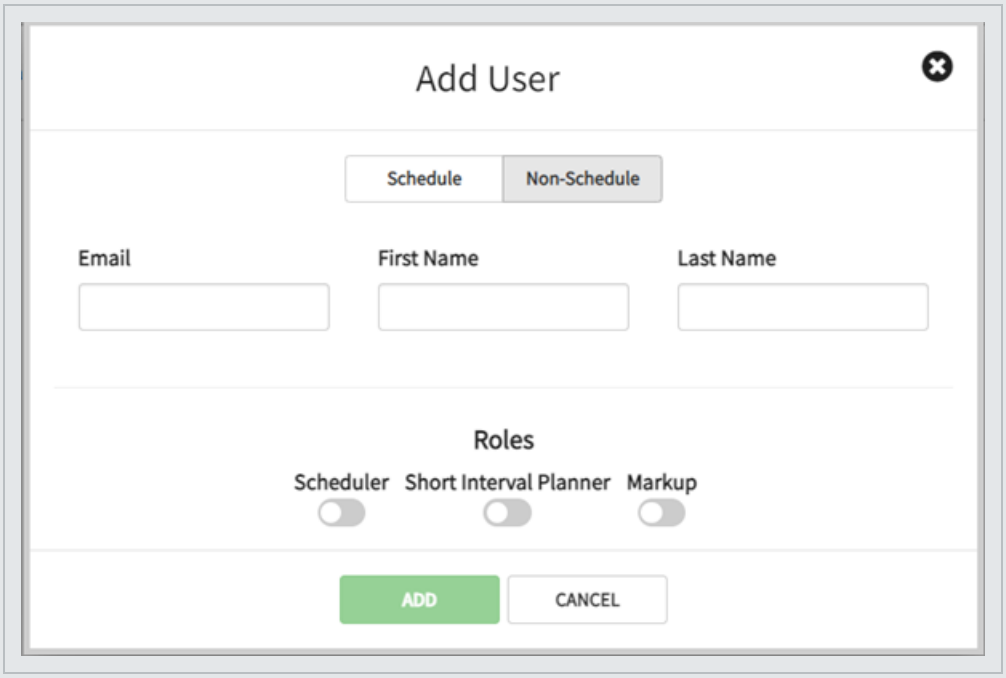


   - The Add User Window opens

3. Schedule and Non-Schedule options are at the top of the window. Select **Schedule** to list all users currently registered in Schedule.
4. Click on the user(s) to be added as project contributors.



NOTE Switching to Non-Schedule changes the window to a registration form which lets guest user to be added to the project.



5. Once selected, select ***On*** each role the new user should have.
6. Click **Add**.

LESSON 4 – PACKAGES AND ACTIVITIES

Activity Productivity Rates

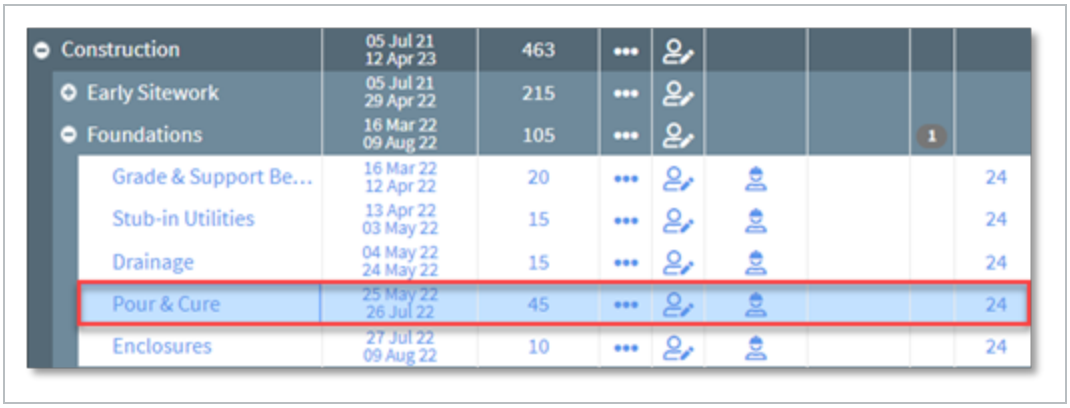
Productivity rates allow schedulers to establish a productivity factors for activities and thus scale durations accordingly.

NOTE These rates also aid in generating a bottom-up cost for the project.

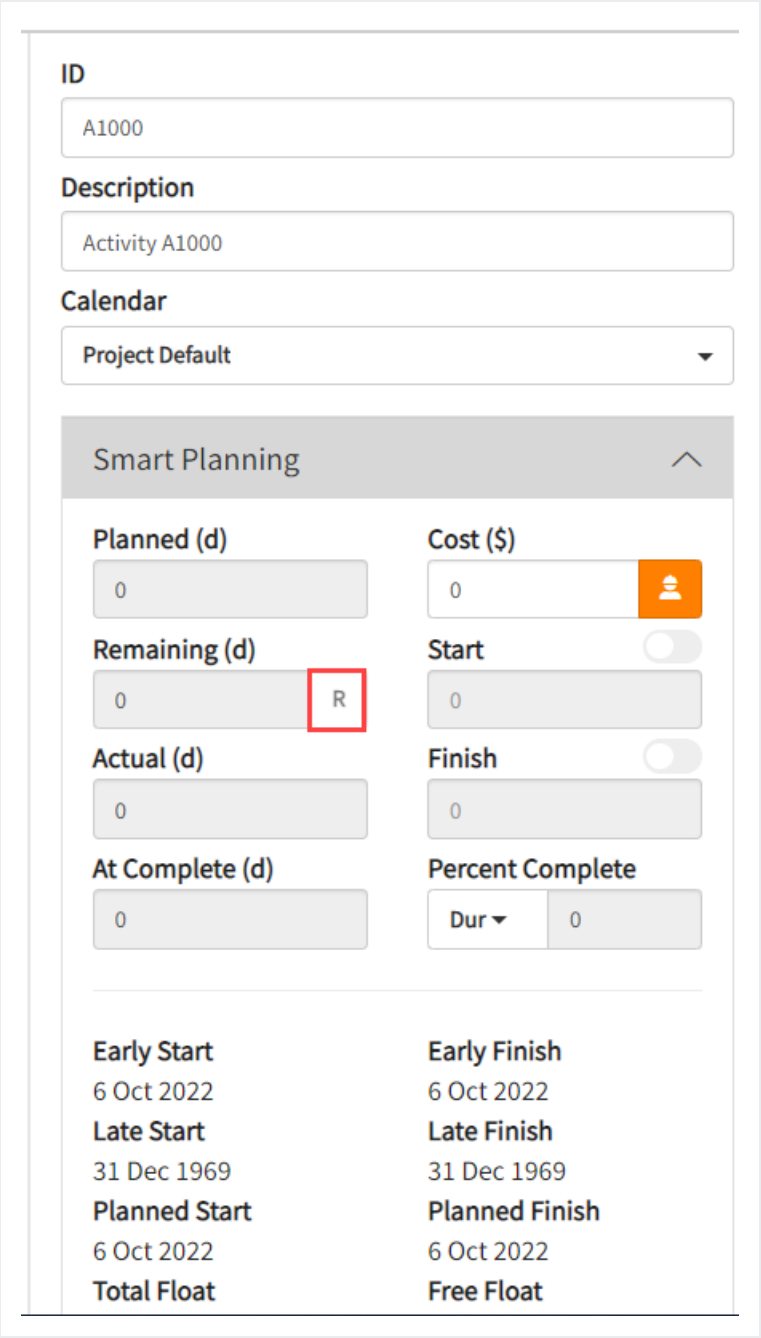
To set the productivity factor, use the built-in application in the Iris' Smart Planning Section.

Set the productivity factor

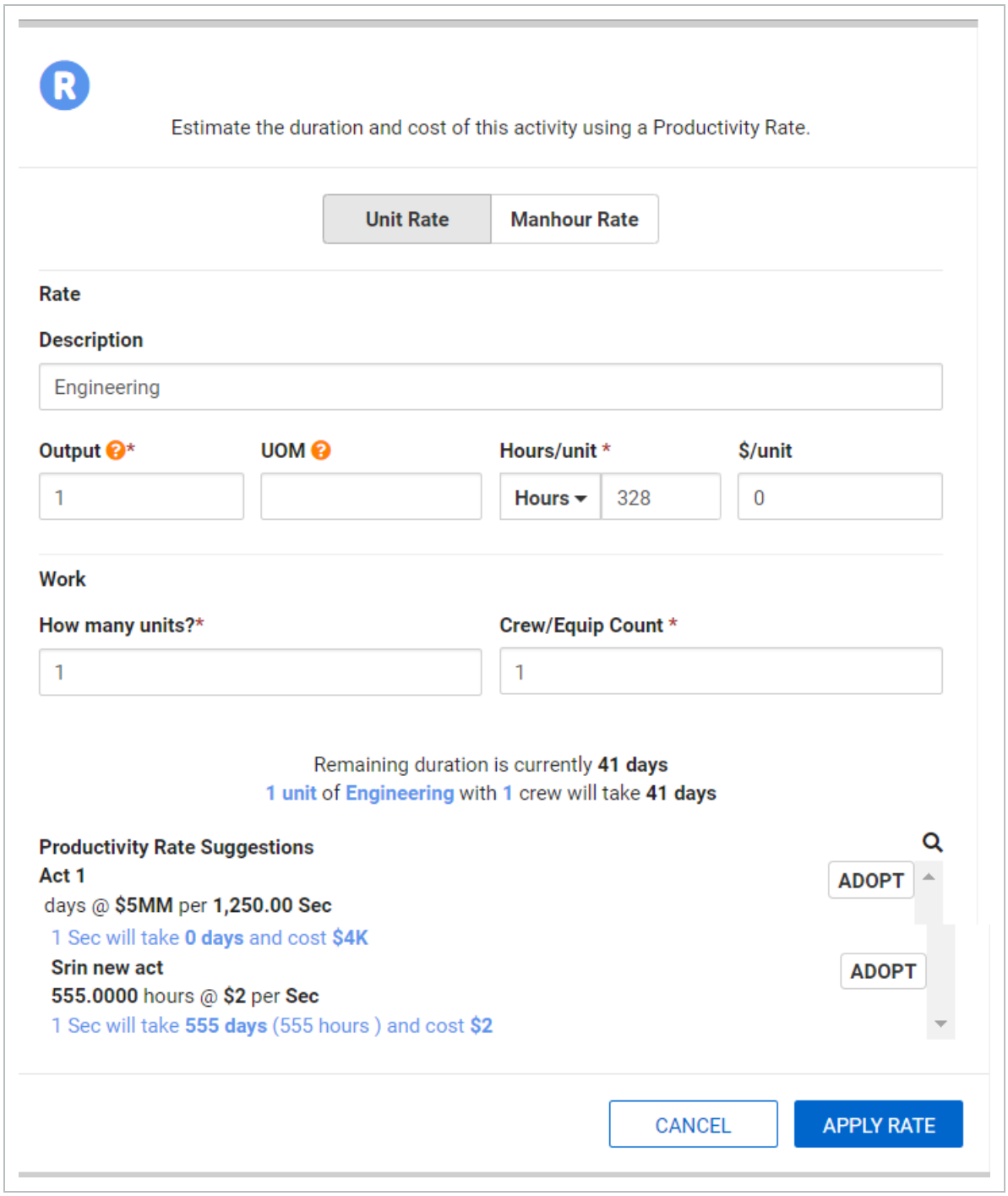
1. Select an **activity**.



2. In Iris > **Smart Planning** section, select the **set productivity rate** option for the activity duration field.



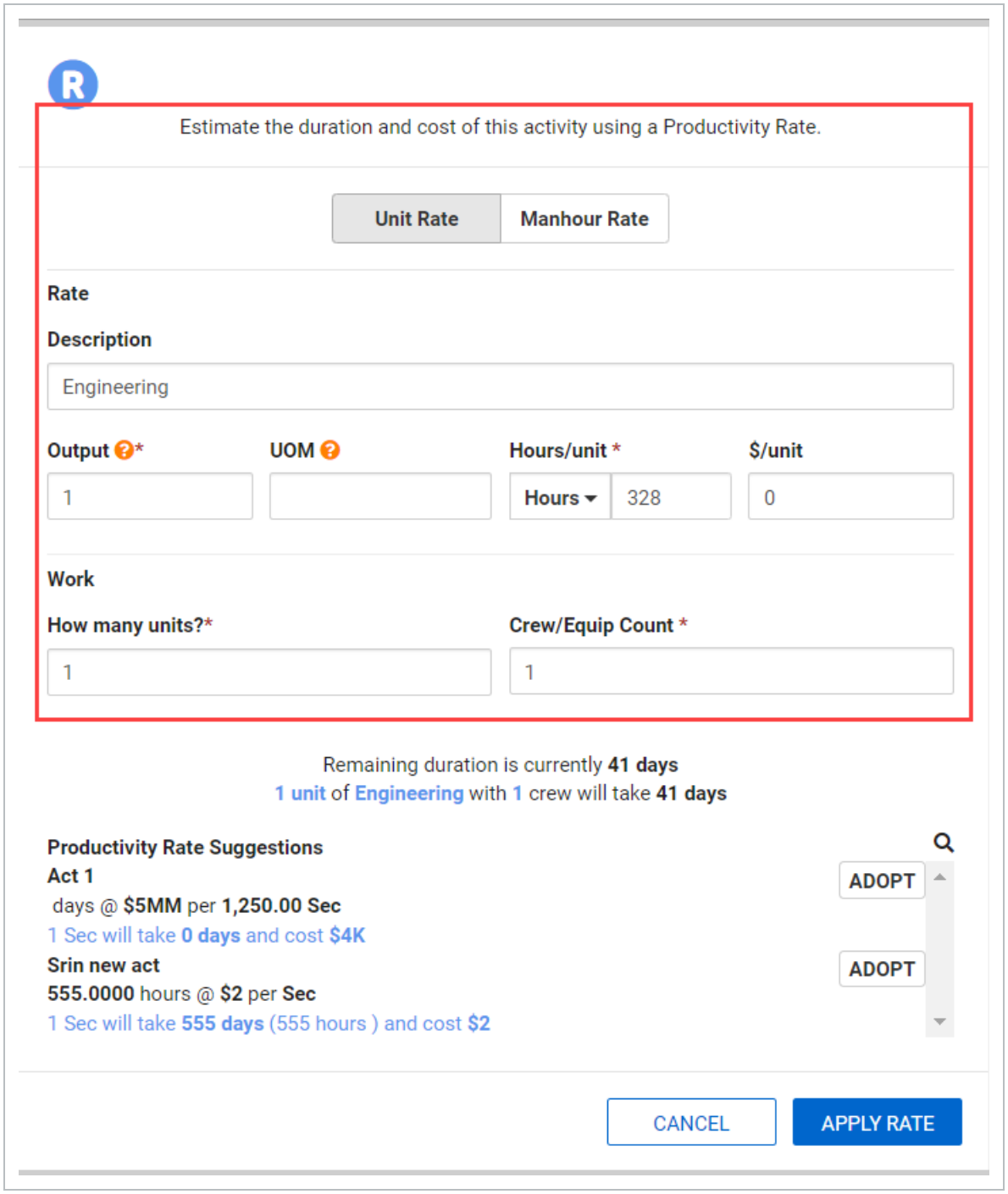
- A new window opens with the Productivity Rate Calculator and Knowledge Library Suggestions



Using the Productivity Rate Calculator

In the top section, schedulers establish the package of work to be conducted. Here, you enter the values for the calculator to use to determine the base productivity rate:

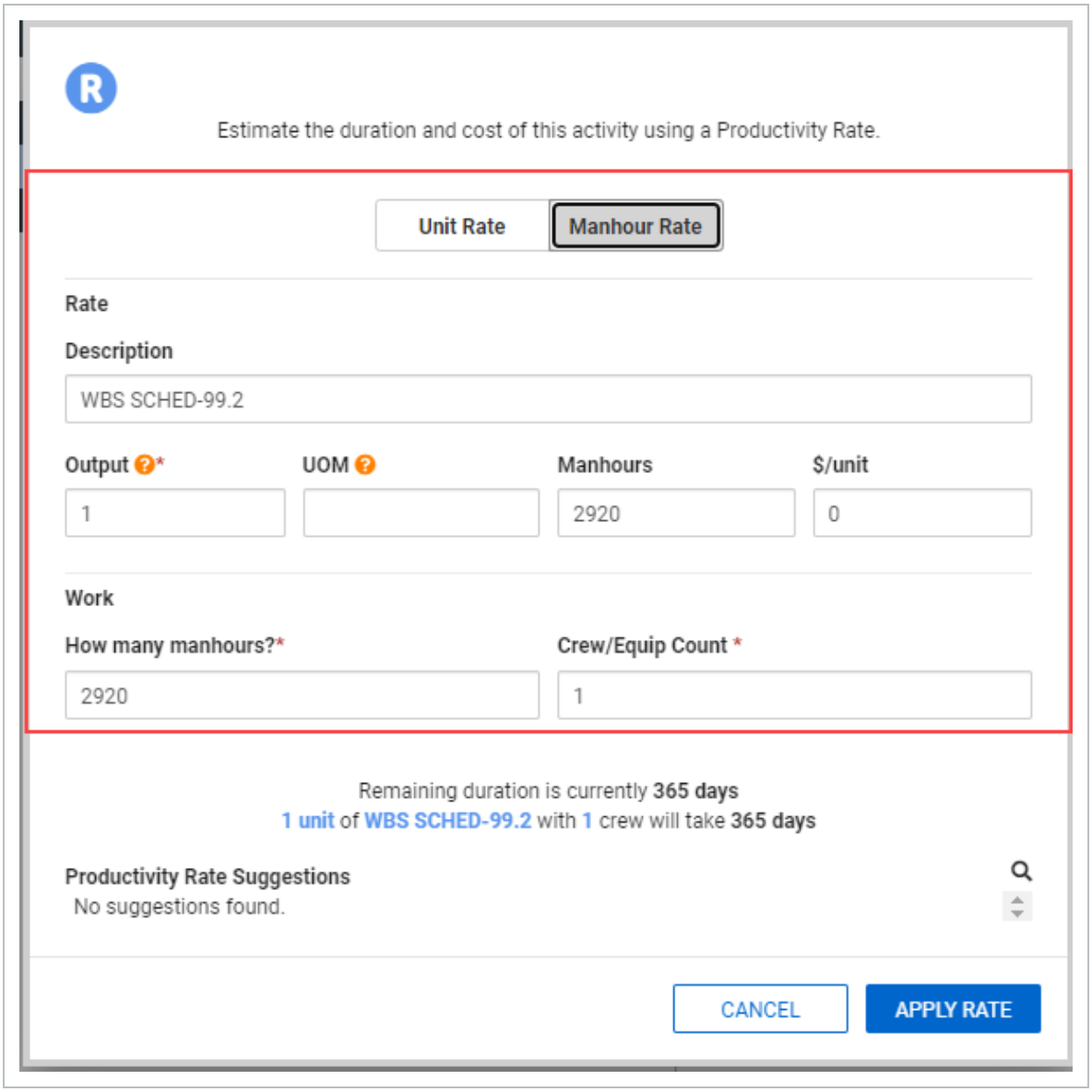
When you select the Unit Rate method, the following fields are shown.



Field	Description
Activity Description	Activity this Productivity Rate is for

Field	Description
Output	Output quantity for a single package (in the respective Unit of Measure)
UOM	Unit of Measure description
Time/ “Output & UoM”	Time (Hours/Days/Weeks) to complete the output established
$/“Output & UoM”	Cost to complete the output established

When you select the Manhour Rate method, the following fields are shown.



All of the Manhour Rate fields are the same as the Unit Rate Fields, with the exception that the Manhour Rate uses Manhours and the work calculates with manhours instead of units.

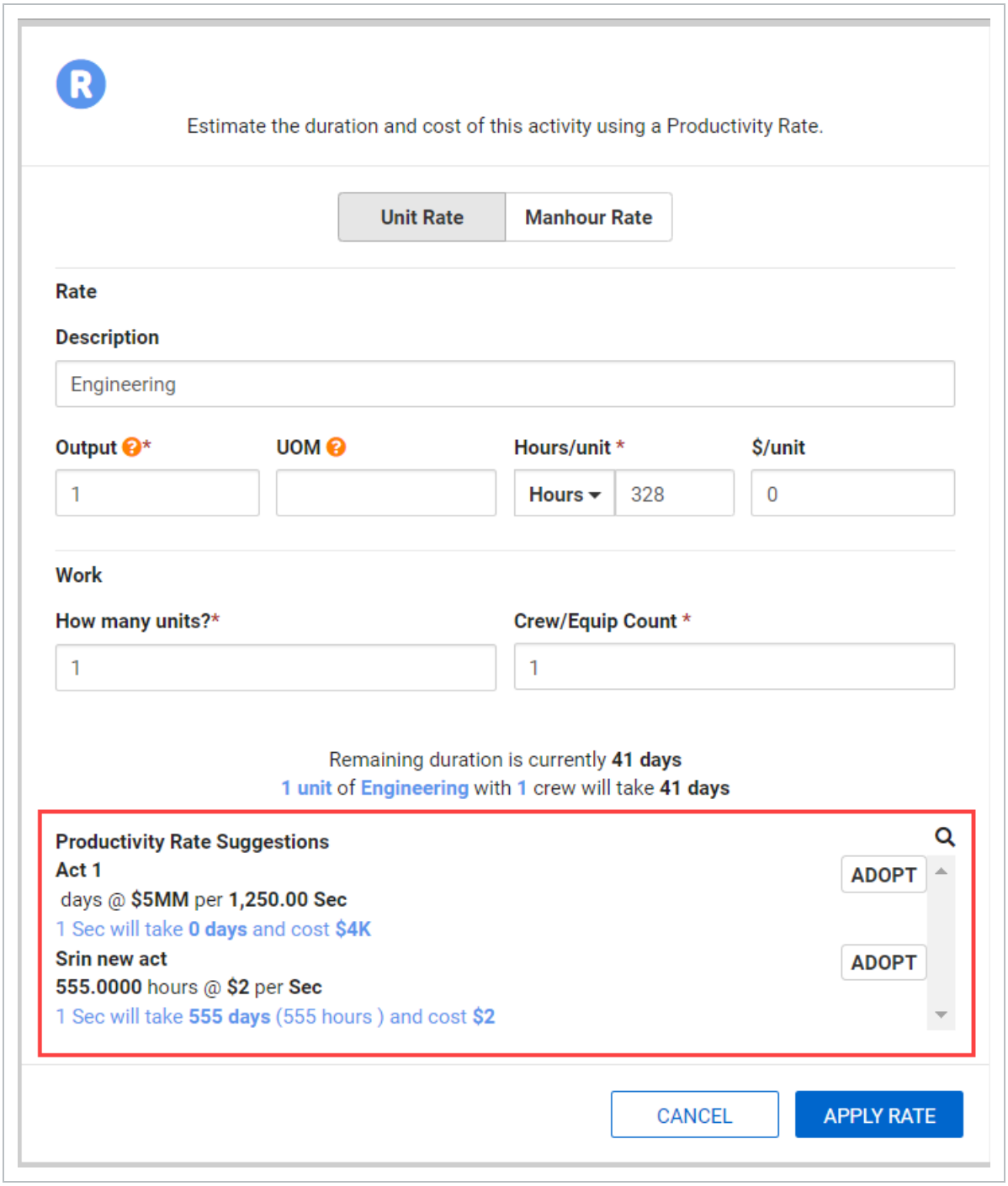
Under the Work subheader, schedulers can define the variables on the current project that the productivity rate will be factored against:

Field	Description
How many “manhours”?	Total quantity of manhours of effort to be expended
Crew/Equipment Count	Total Crews or Equipment assigned to complete the work

After all the variables have been entered, Schedule provides a summary of the calculation.

Using the Knowledge Base Suggested Rates

The Knowledge Base pulls in suggested productivity rates based on past packages that are similar in their descriptions, associated knowledge tags , and benchmark selection.

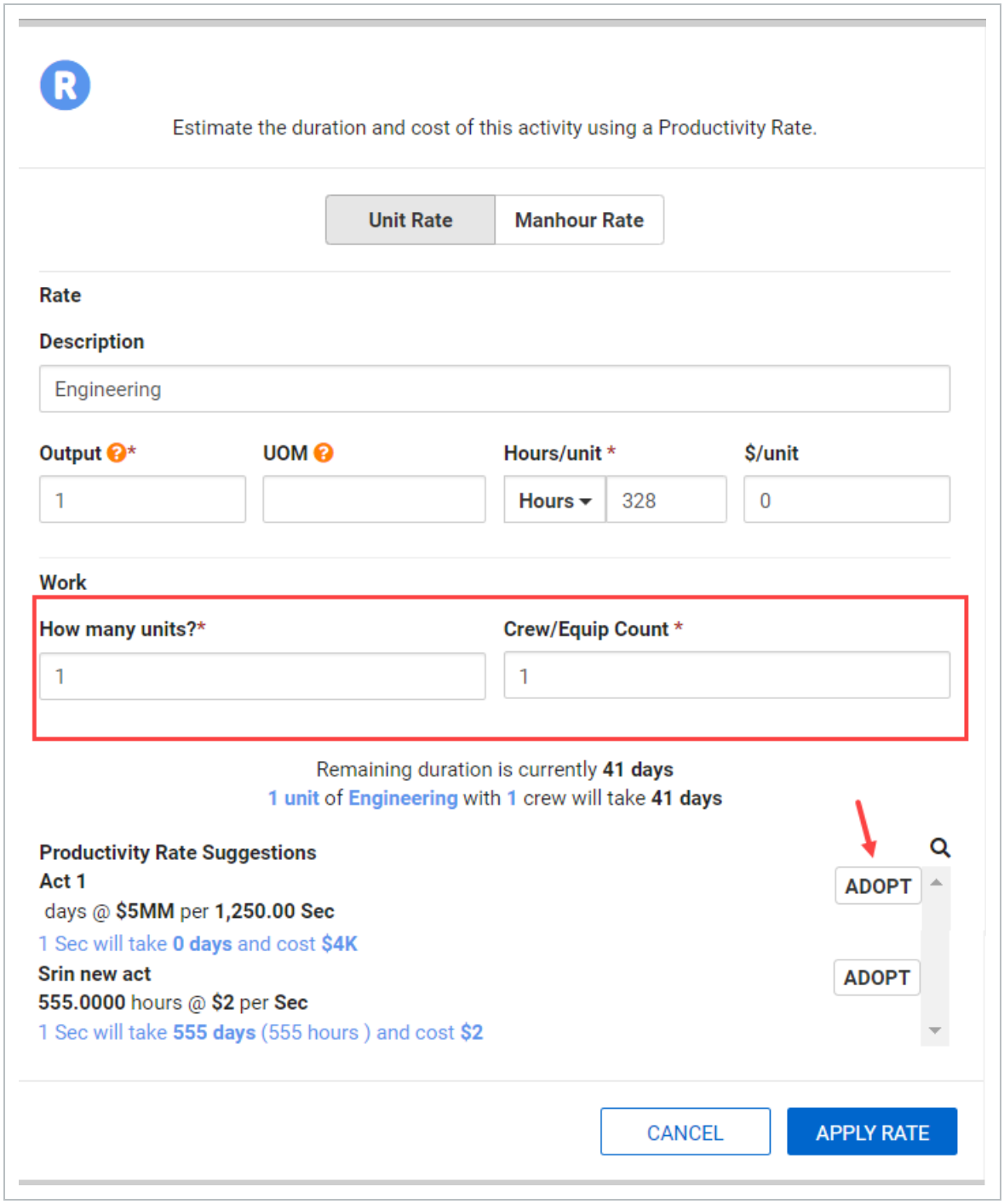


To select a suggestion, click **Adopt**. This will automatically fills in the Productivity Rate Calculator with the values from the Knowledge Library.

NOTE You can still make adjustments to the rate for the current project after adopting the suggestion.

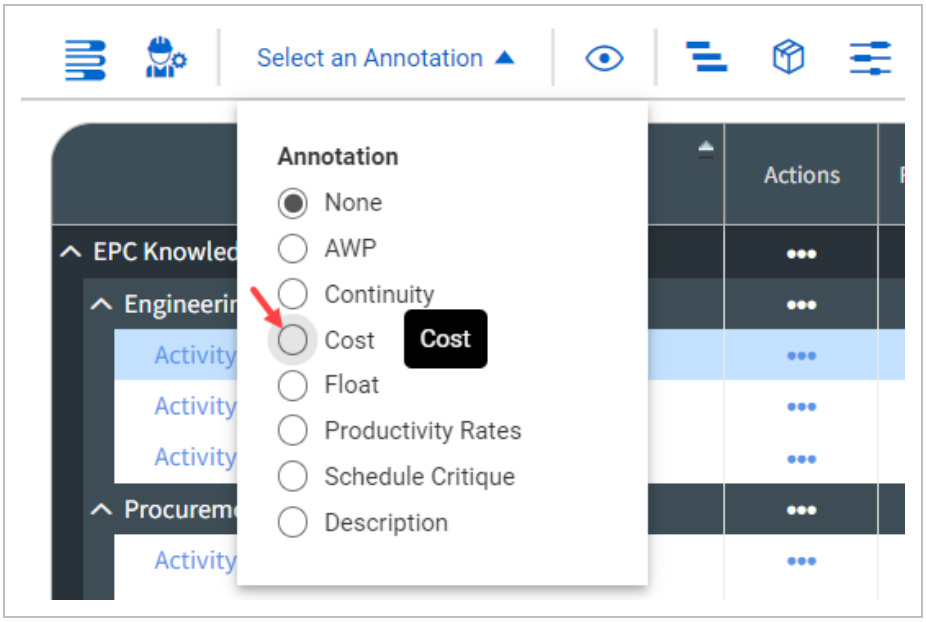
Calculate Productivity Rates

1. Go to the Knowledge Base productivity rate suggestions and **Adopt** a productivity rate.
2. Set or change the amount of work and crew size.

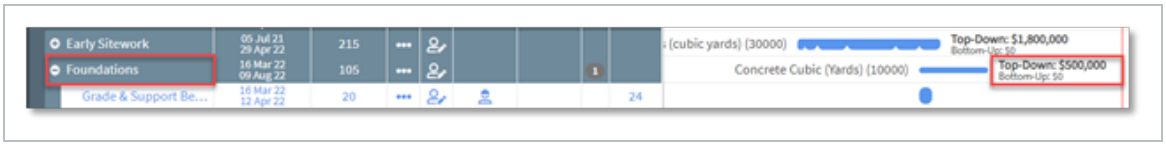


NOTE Pay attention to how this impacts the activity duration and cost

3. Click **Apply Rate** when complete.
4. Open the Annotation drop-down menu and select **Cost**.



- Now, you can view your project's bottom-up and top-down costs



Create Activities

There are two ways to conceptualize activity creation within InEight Schedule and depending on your intended outcome, there are benefits to each process:

- Knowledge subnet
- Create form scratch

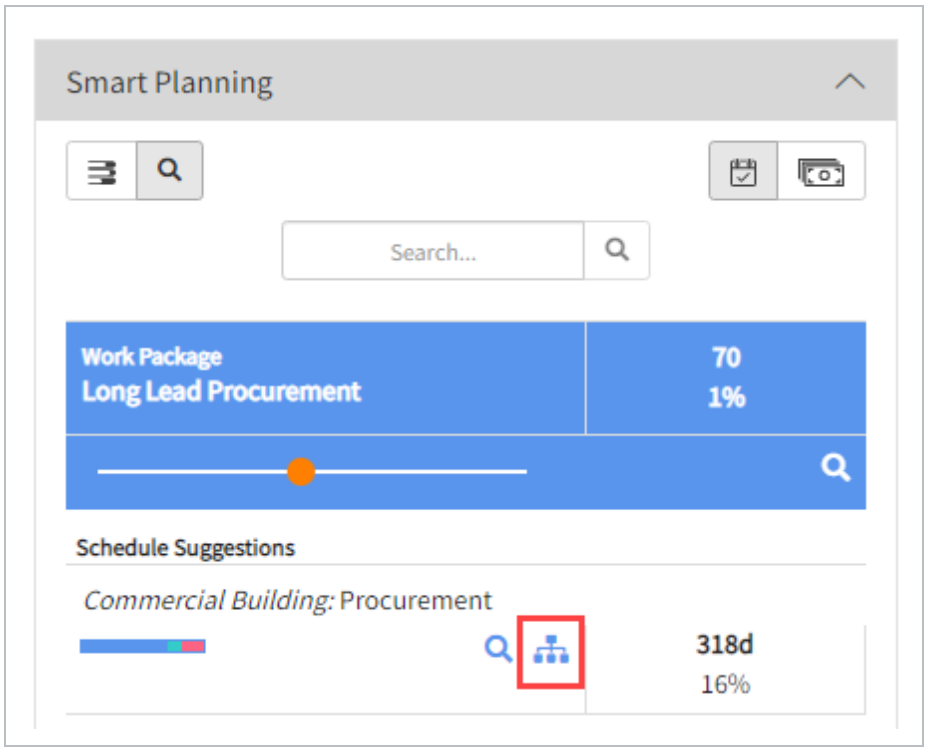
Knowledge subnets

Schedule leverages the Knowledge Base to rapidly build a schedule based on historical projects or existing templates. This feature enables you to pull in similar activities from Knowledge Base projects

and adjust them based on the parameters of the project being created.

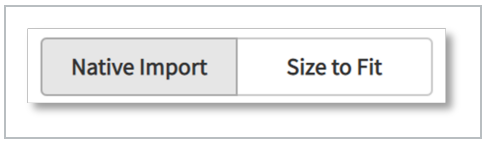
Building a schedule

1. Select a planning package.
2. From the Iris > **Smart Planning**, under the first Schedule Suggestion, click **Import Knowledge Subnet**.



   - The merge window opens, letting you customize your selection of planning packages and activities. For this example include all packages and activities in the subnet switched on

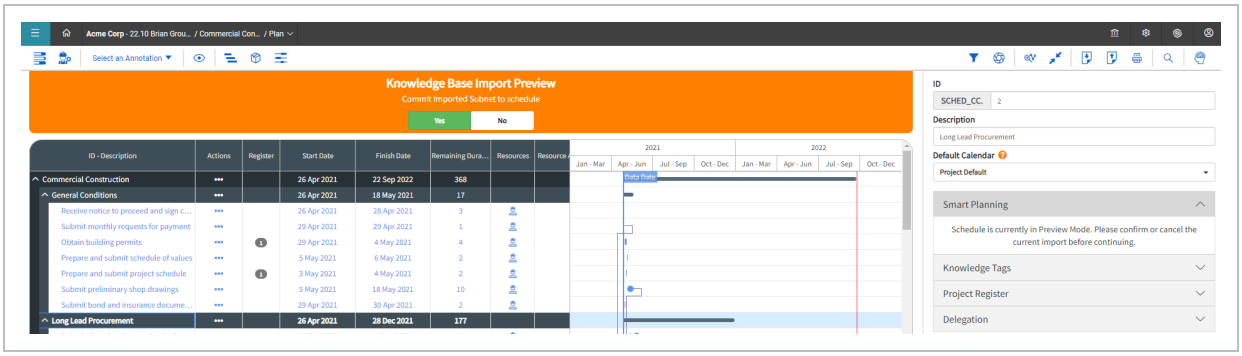
3. After the subnet selection is made, the option to bring in Knowledge Base subnet as *Native Import* or *Size to Fit* is available.



   - Native Import: it will bring in the selected subnet with the original durations from the Knowledge Base

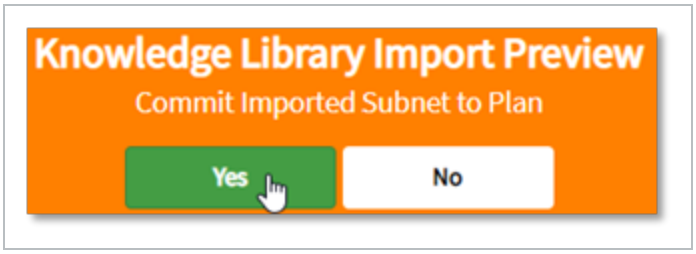
- Size to Fit: it will proportionally adjusts the subnet to fit within the duration of the Superior planning package in the current schedule

4. Select either **Native Import** or **Size to Fit**.
5. When complete, click **Preview**.



- Schedule merges in the Knowledge Subnet into the project and presents it as a preview.

6. If the preview looks good for merge, select **Yes** to commit the import in Schedule.

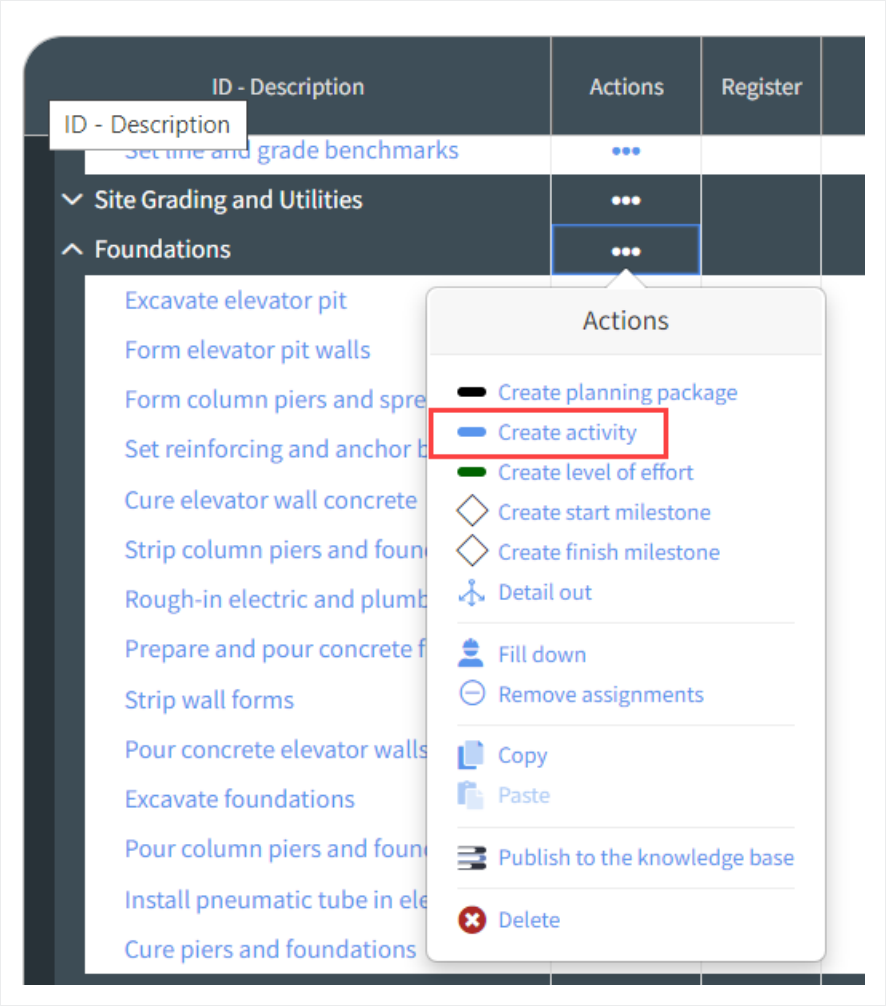


Activities from Scratch

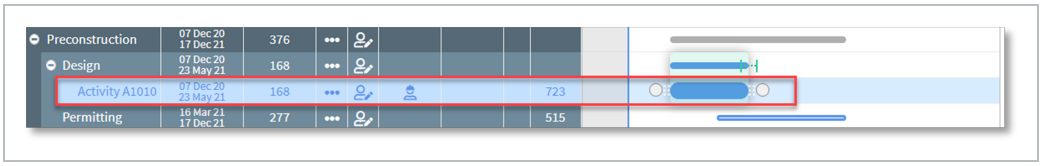
The second way to create activities is from scratch. This allows activities not yet in the Knowledge Library to be created on the project. Additionally, it provides schedulers total manual control when creating an activity.

Build Activities from Scratch

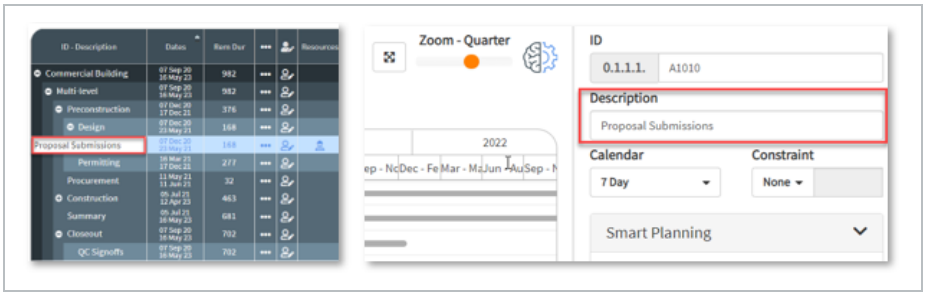
1. Click the **Actions** icon for the planning package which the subordinate activity falls under.



2. Select **Create Activity**.
   - A new activity will appear as a subordinate

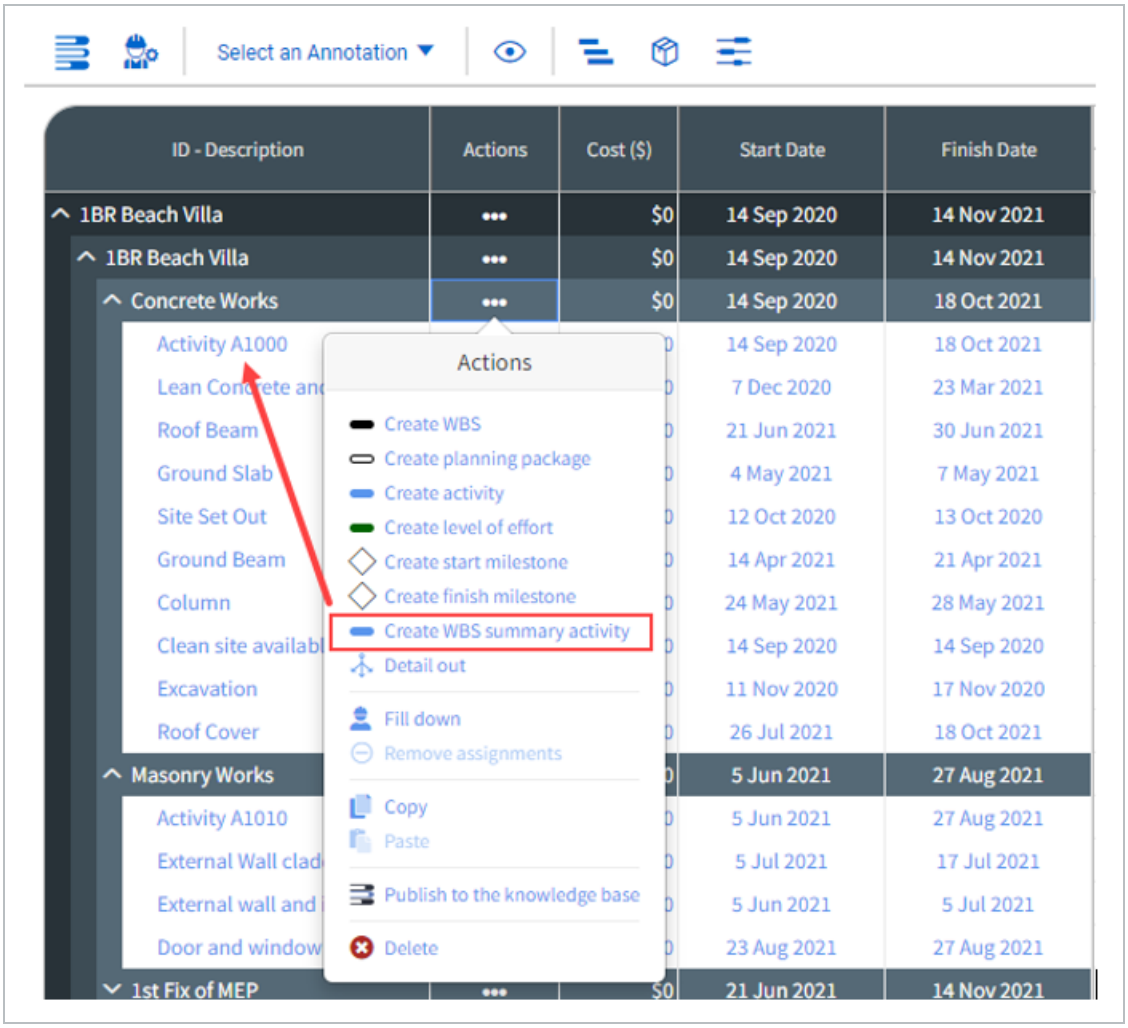


3. Rename your activity by either selecting the description field in the Gantt View or by going to the Iris and adjusting the description there.

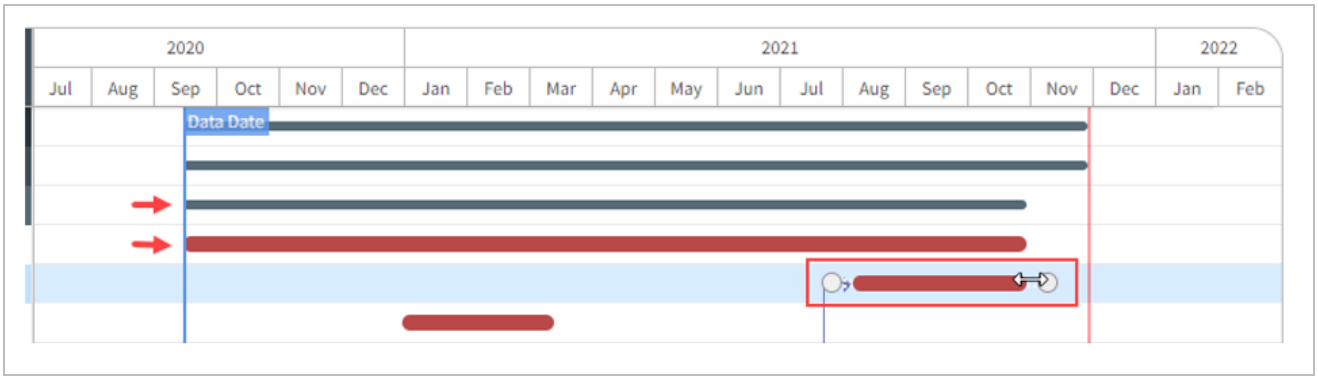


WBS summary activity type

In Schedule > **Plan**, you can create a WBS summary activity. Primavera XER imports support the WBS summary activity type and does not convert these summaries to Planning packages.



When you increase or decrease the duration of a portion of your WBS in your schedule, the WBS summary activity dynamically reacts to the modified duration changes.



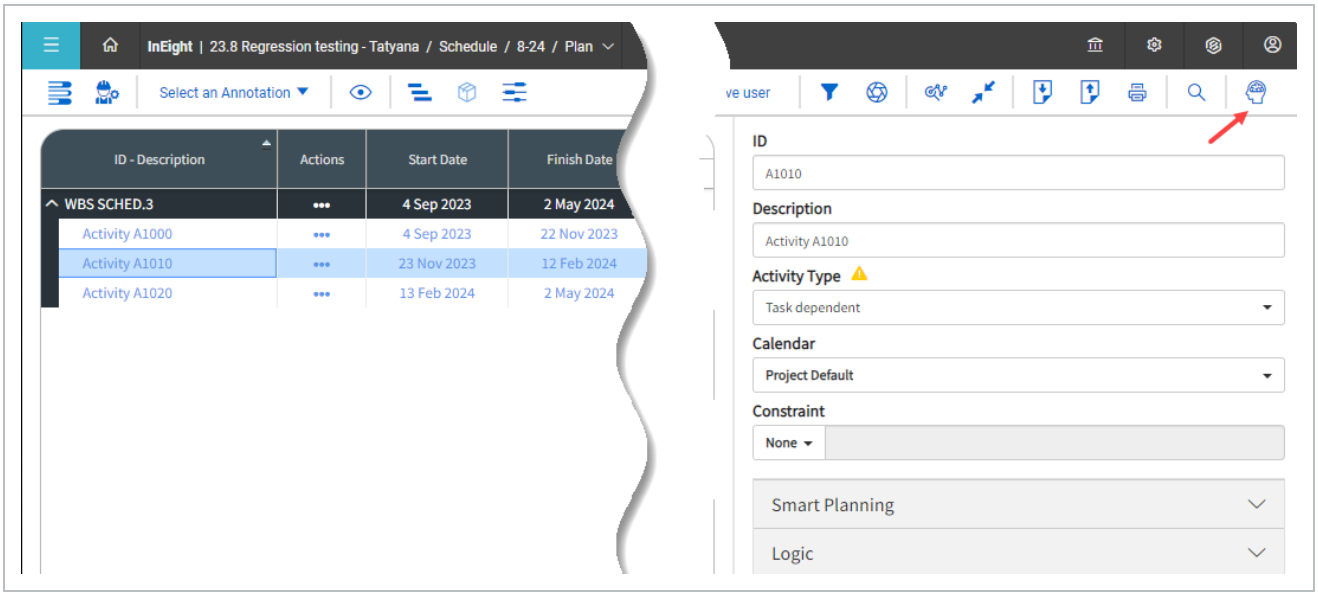
You can load resources into WBS summary activities to help linearly spread units over a specific time frame. Different calendars can be assigned to the WBS summary activity for tracking.

Change Activity Type

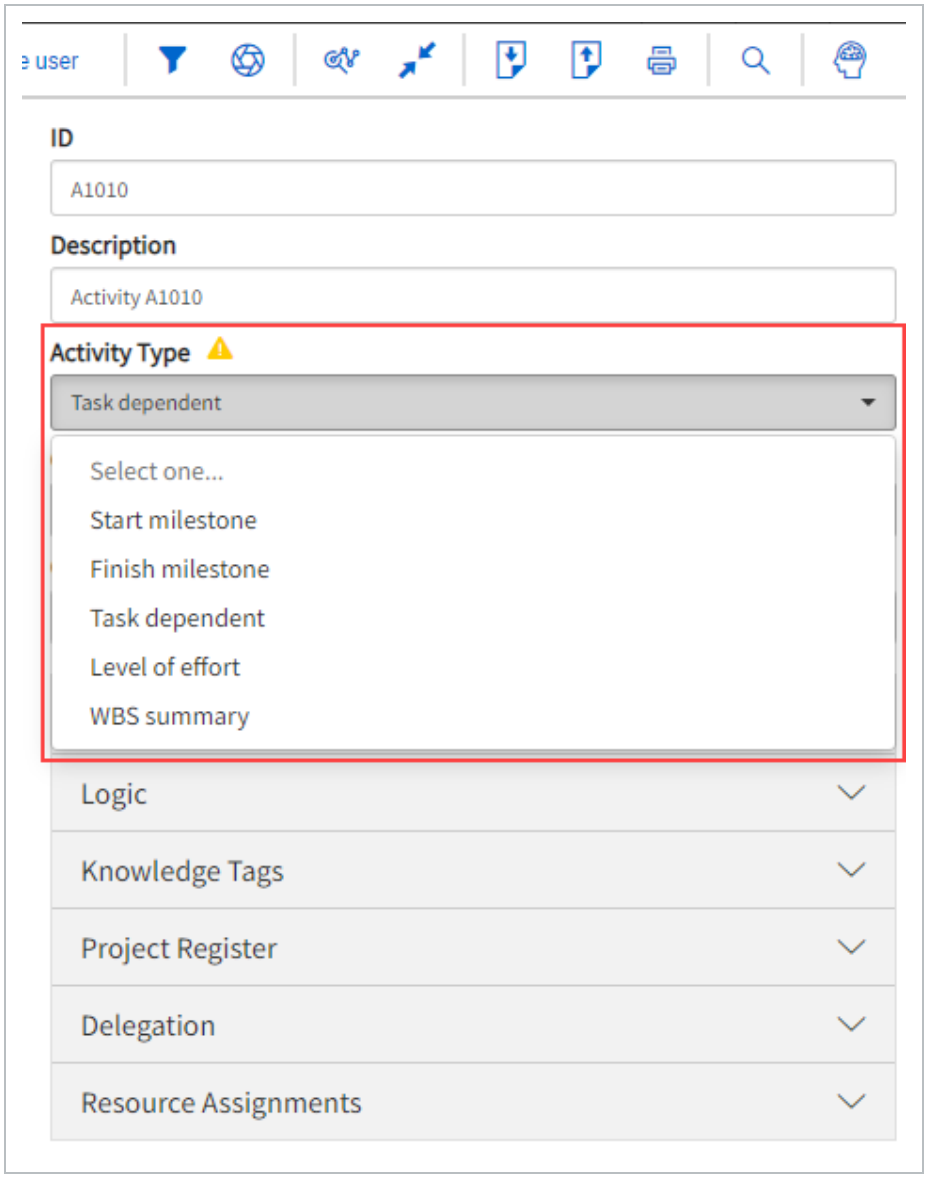
You can select an Activity Type in the plan schedule and change it from one type to another via a drop-down menu, which lets change an activity type without having to leave the page.

Change Activity Type

1. From the Schedule Plan view select an (terminal level) **Activity**.
2. Click on **Show/Hide Iris**.


InEight | 23.8 Regression testing - Tatyana / Schedule / 8-24 / Plan
Select an Annotation
ID - Description
Actions
Start Date
Finish Date
WBS SCHED.3
4 Sep 2023
2 May 2024
Activity A1000
4 Sep 2023
22 Nov 2023
Activity A1010
23 Nov 2023
12 Feb 2024
Activity A1020
13 Feb 2024
2 May 2024
ve user
ID
A1010
Description
Activity A1010
Activity Type
Task dependent
Calendar
Project Default
Constraint
None
Smart Planning
Logic

3. Click on **Activity type drop-down**, and select an activity type.

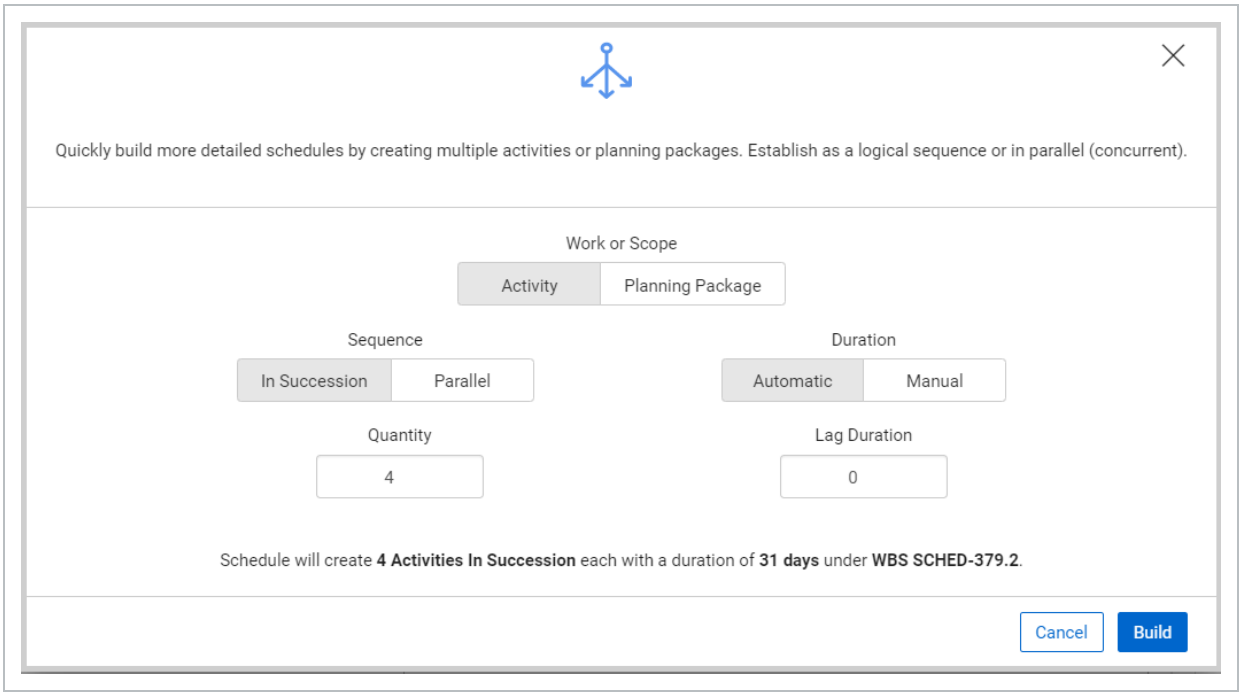


Bulk Activities from Scratch

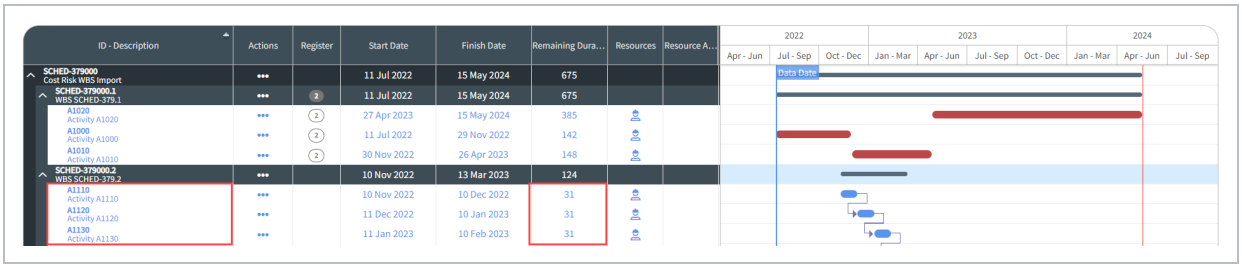
If multiple activities are to be created from scratch, the detail out function can be used as well.

Create Activities in Bulk

1. Click the **Actions** icon for the planning package that the subordinate activities fall under.
2. From the Actions menu, click **Detail Out**.
3. Create your activities as needed.
4. Set the Work or Scope option to **Activity**.
5. Set the Sequence option to **In Succession**.
6. Set the Duration to **Automatic**.
7. Set your **Quantity**.
8. Click **Build**.



9. Change the activity names and their respective duration.



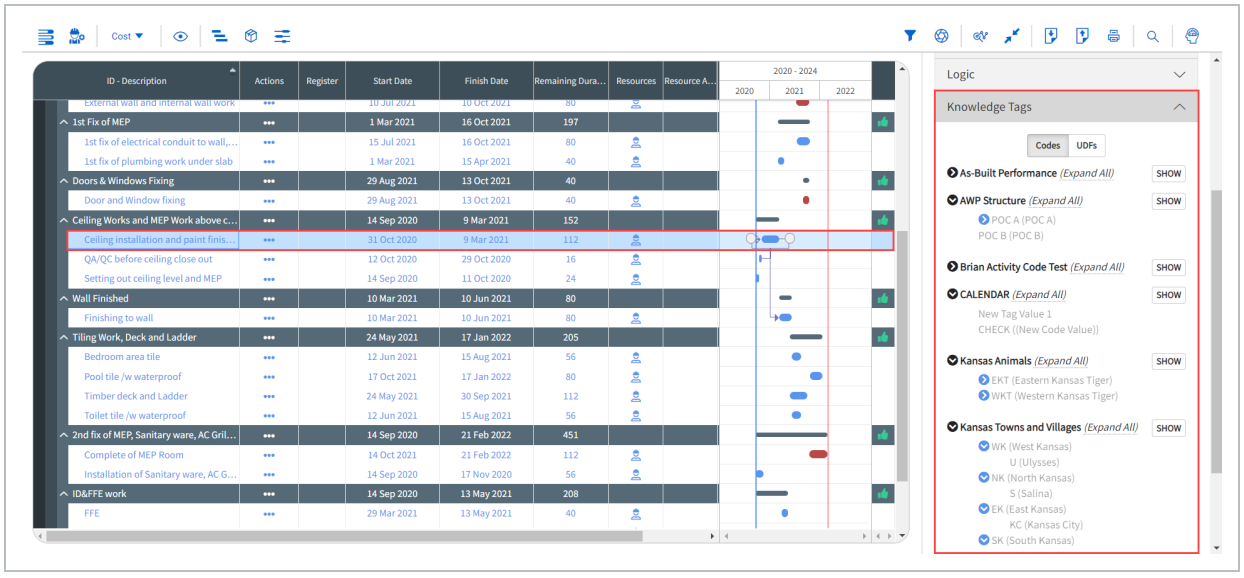
Assign Knowledge Tags

Knowledge Tags connect the data between the Knowledge Base, schedules, and activities. Assigning Knowledge Tags to planning packages and activities aid in associating schedules of similar scope, cost, duration, location, discipline etc. for InEight Schedule to generate suggestions and benchmarks.

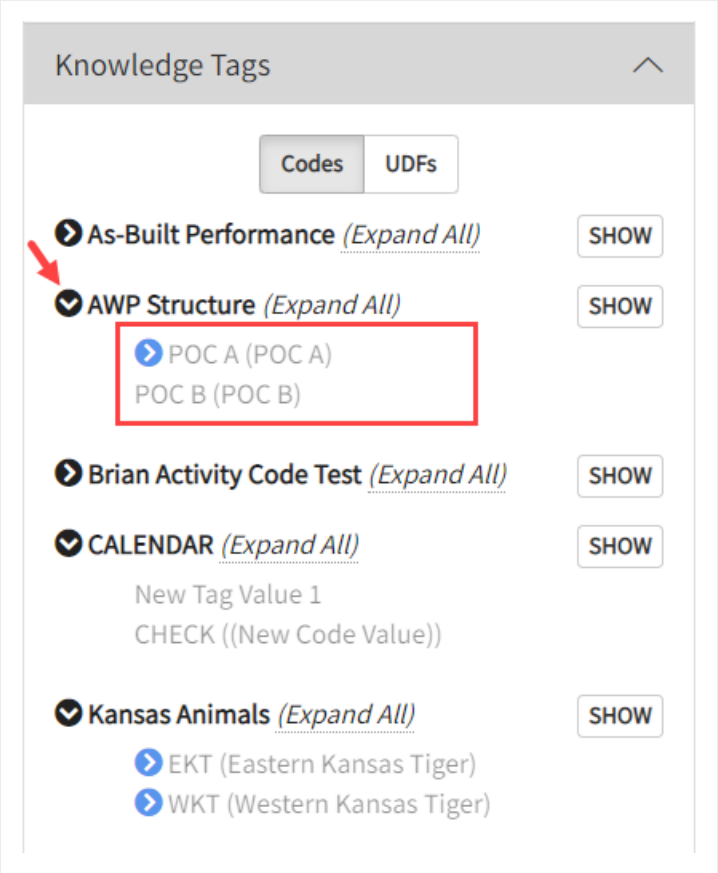
> **NOTE** The process of associating Knowledge Tags to activities is fundamentally the same for planning packages.

Assigning Knowledge Tags in the Iris

1. Select an activity. Open the Iris and go to the Knowledge Tags Section.
    - Knowledge Tags will appear in the Iris based on what is set up in the Knowledge Base & the Configuration Knowledge Tags Register.

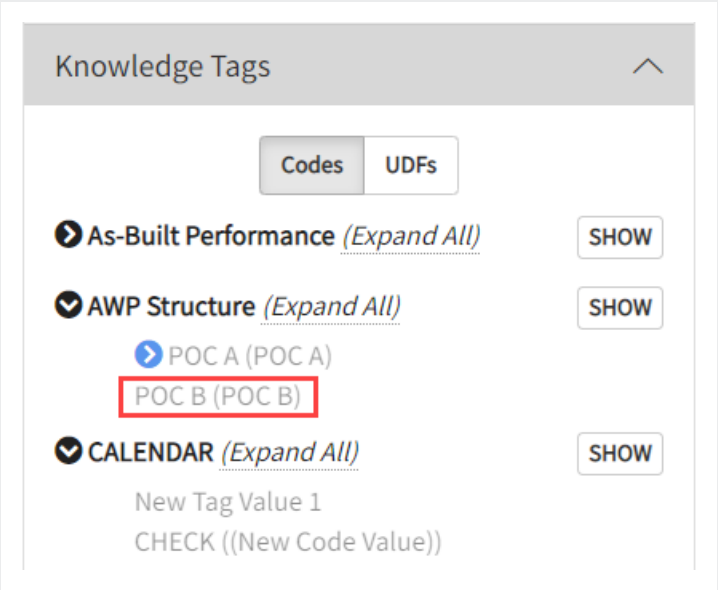


2. Click on the **arrow** to expand the Knowledge Tags available within each group.



NOTE Some tags have “Inherited” values. These are rolled down from a superior level (i.e. assigned at the project level, assigned at the planning package level)

3. Select a tag from the drop-down menu to assign it to the activity.



Assigning Logic

Logic is what links planning packages, activities, and milestones together throughout the schedule, for example when:

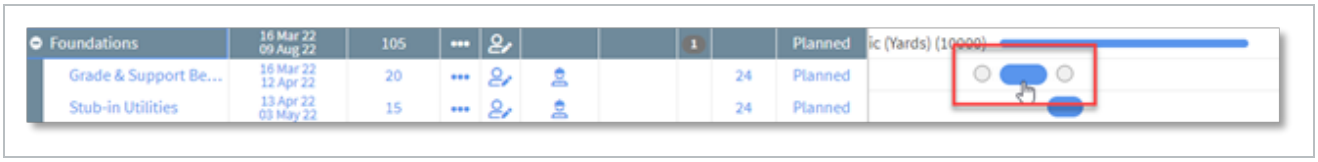
- an activity finishes, another starts
- two activities kick off at the same time
- multiple activities must be completed before another begins

Within Schedule, there are two ways to setup schedule logic: via the Gantt Chart or the Iris.

Using the Gantt Chart to Assign Logic

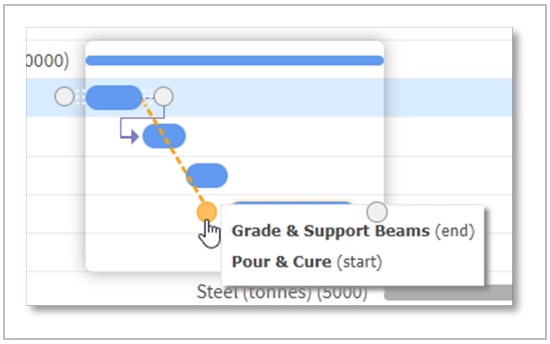
The Gantt Chart has built-in functionality allowing activity logic to be tied together directly in the visual. This is great for quickly adding or adjusting logic in the schedule.

When hovering over any activity bar in the Gantt chart, two dots will appear at the beginning and end of the activity:

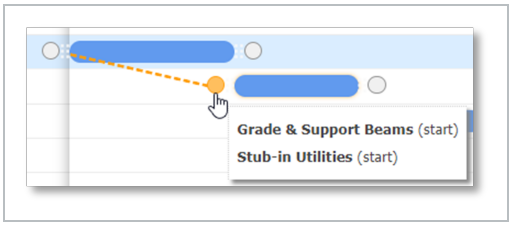
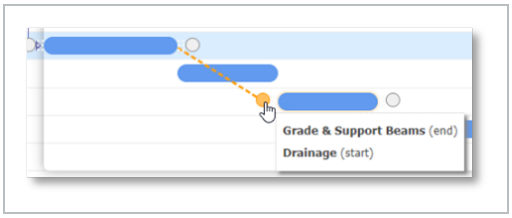
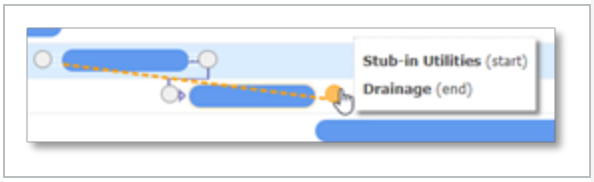


Clicking and dragging either dot from what activity to another will create a logic tie.

- Dot at the beginning of an activity: the start logic of the activity
- Dot at the end of an activity: the end logic of the activity



Connecting dots between activities, define the type of logic being applied.

Function (Connect the Dots)	Logic (How to Connect)	
	Start-to-Start (SS)	Connect the start of one activity to the start of another activity
	Finish-to-Start (FS)	Connect the end of one activity to the start of another activity
	Finish-to-Finish (FF)	Connect the end of one activity to the end of another activity
	Start-to-Finish (SF)	Connect the start of one activity to the end of another activity

NOTE The first activity dot selected is treated as the predecessor to the second activity dot. Thus, the second activity will be a successor to the first activity.

Planning Mode

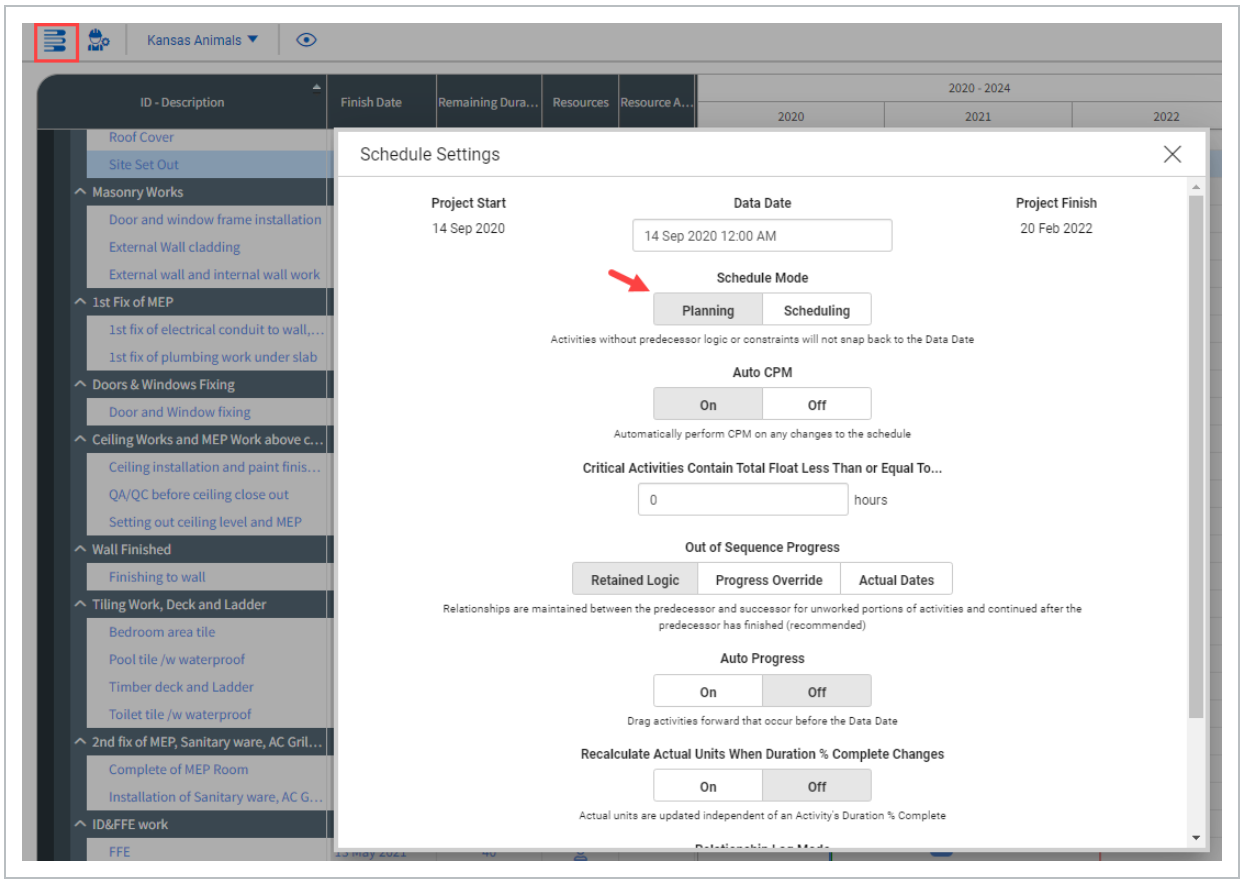
At the start of the project or phase, non-schedulers identify the key items to be planned for and create a rough timeline of the plan. InEight Schedule gives you the ability to do this in a way that easily carries forward into a full schedule.

TIP Planning mode lets users freely move around planning items. In this mode, planning packages and milestones can be added, but not activities.

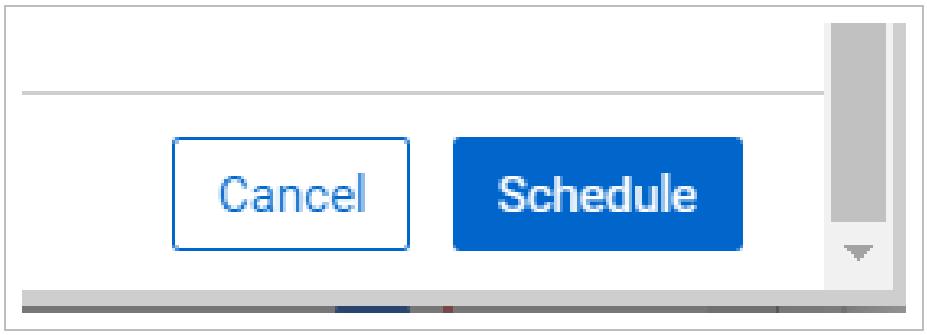
Create a new planning package

NOTE Planning packages brought in from the outline during project creation are automatically populated.

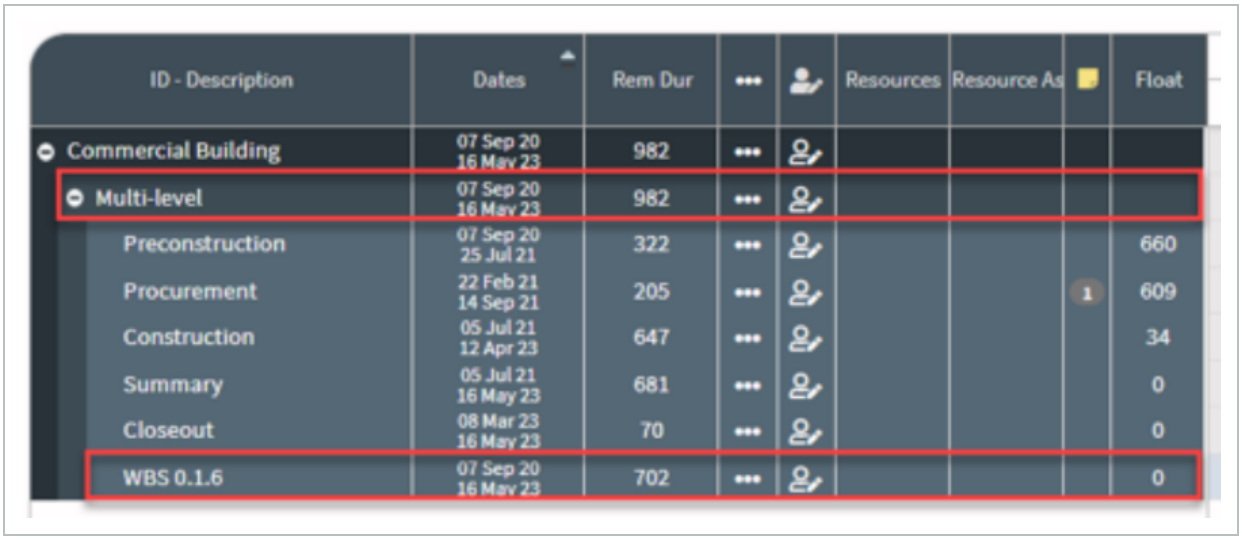
1. To create a new planning package from scratch, click the **Schedule** icon in the far left corner and select **Planning** Schedule mode.



2. Scroll down to select **Schedule** at the bottom far right on the Schedule Settings window.

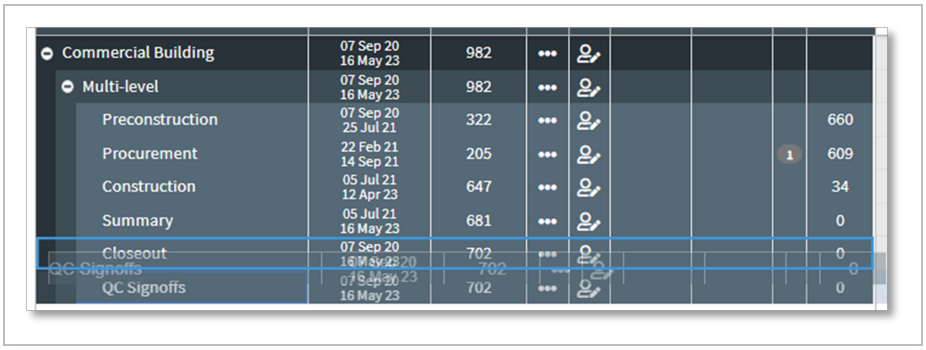


NOTE New planning packages are created as subordinates under the open or selected parent package.



TIP If the Actions icon is not available, you can bring it into view using the **Customize Gantt View** icon at top.

1. Click in the **Description** column to rename your new planning package.
2. Organize planning packages by clicking and dragging the rows.



NOTE When dragging rows in the Gantt chart, either a white dot or a blue line shows where in the hierarchy the row is being moved. Or, a row is boxed in blue, signifying the planning package being dragged will become a subordinate to the boxed work package.

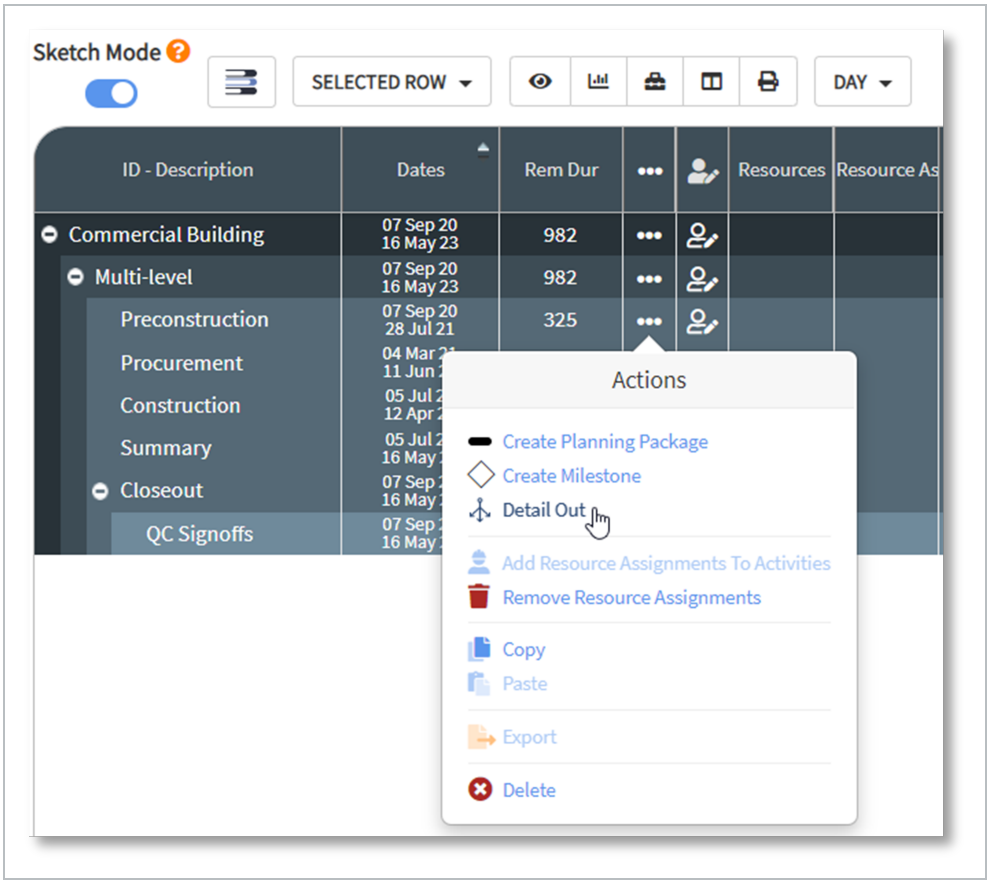
3. You can continue adjusting planning packages using the bars in the Gantt chart.

NOTE You can adjust a planning package's duration in the Rem Dur column. This will adjust its duration while holding the current start date.

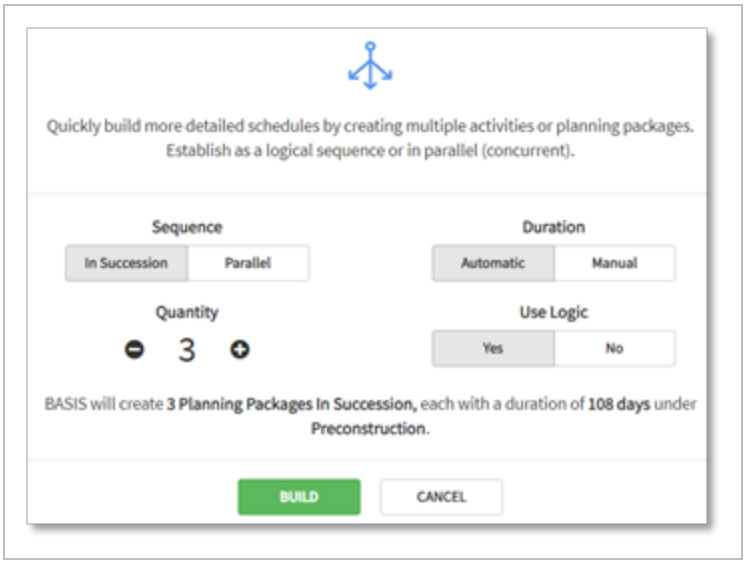
Bulk creation of planning packages

Add planning packages individually or in bulk with the Detail Out function.

1. Select the **Actions** icon on an existing planning package.
2. From the drop-down menu, select **Detail Out**.



- From here you can select how you want to add your new planning packages



Field	Description
Sequence	Sets the new planning packages to occur in succession or parallel.
Duration (Automatic)	Schedule will distribute the superior duration evenly across the subordinate planning packages.
Duration (Manual)	Manually set a custom base duration.
Quantity	Number of subordinate planning packages are being created.
Use Logic (On)	Logic is tied from one package to the next.
Use Logic (Off)	Logic is not assigned. Additionally, the option to set a scope gap is provided.

NOTE The values set here are for the default/initial creation of packages and can be changed as needed later .

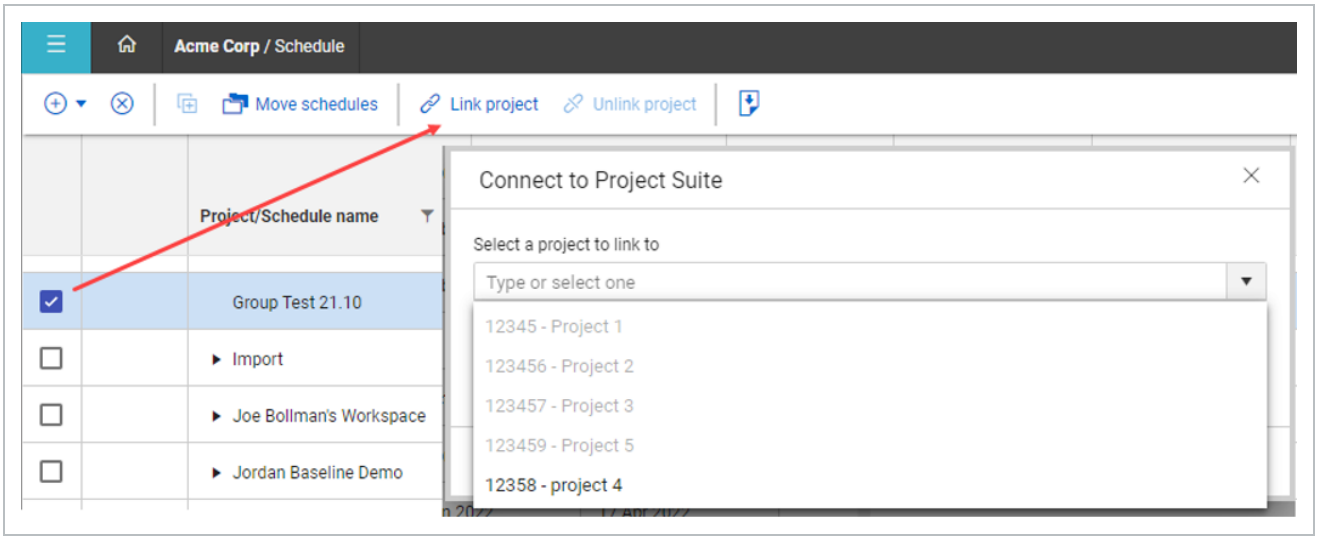
3. Set the **quantity**.
4. Click **Build**.

NOTE At the bottom of the Detail Out window is a summary of what will be added to the schedule.

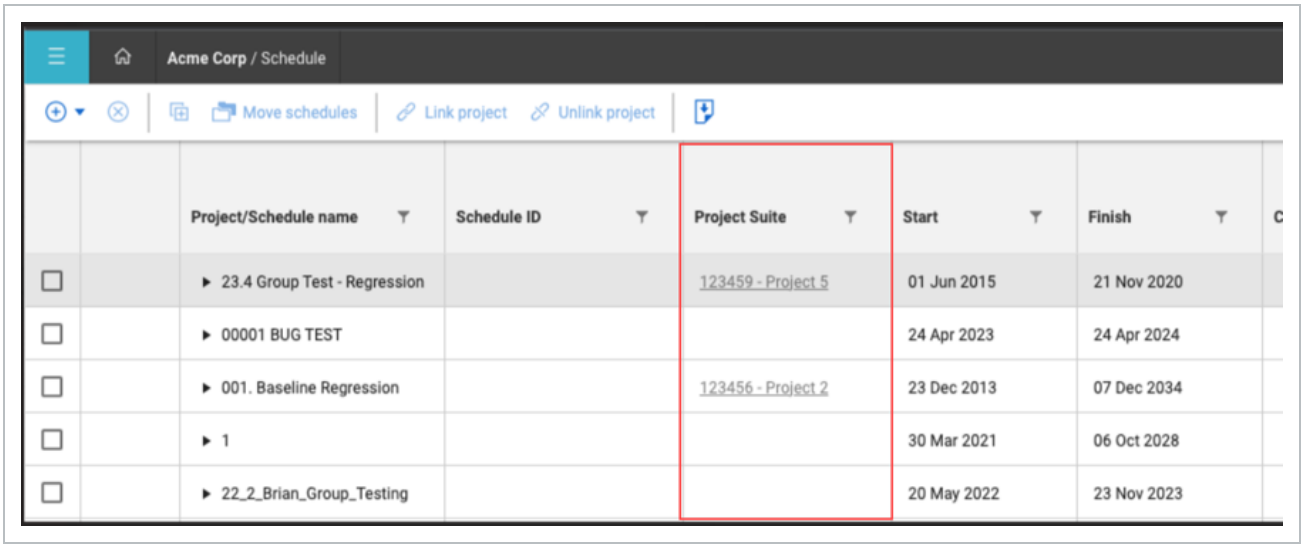
5. Your new WBS planning package is created, and you can rename your planning packages accordingly.

Advanced Work Packaging

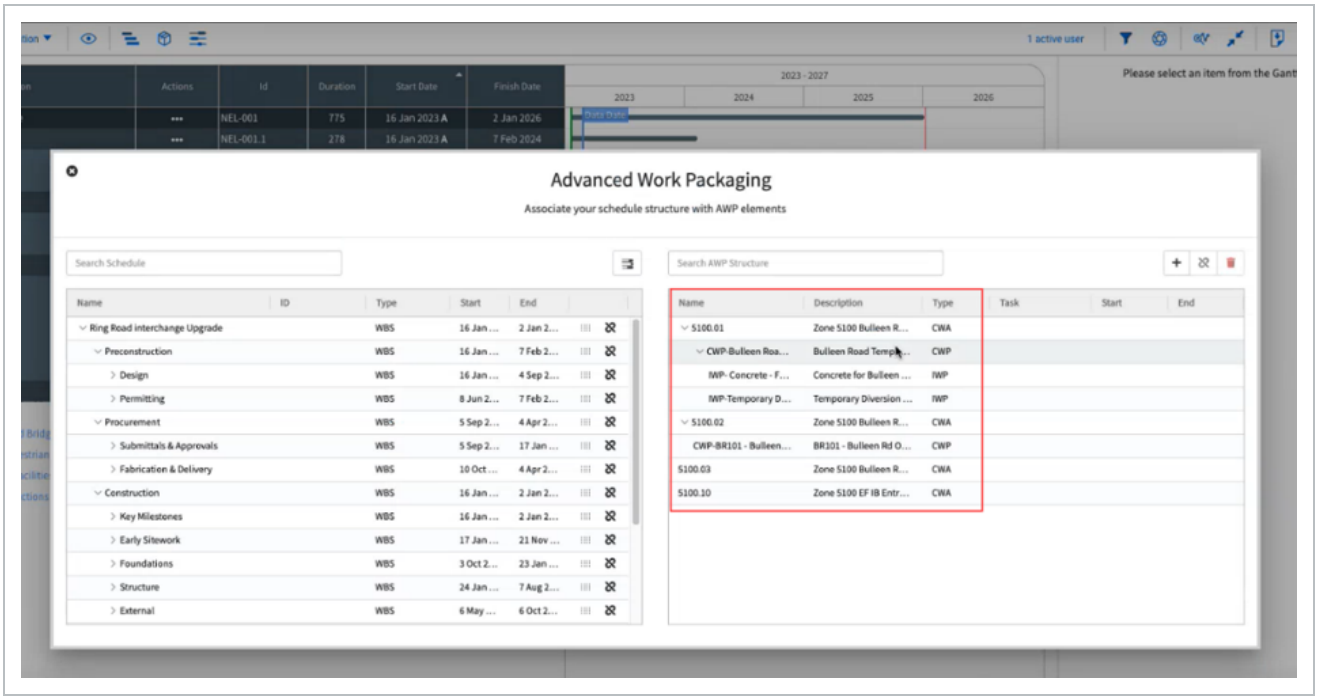
The integration with Project Suite is built primarily for the Project Suite migration. For new users or non-connected workspaces, you can navigate to the Project List page, select a workspace and link a project. You can then select a project in Project Suite to connect and link a project schedule in Schedule.



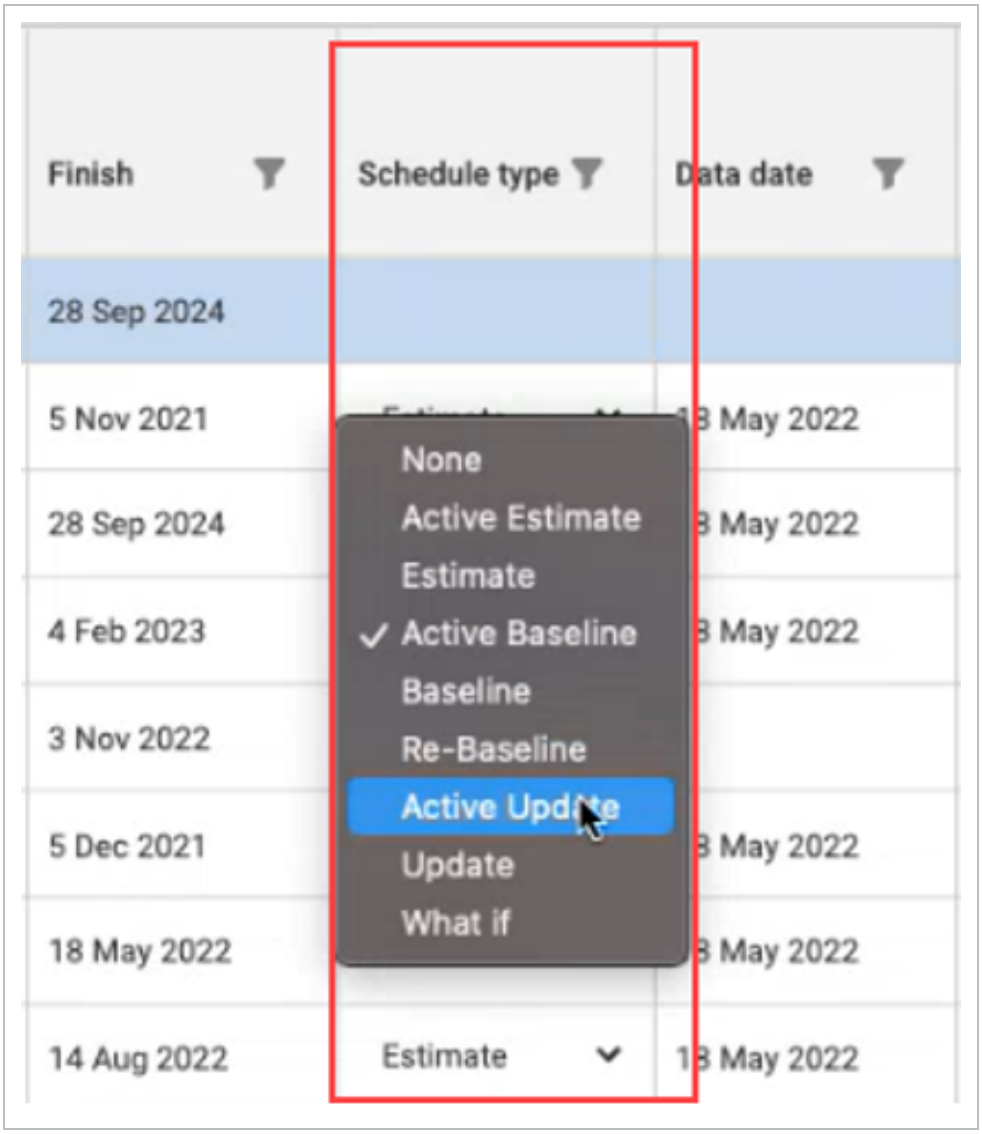
When linked, the Project Suite field becomes populated with a selected project.



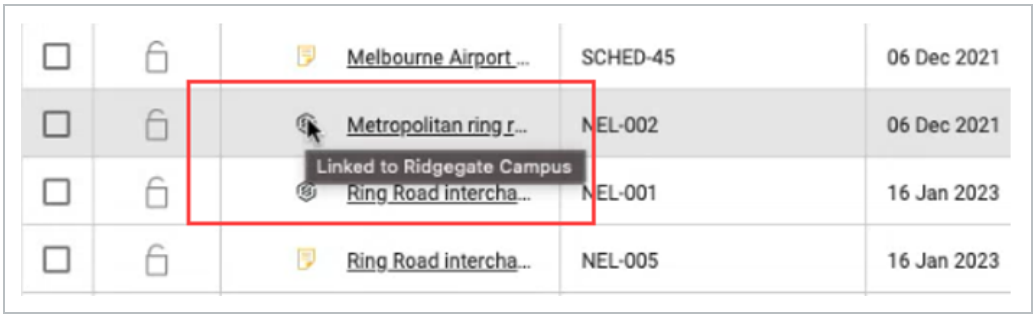
When you go to AWP, you see Plan and Progress data in that schedule.



When a project schedule is identified as an Active Update Schedule Type, it becomes the Project Suite connected schedule.

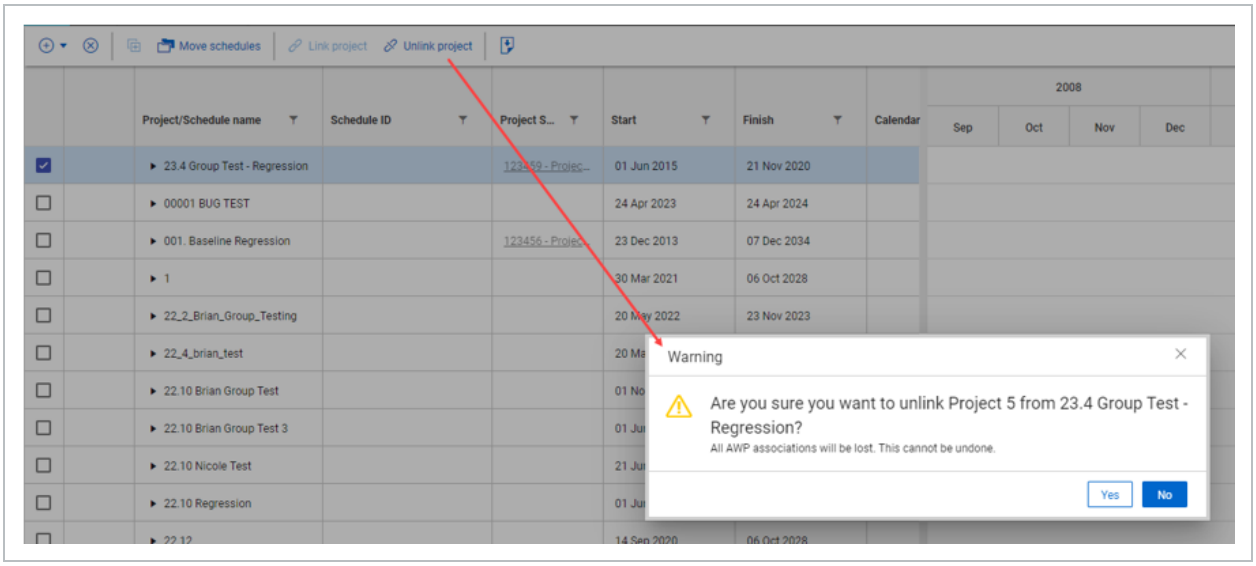


An InEight icon shows next to the project schedule name to signify that the schedule is now linked with a project in Project Suite.



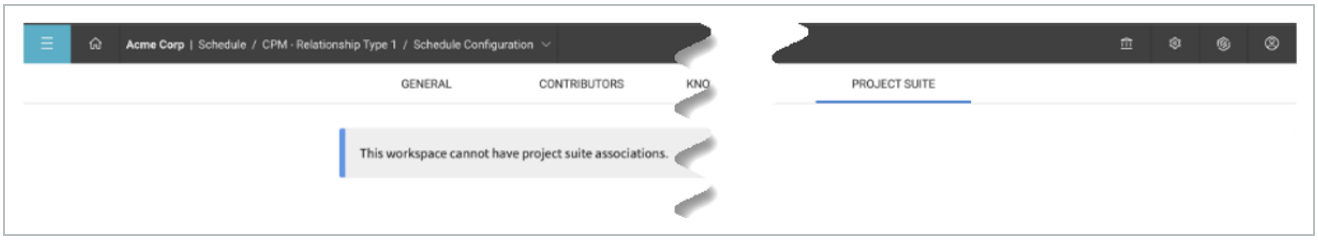
Unlink a Project Suite project

You can select **Unlink project** to disconnect a Project suite project from Schedule. All the AWP associations will be deleted, and any changes cannot be undone.



Schedule Configuration

Schedules that are housed under the *None* project workspace do not support a Project Suite project connection via the Project Suite tab in Schedule Configuration.



If a connection is required, you can move the schedule file to a new or existing workspace to enable this feature.

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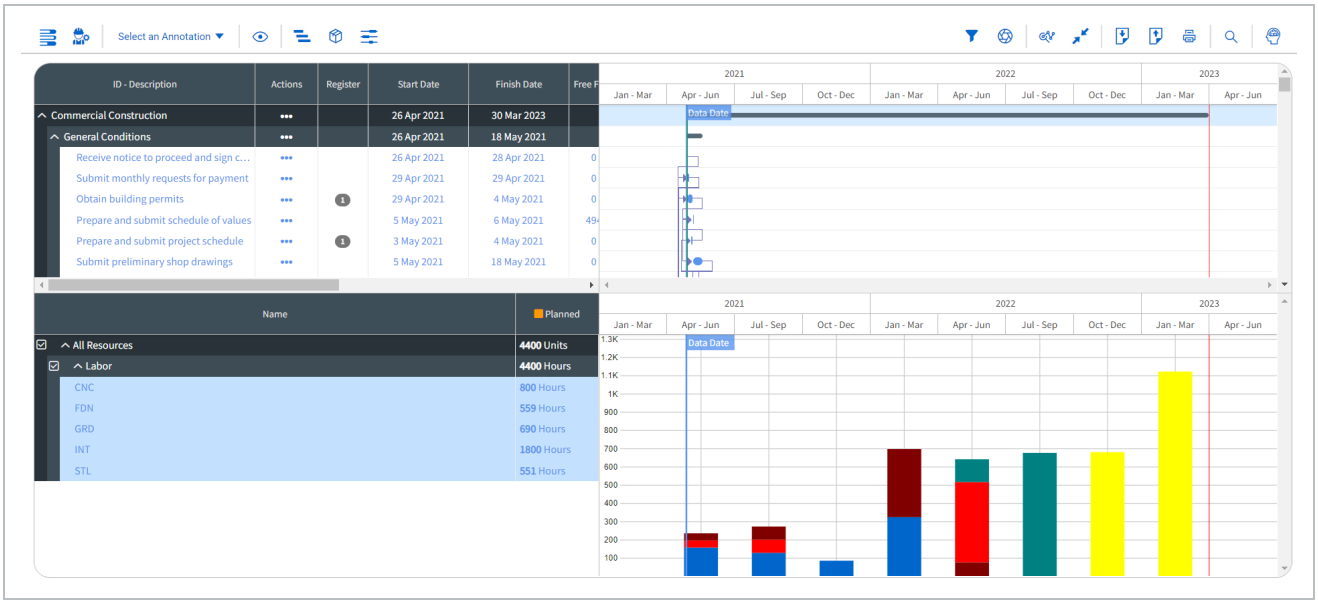
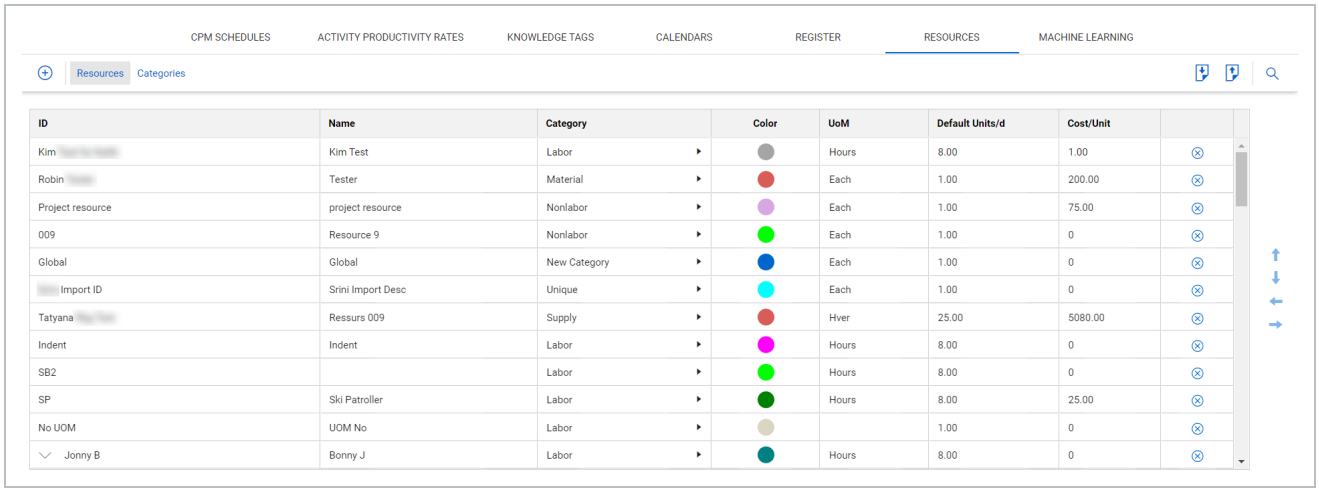
LESSON 5 – RESOURCE MANAGEMENT

Project Resources

The Resource Management function provides schedulers with the ability to account for and report on the project resources (for example, labor, materials, or equipment) that are needed to plan the scheduled work.



From a shared organization resource pool, schedulers can assign the required resources to activities. With the resource utilization data, InEight Schedule can assess cost and time impacts in a time-phased manner.



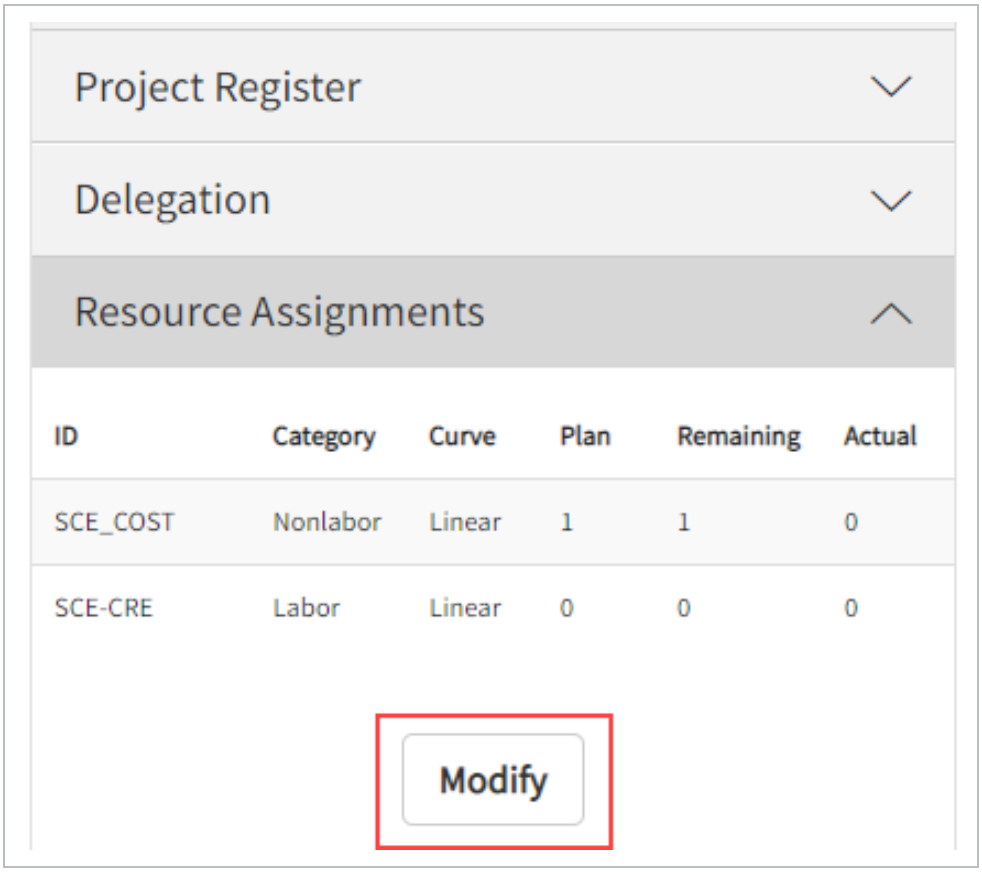
Resource Assignments

Resources are assigned to activities (activity level) but can also be set via work packages (summary level) in the schedule.

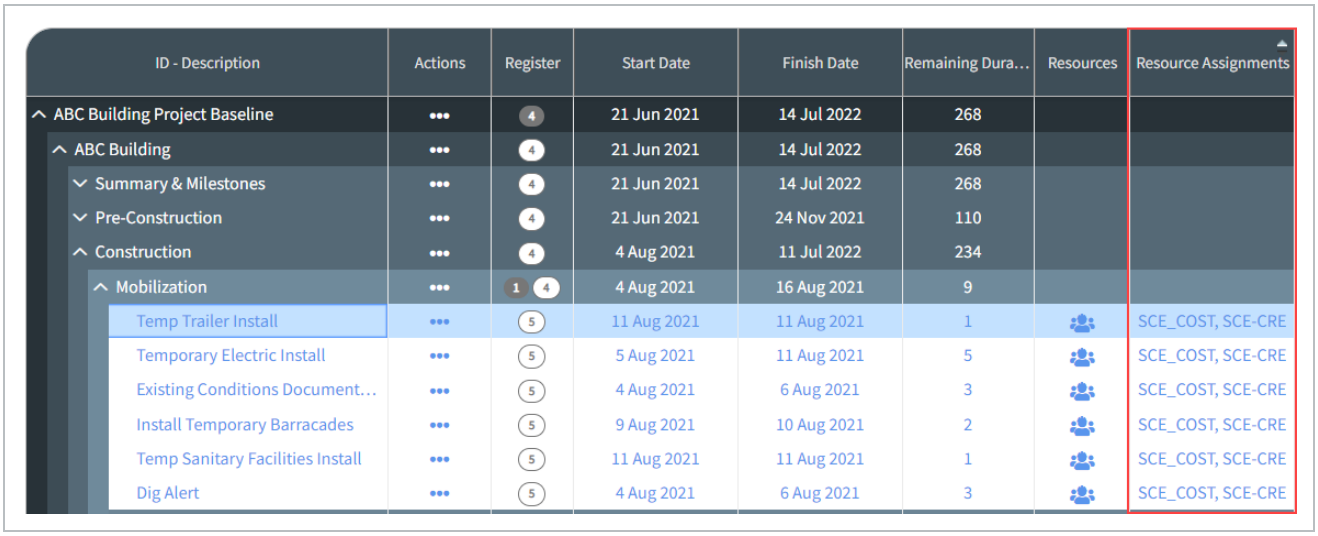
Assign Resources at the Activity Level

From the plan view, access the resource assignments of the assigned by using the options below:

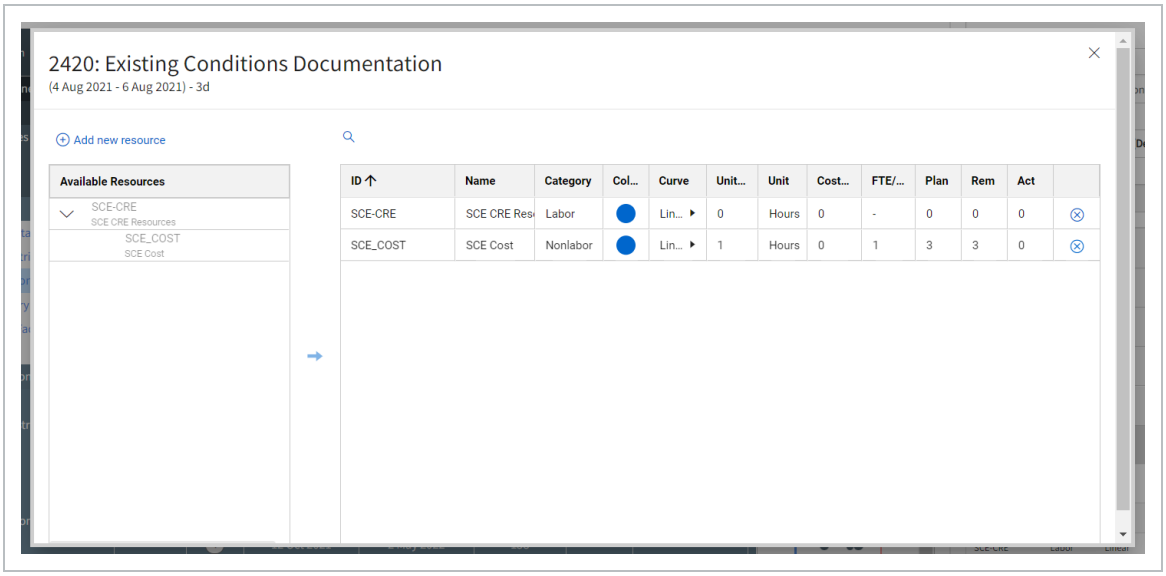
- You can open an Activity's details in the Iris, expanding the Resource Assignments section, and selecting **Modify**.



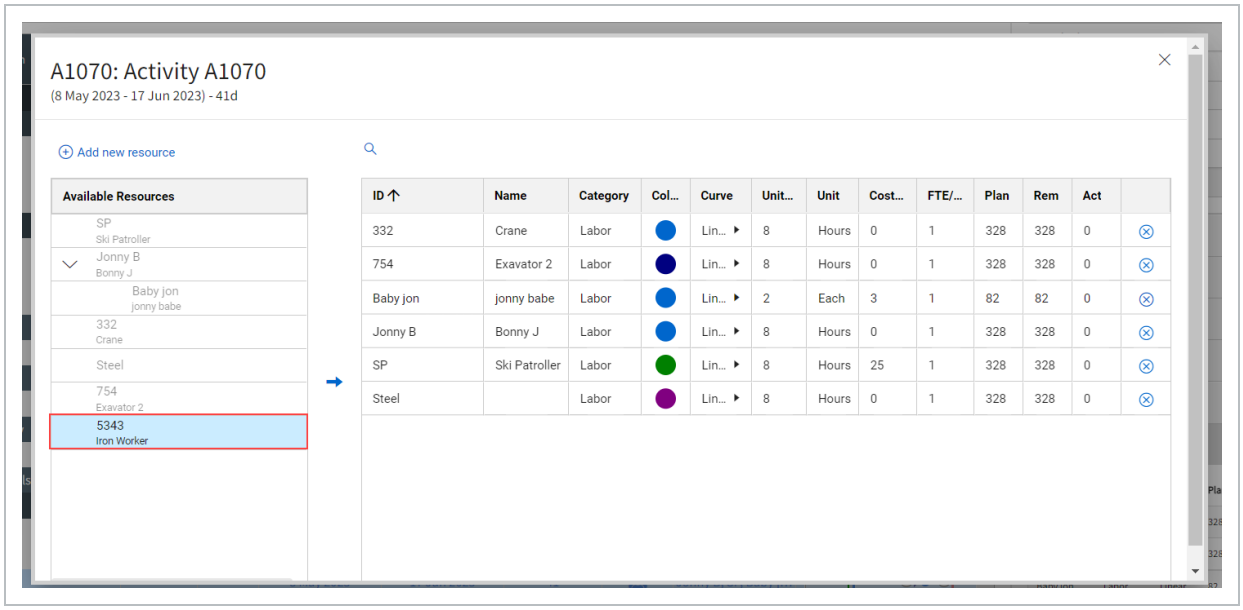
- You can customize the Gantt Chart view to include the Resources Column and selecting the **Resources** icon directly in the Gantt Chart.



- When either of these options have been selected, the resource assignment window appears:

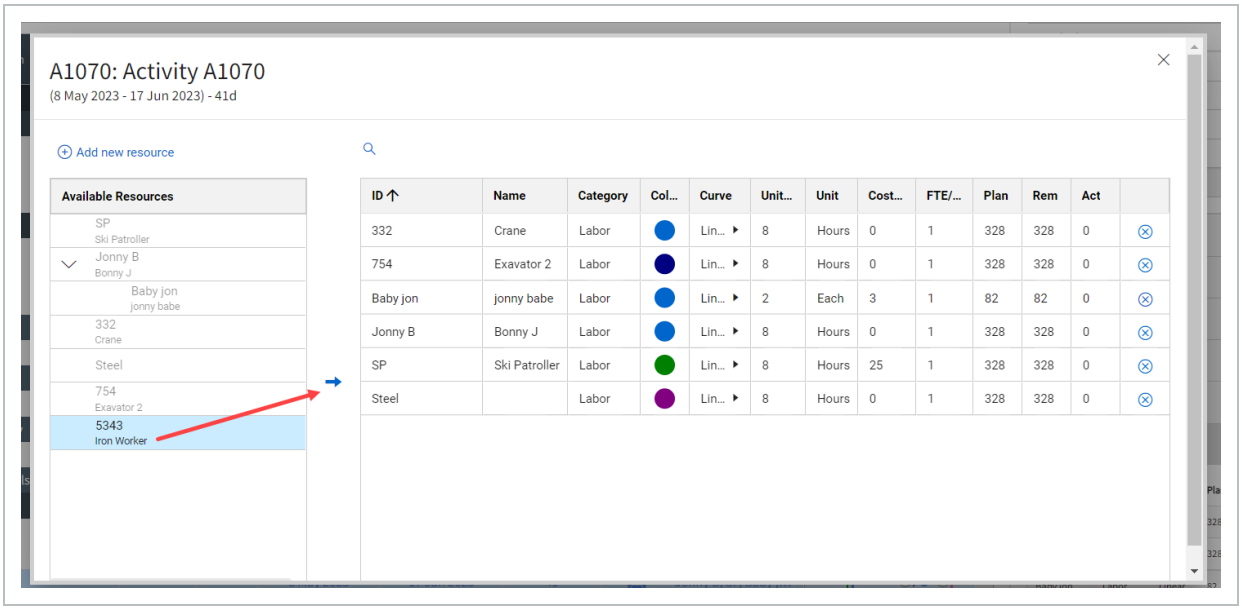


2. In the resource window, under Available Resources, select the resource.



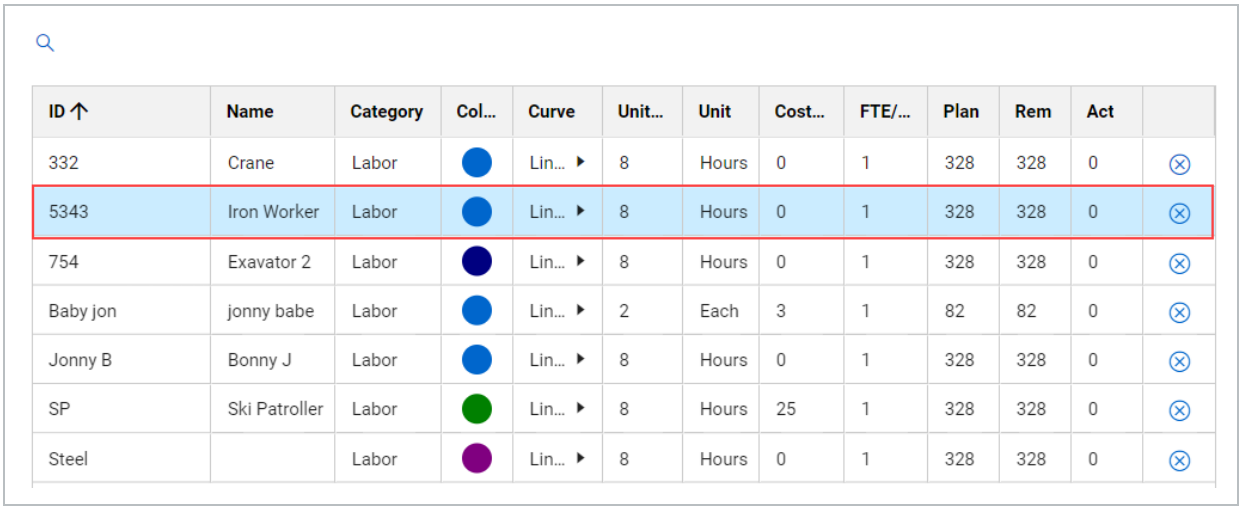
NOTE All available resources can be quickly found using the search function in the resource assignment window. If a resource cannot be found or a project-specific resource is to be made, see “Creating Project Resources via Resource Assignment” on for more information.

3. Once selected, click the **right arrow** to add the resource to the activity's Resource register.



TIP Double clicking a resource will also add it to the activity's Resource register.

4. Once added, details for each resource can be modified for the activity. Fields that can be adjusted at this level include Curve, Units/d, Cost/Unit, FTE/Qty, and Plan.

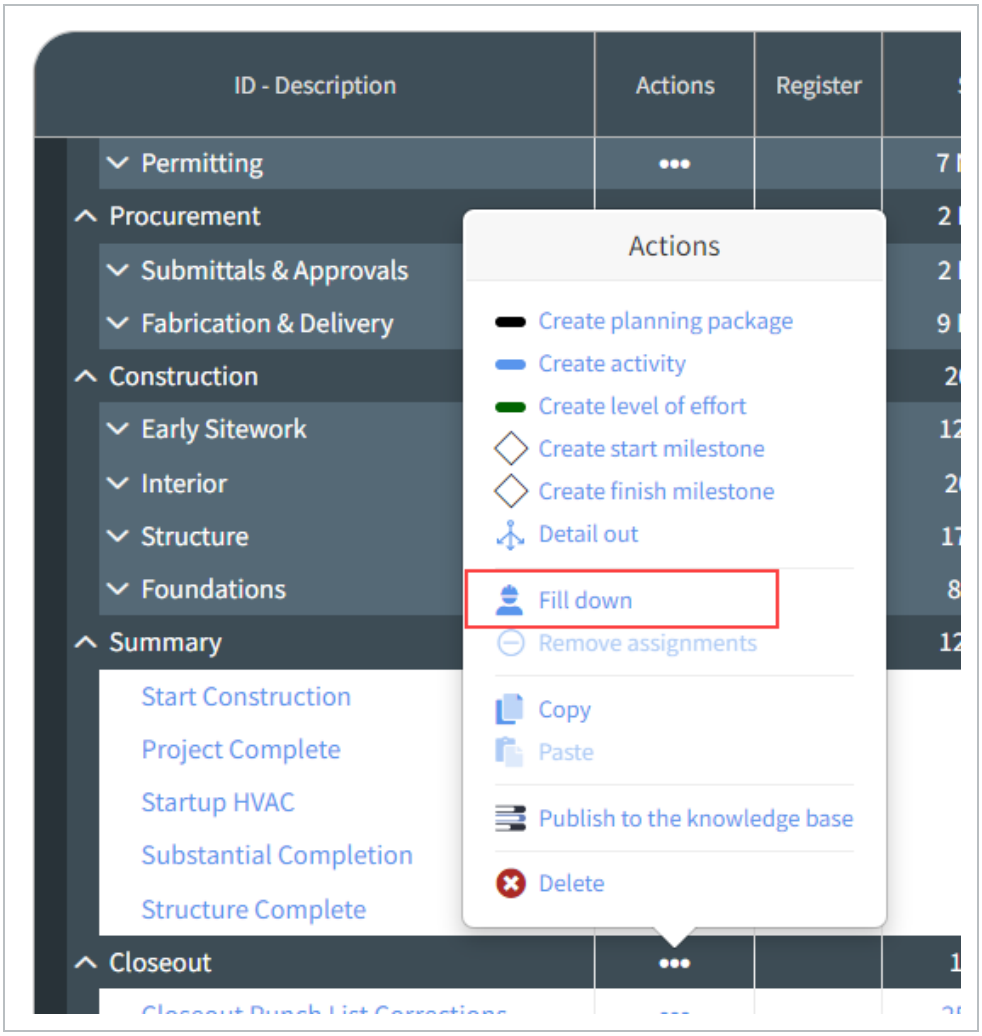


ID	Name	Category	Col...	Curve	Unit...	Unit	Cost...	FTE/...	Plan	Rem	Act	
332	Crane	Labor		Lin...	8	Hours	0	1	328	328	0	⊗
5343	Iron Worker	Labor		Lin...	8	Hours	0	1	328	328	0	⊗
754	Exavator 2	Labor		Lin...	8	Hours	0	1	328	328	0	⊗
Baby jon	jonny babe	Labor		Lin...	2	Each	3	1	82	82	0	⊗
Jonny B	Bonny J	Labor		Lin...	8	Hours	0	1	328	328	0	⊗
SP	Ski Patroller	Labor		Lin...	8	Hours	25	1	328	328	0	⊗
Steel		Labor		Lin...	8	Hours	0	1	328	328	0	⊗

NOTE If a resource is not available in the Project's resource register, a new resource can be created directly from the Resource Assignment window. See "Creating Project Resources via Resource Assignment" topic.

Fill Down

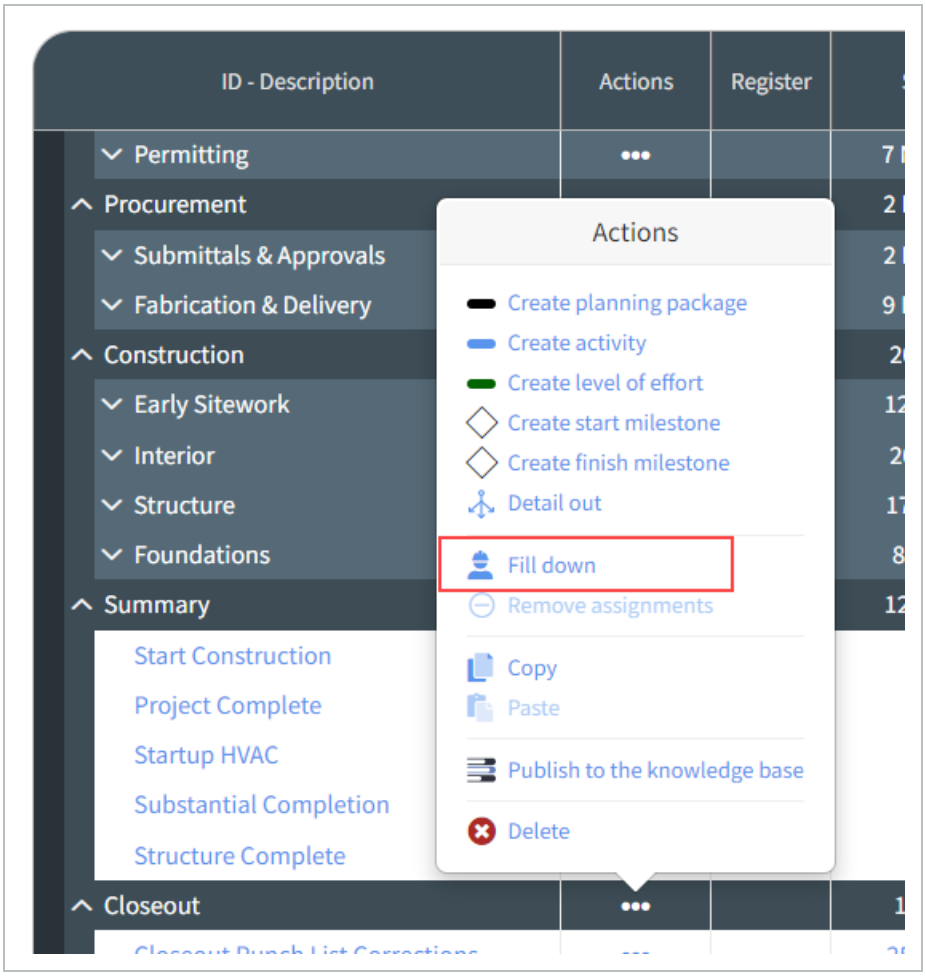
The Fill Down function lets you fill down a calendar, code or resource from the summary level. You select the items to fill down, the system fills down the selections and processes the items to all child level elements.



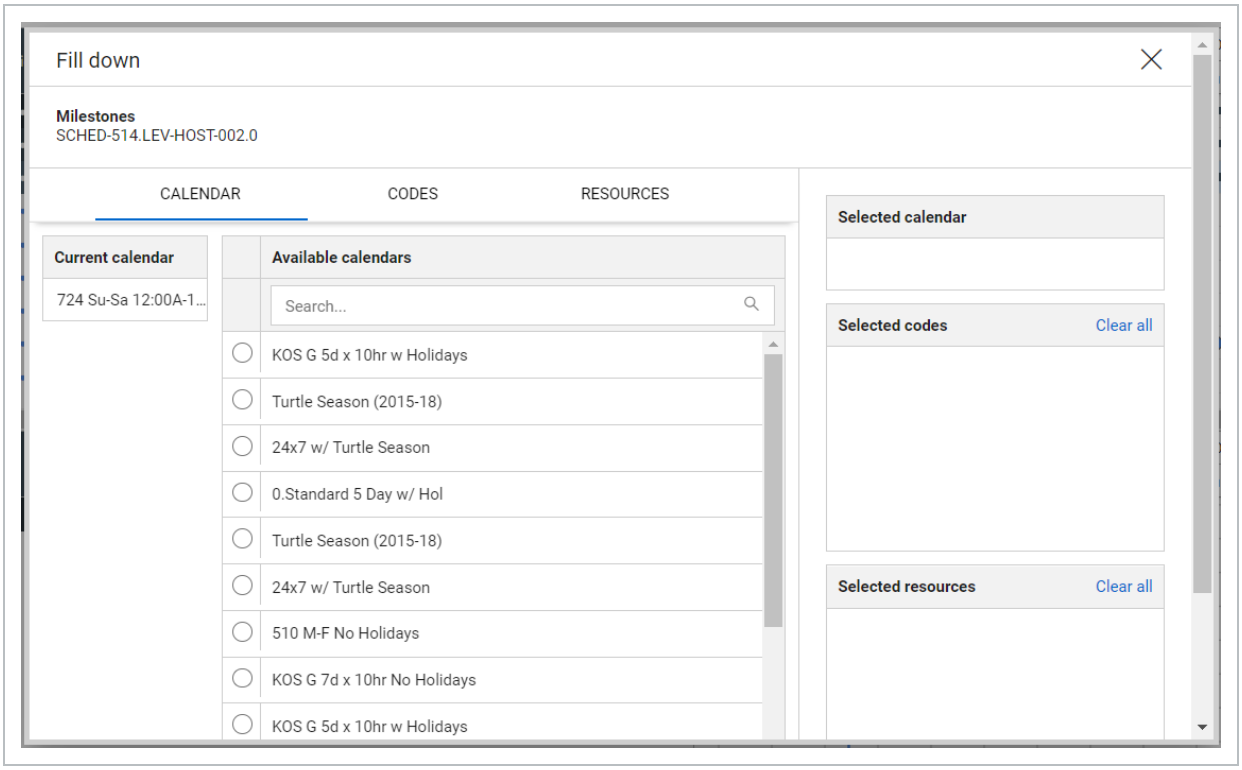
Fill Down from the summary level

1. Identify the summary level planning package to assign resources to, and select the **Actions** icon.

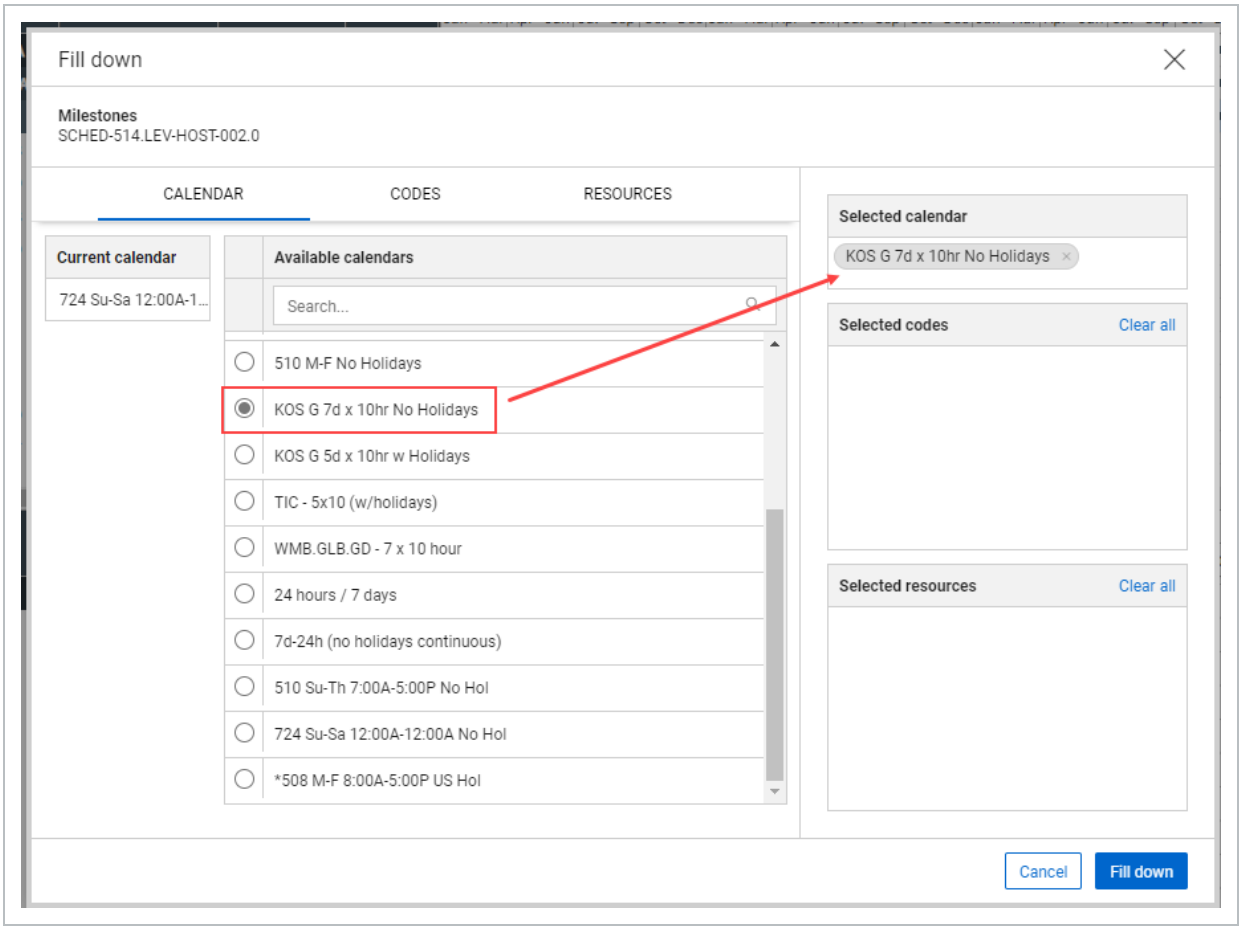
2. In the Actions menu, select **Fill Down**.



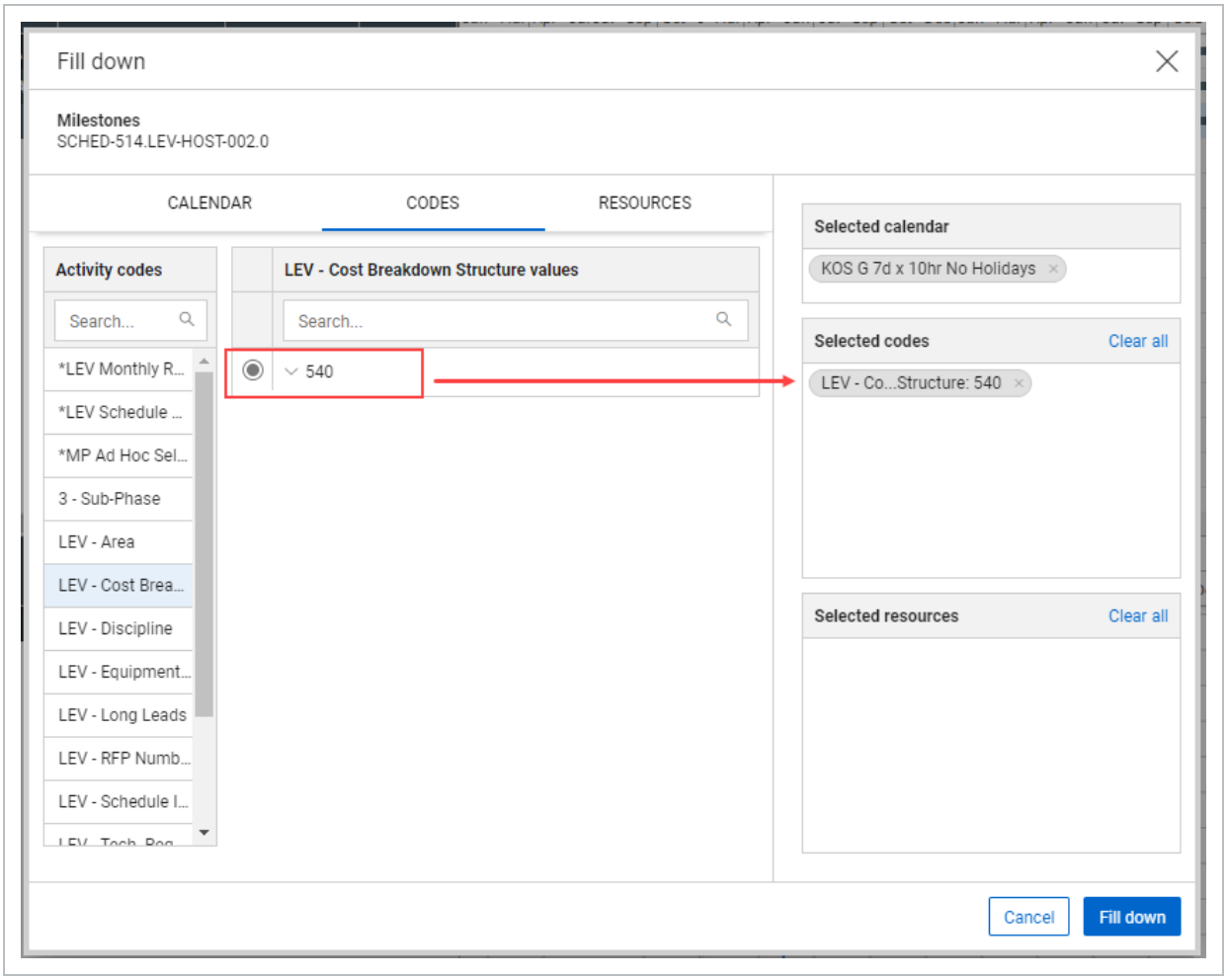
- The Fill down window appears



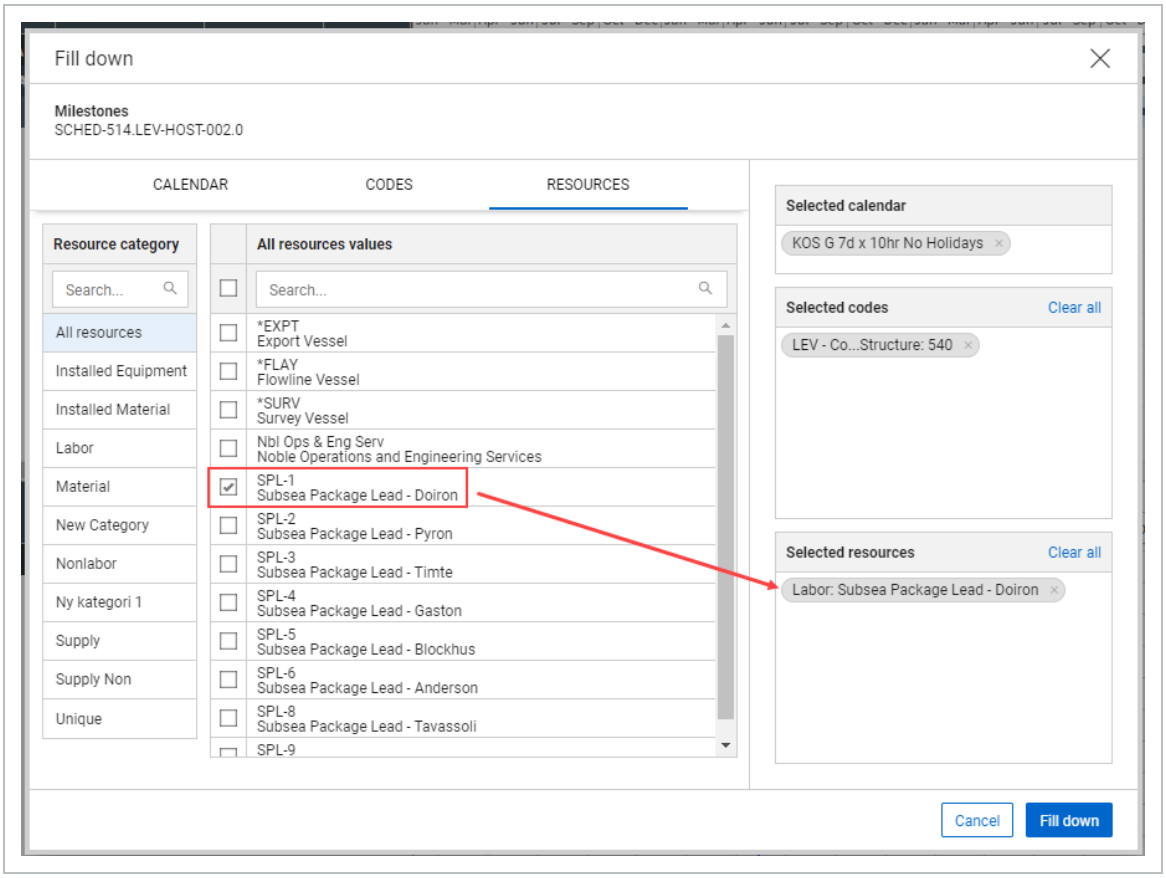
3. Under Calendar, choose a calendar from available calendars



4. Click on the Codes and select any Activity Code.



5. Click on Resources and select any Resource value.



- All assignments made from this window flow down to all subordinate activities.

NOTE All available resources can be quickly found using the search function in the resource assignment window. If a resource cannot be found or a project specific resource is to be made, see the “Creating Project Resources via Resource Assignment” section for more information.

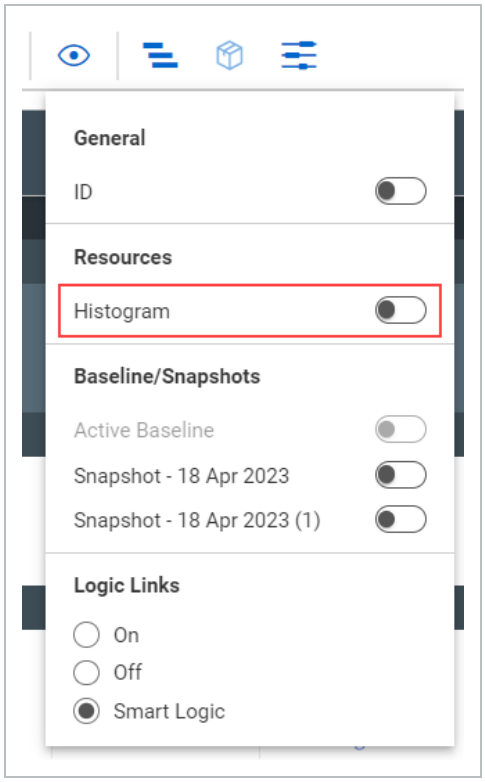
NOTE Resources can still be further edited at the activity level even when set up from the summary level. Plan values are not editable when applying a resource at the summary level but can be adjusted act the activity level.

Resource Histogram

After a schedule has been loaded with resources, Schedule can generate a resource histogram.

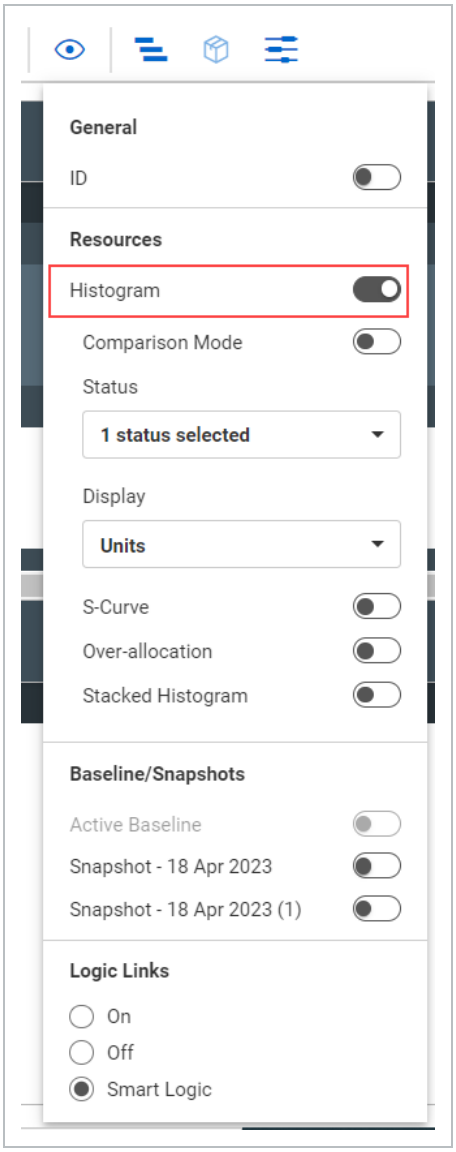
Generate a Resource Histogram

1. In the Schedule's Planning View, select **View Options**.
    - A drop-down menu appears where you can switch the Resource Histogram on or off.
2. Switch the histogram from off to *ON*.



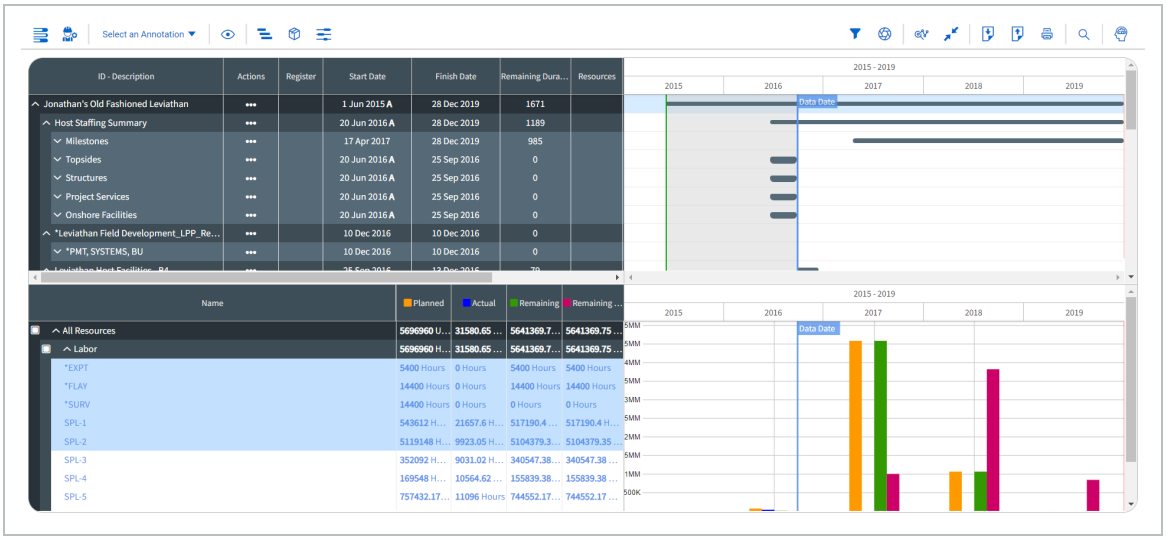
A histogram shows below the Gantt Chart. The resource histogram plots resource utilization over time depending on the following:

- **Resource Settings Configuration Options:** When the resource histogram is switched on, more settings become available for configuration.

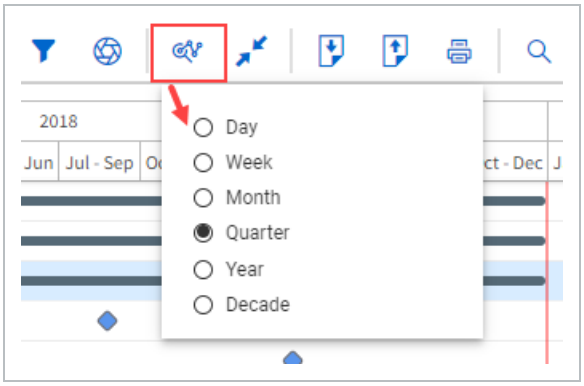


Setting	Function
Resource Histogram	You can switch the Resource Histogram view on or off.
Comparison Mode	Compares Current, Active Baseline, and Snapshots in the Resource Histogram.
Status	Filters histogram to show Planned, Actual resource quantities, Remaining or Remaining

Setting	Function
	Late.
Display	Adjusts the Y-axis of the histogram to show Units, FTE, or Cost.
Unit	The resource's unit of measure.
S-Curve	Switches on or off the S-Curve on the resource histogram.

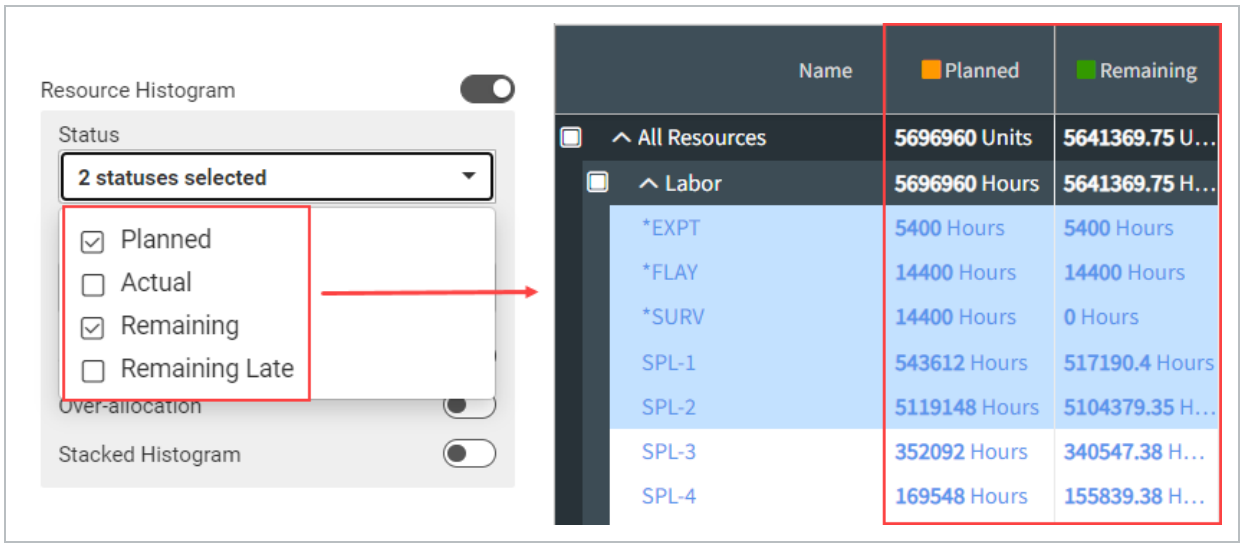


- **The activity or summary level selected in the Gantt Chart:** The resource histogram plots out data based on the activity or planning package selected in the schedule
    - *The zoom level selection:* The zoom level for the Gantt chart controls both the schedule and resource histogram X-axis units of time that is days, weeks, months, quarters, years or decades.



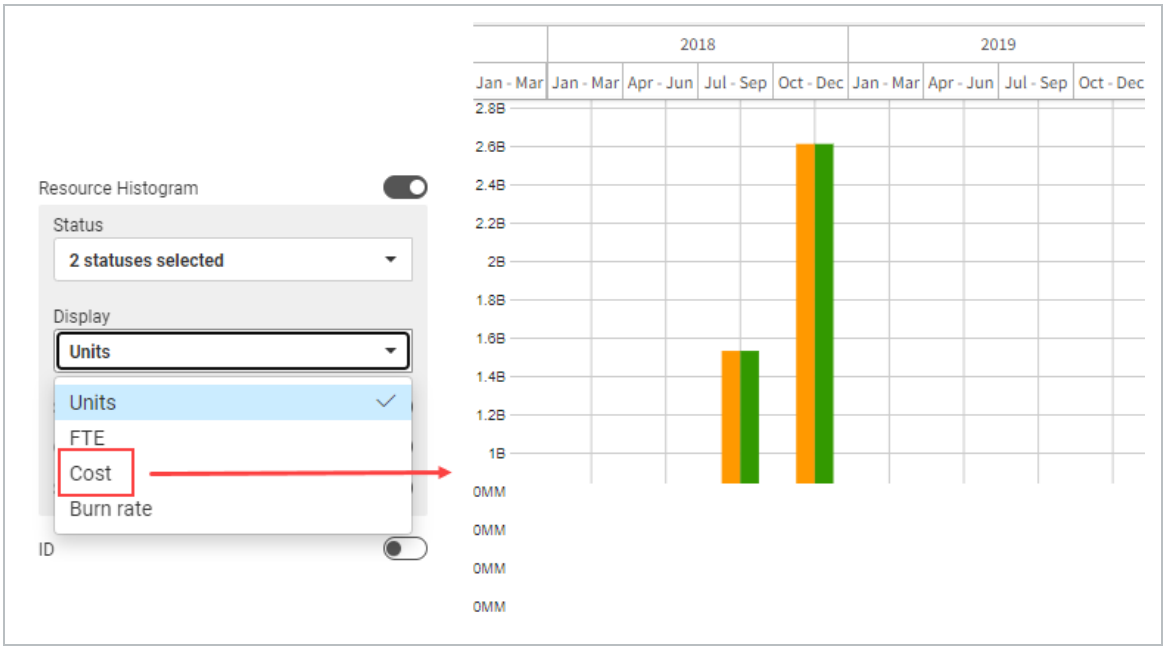
3. Set the Resource Setting Configuration Status to **Planned** & **Remaining**.

   This populates the Resource Histogram with all planned and remaining resources for the activity or planning package selected.

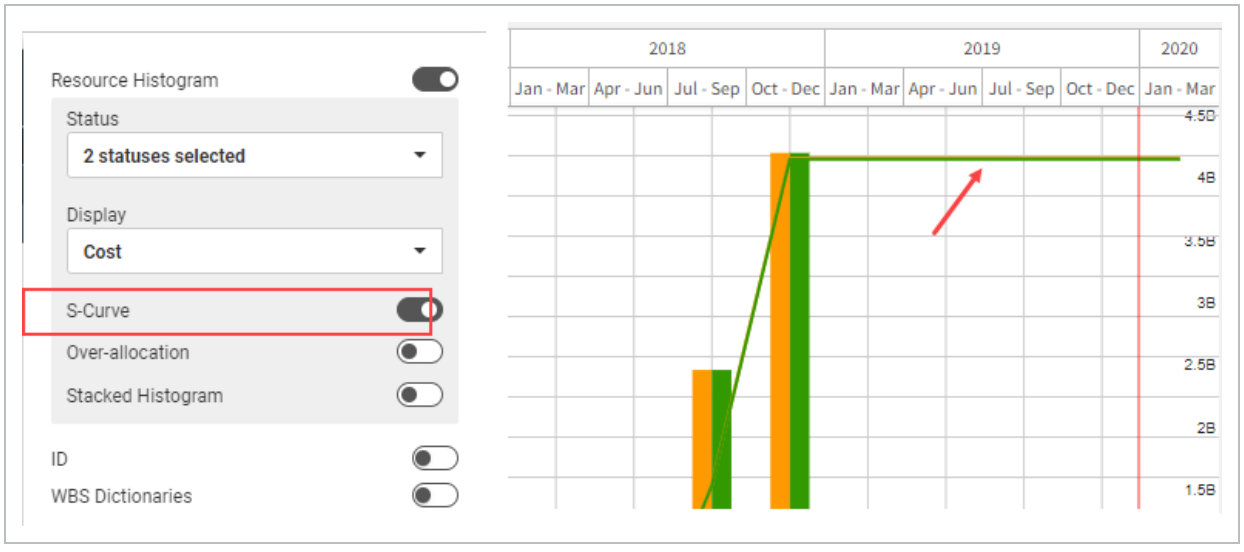


4. Change the Resource Setting Configuration Display from Units to **Cost**.
   - FTE stands for Full Time Equivalent, and is the count of people per time period.
   - Burn rate is the percent planned per period of time.

- This adjusts the Y-axis values from resource quantities to dollars



5. Switch on the **S-Curve**. This overlays the S-Curve on the Resource Histogram.

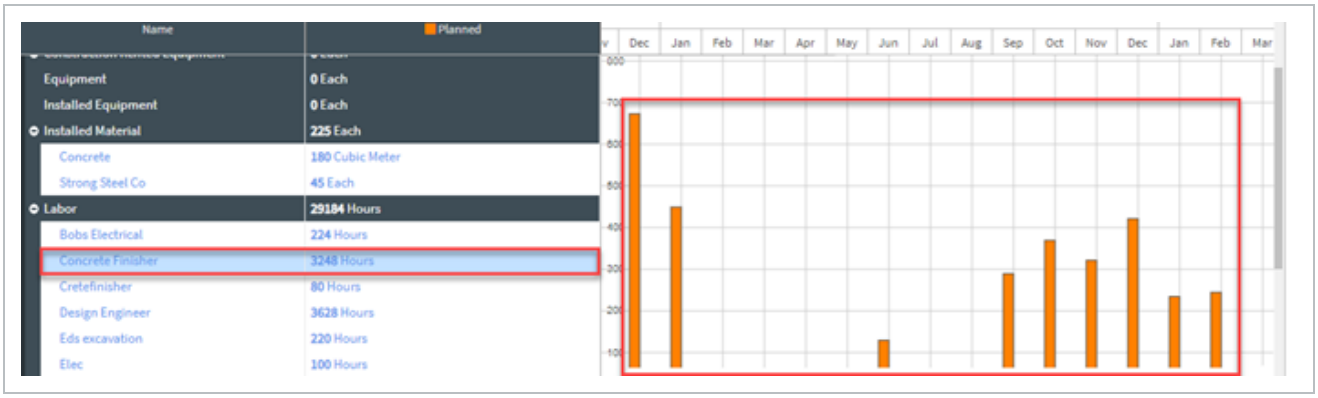


NOTE S-Curves reflect cumulative data. As the values increase over time, this reflects the accumulation of resource units/FTE/cost, depending on settings, over time.

Filtering by Resource

Filtering by resource only applies if the stacked resource histogram is turned to *On*.In the filter functionality, the Gantt chart & resource histogram can be filtered to see planning packages and activities assigned specific resources. When the resource histogram is switched on, it can be used as an interactive filter as well. Selecting a Resource Name listed in the histogram or any of the resource bars will filter down the Gantt Chart and Resource Histogram to show only data pertaining to the information selected.

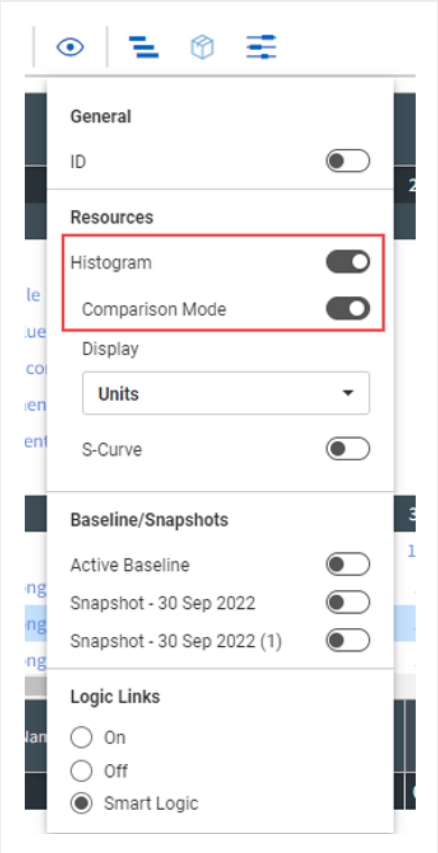
In the image below, the Resource Histogram is filtering based on the selected resource: *Concrete Finisher*.



Additionally, to modify or disable the resource filtering, users may click the filter icon to make adjustments to the filter parameters.

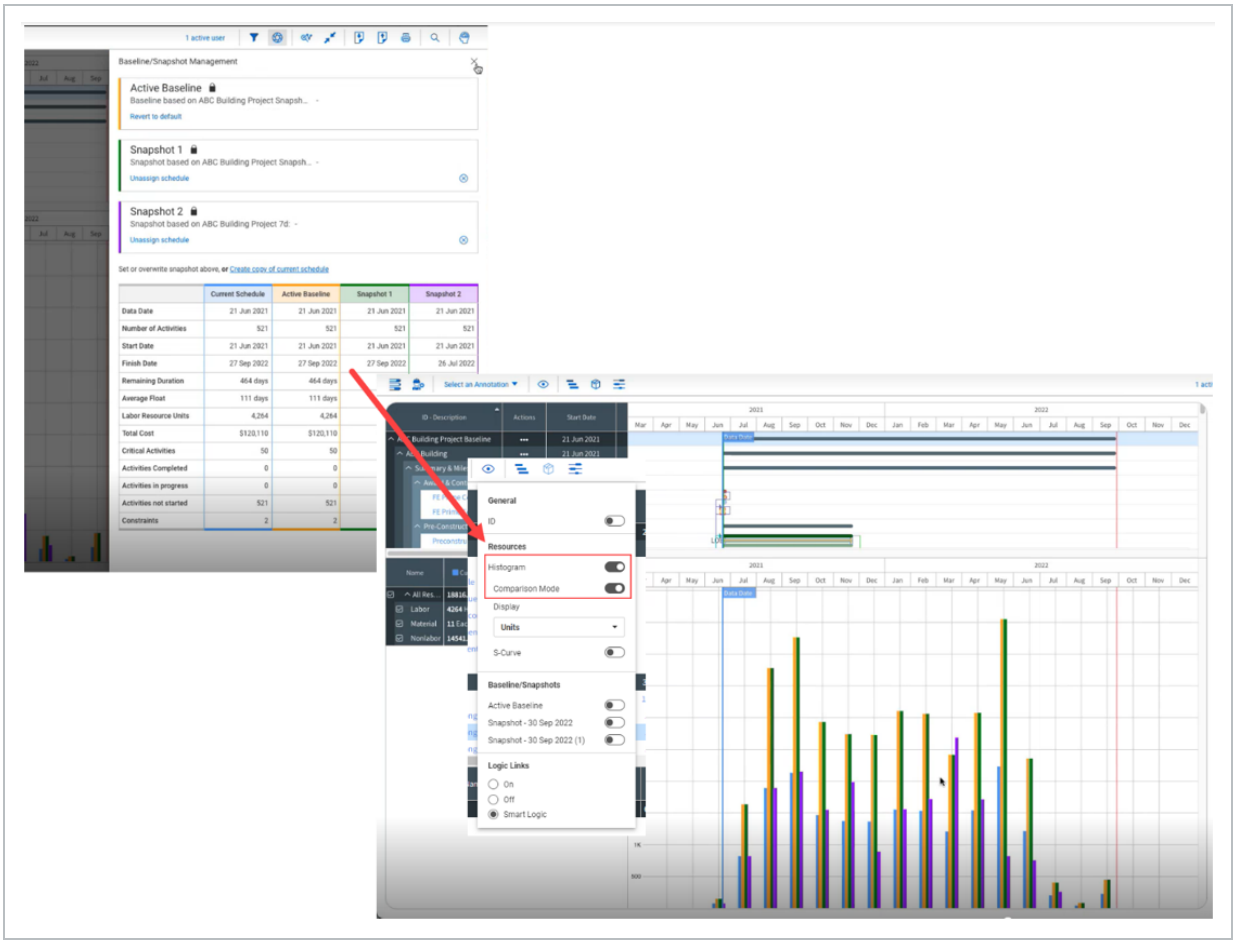
Histogram Comparison Mode

In View Options, you can view the histogram in comparison mode, when enabled.

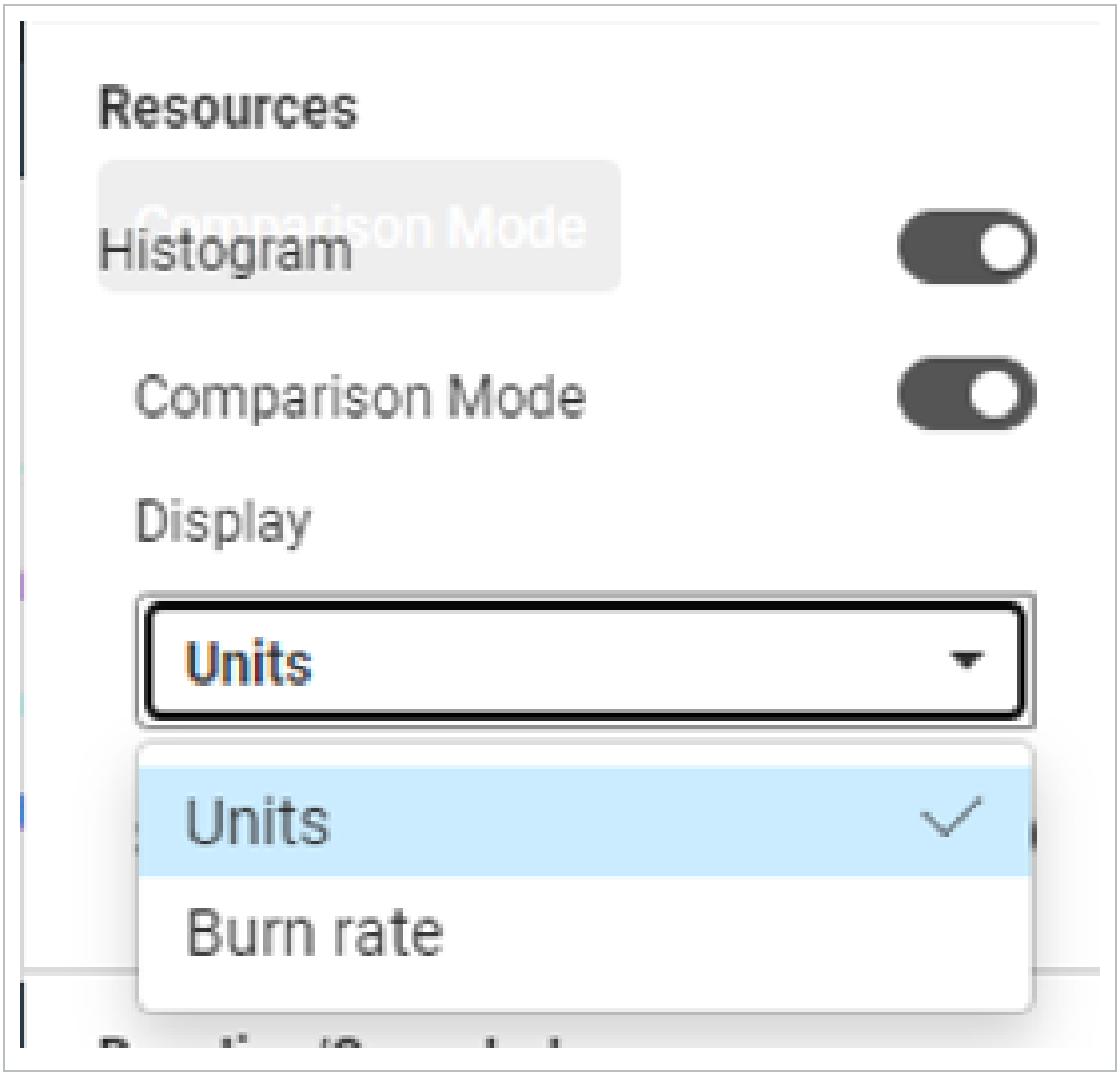


When the Comparison mode toggle is set to On, the baselines and snapshots that exist in the Baseline/Snapshot Management show as a graph with the current baseline. The histogram compares resources rolled up to the category type and shows you resources as they trend.

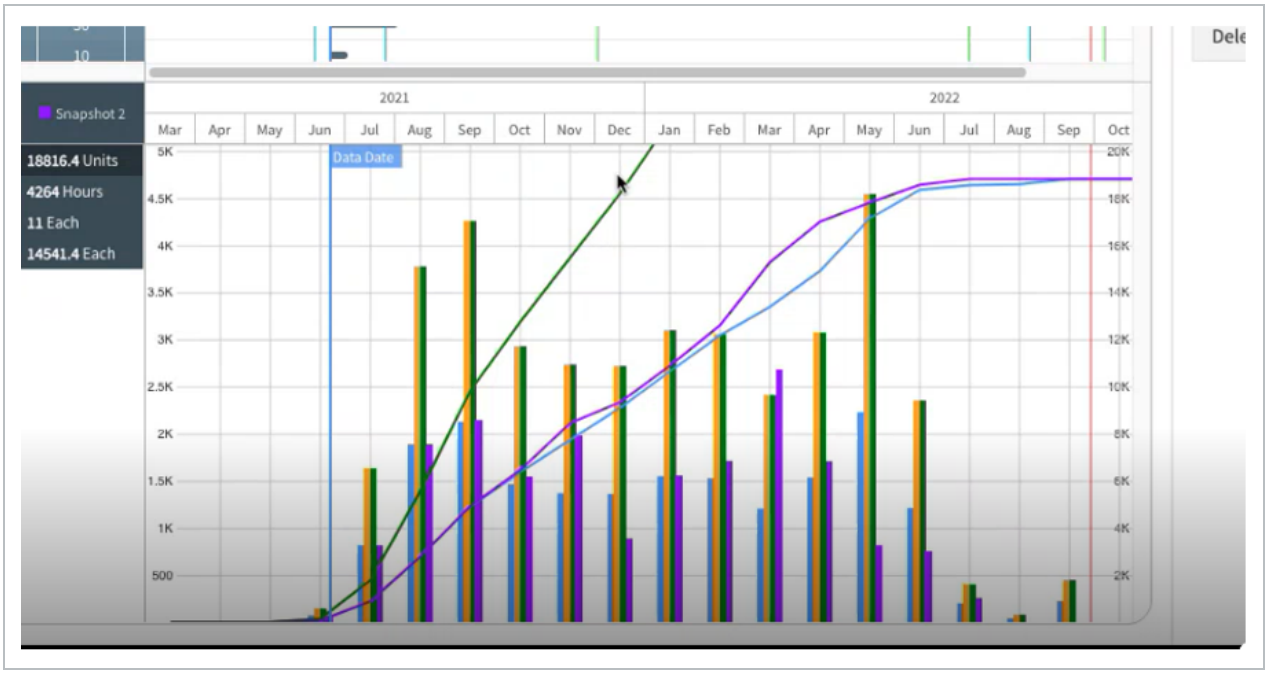
Each line in the graph represents a baseline, snapshot, and the current estimate.



The histogram graph can now also be shown in units and burn rate.

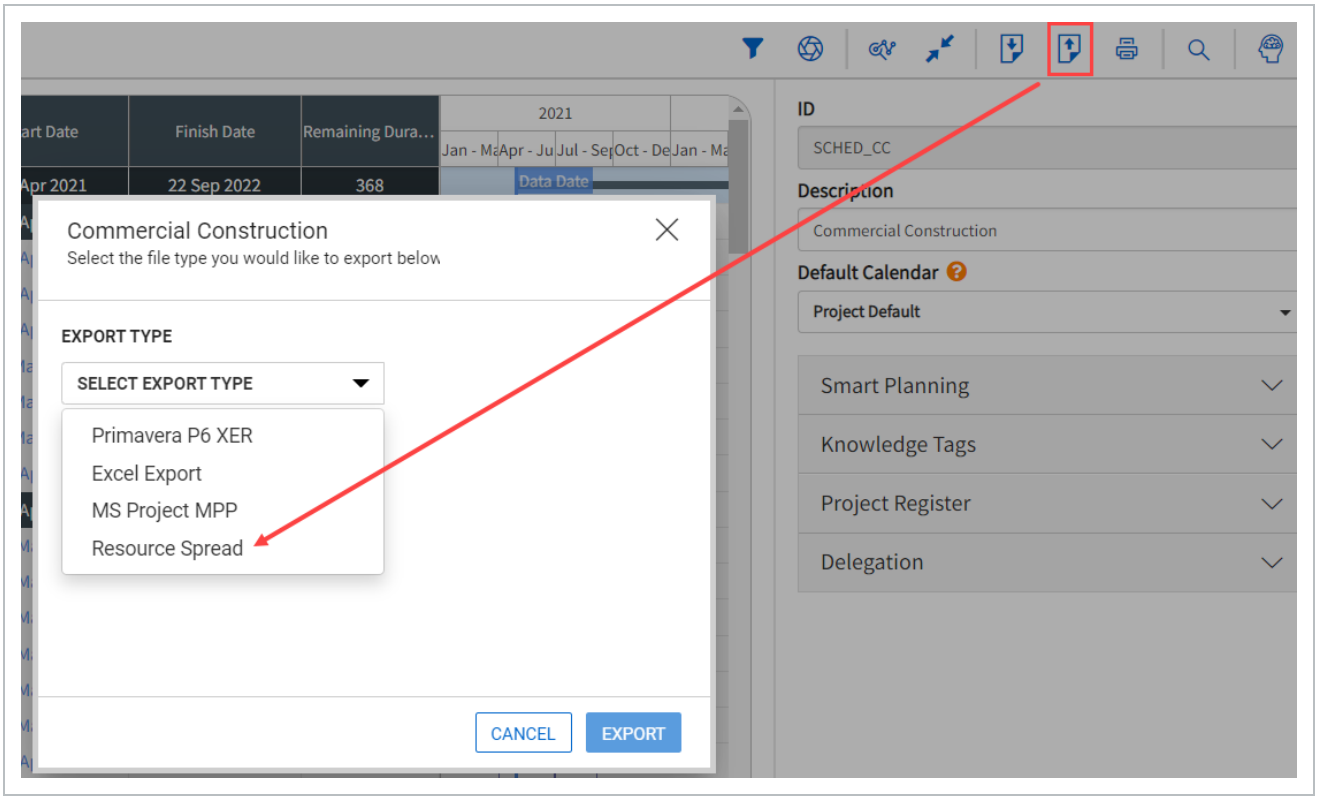


You can also view the histogram with an S-Curve that shows you a cumulative trend line for each baseline, snapshot and current.



Export Assignments

Schedule export functionality includes the ability to export resource assignments. Select the **Export** icon, then select the **Resource Spread** export type from the drop-down menu.



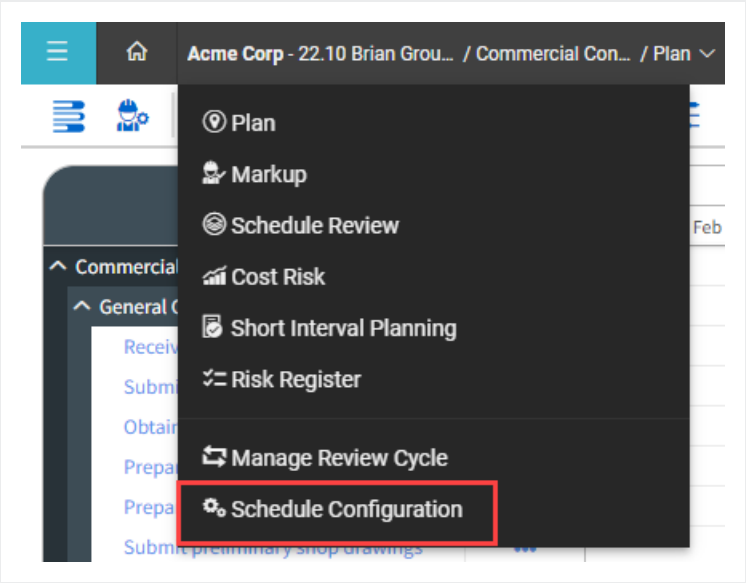
Project Specific Resources: Project Configuration Setup

Resources in a Project are either global resources or project specific resources. Global resources automatically populate a project's resource register from the Knowledge Base. If a resource is not available from the established global resources, project specific resources can be set up.

Project specific resources are useful when the resource utilized is unique to that project and not applicable across the organization.

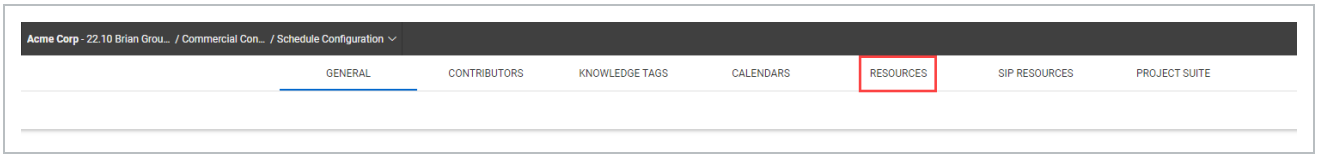
To establish project specific resources:

1. Select Schedule Configuration from the project drop-down menu.

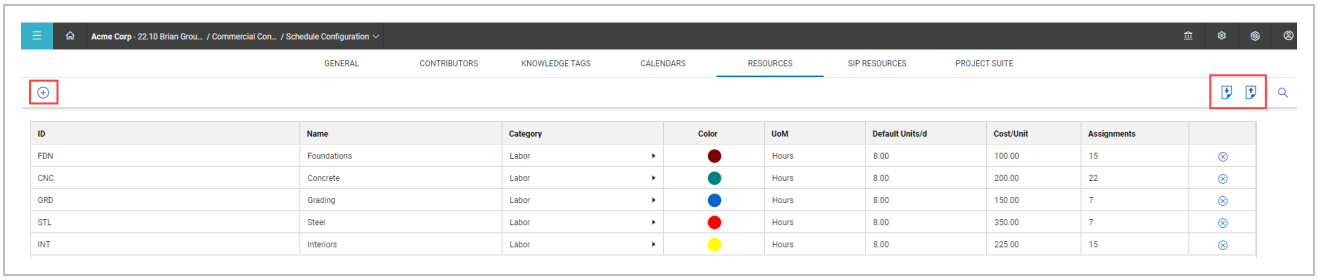


2. Select the **Resources** tab in the Knowledge Base.

This brings you to the project-level resource register



The Project level resource register functions the same as the Knowledge Base. See Setting up Resources for information about how to add resources and use the Import/Export functionality in the Resources register



Schedule possesses the concept of global and project specific resources. When you create a schedule, it does not populate the resources in the Schedule Configuration window, but you can import resources from the Knowledge Base to use in your schedule.

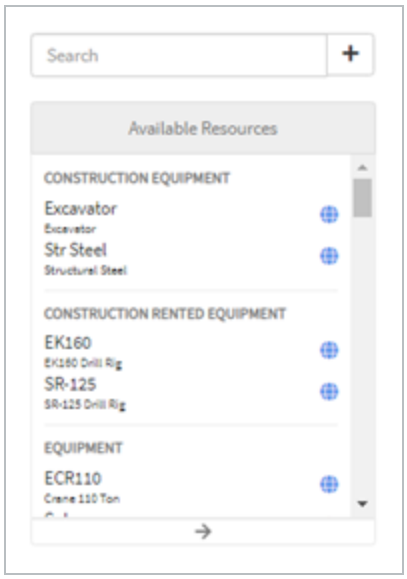
> **TIP** Project specific resources can also be added from the resource assignment window in the planning view. See the Resource Assignment for more information.

Create a project-specific resource via the Resource Assignment window

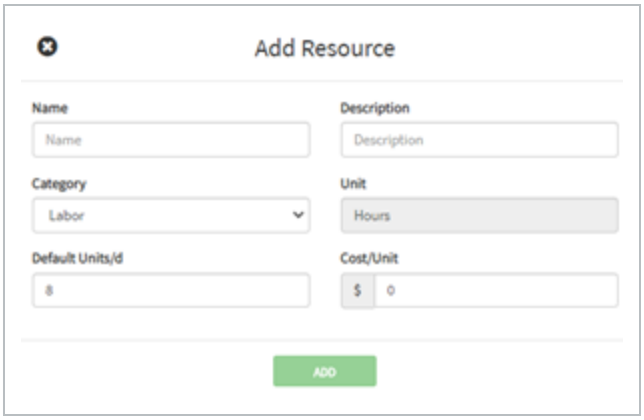
Project Specific Resources can also be created from the Resource Assignment window in the Planning view.

Create a Project Specific Resource via the Resource Assignment Window

1. Without having any resources selected, click the **plus** + **icon**.



   - The Add Resource opens to add a project specific resource



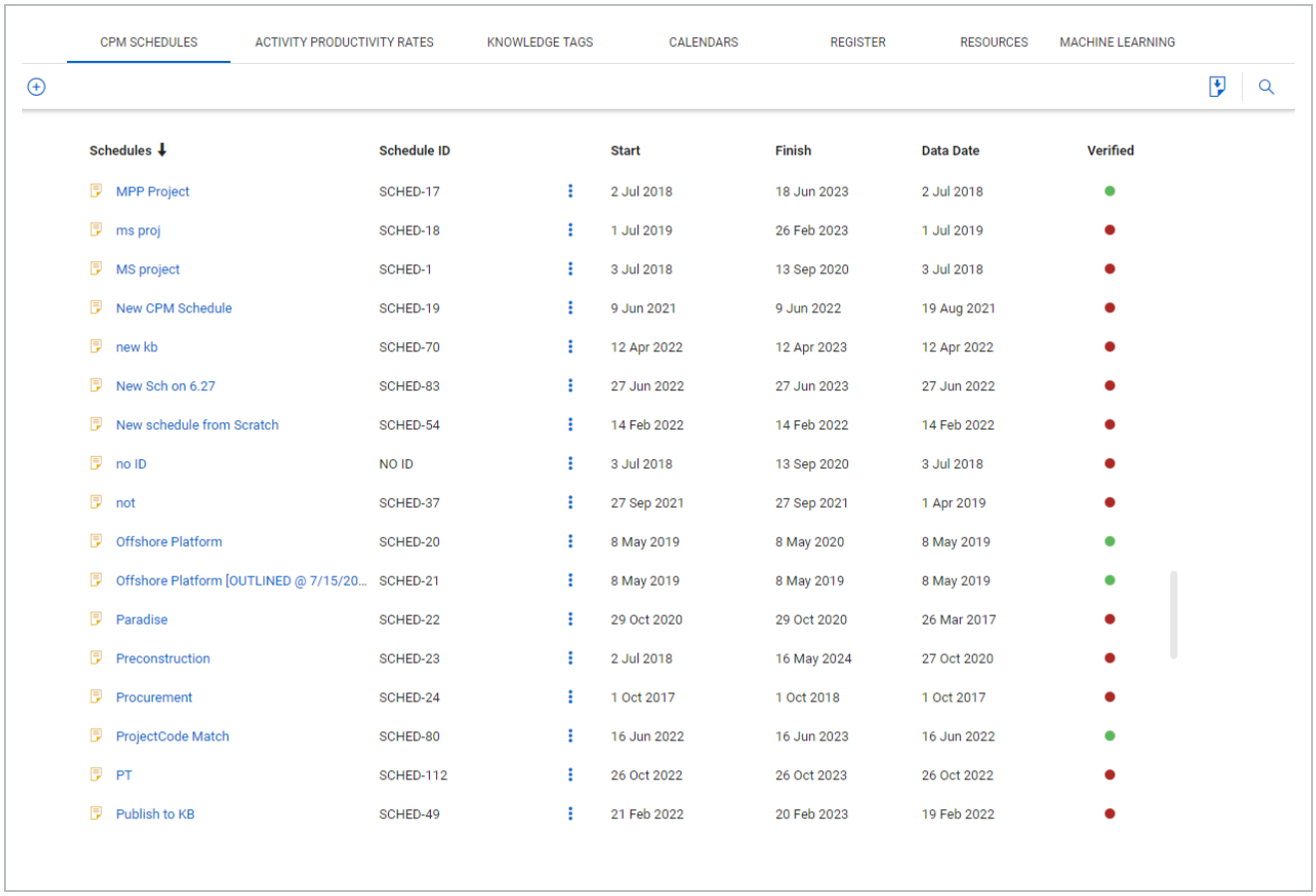
2. Fill out the project resource information and then click **Add**.

Knowledge Base Resources

Resources in the Knowledge Base

To access the Knowledge Base, click the **Knowledge Base** icon.

In the Knowledge Base, you can establish the base pool of resources for the organization. Schedule is built on top of augmented intelligence, or machine based learning. The Knowledge Base is used to enhance machine based learning and load with past schedule-related data that an organization would want to include in future schedules. Hence, this data that gets loaded should be as accurate as possible. After set up, schedulers can pull these into projects for use with the resource management functionality and analytics.

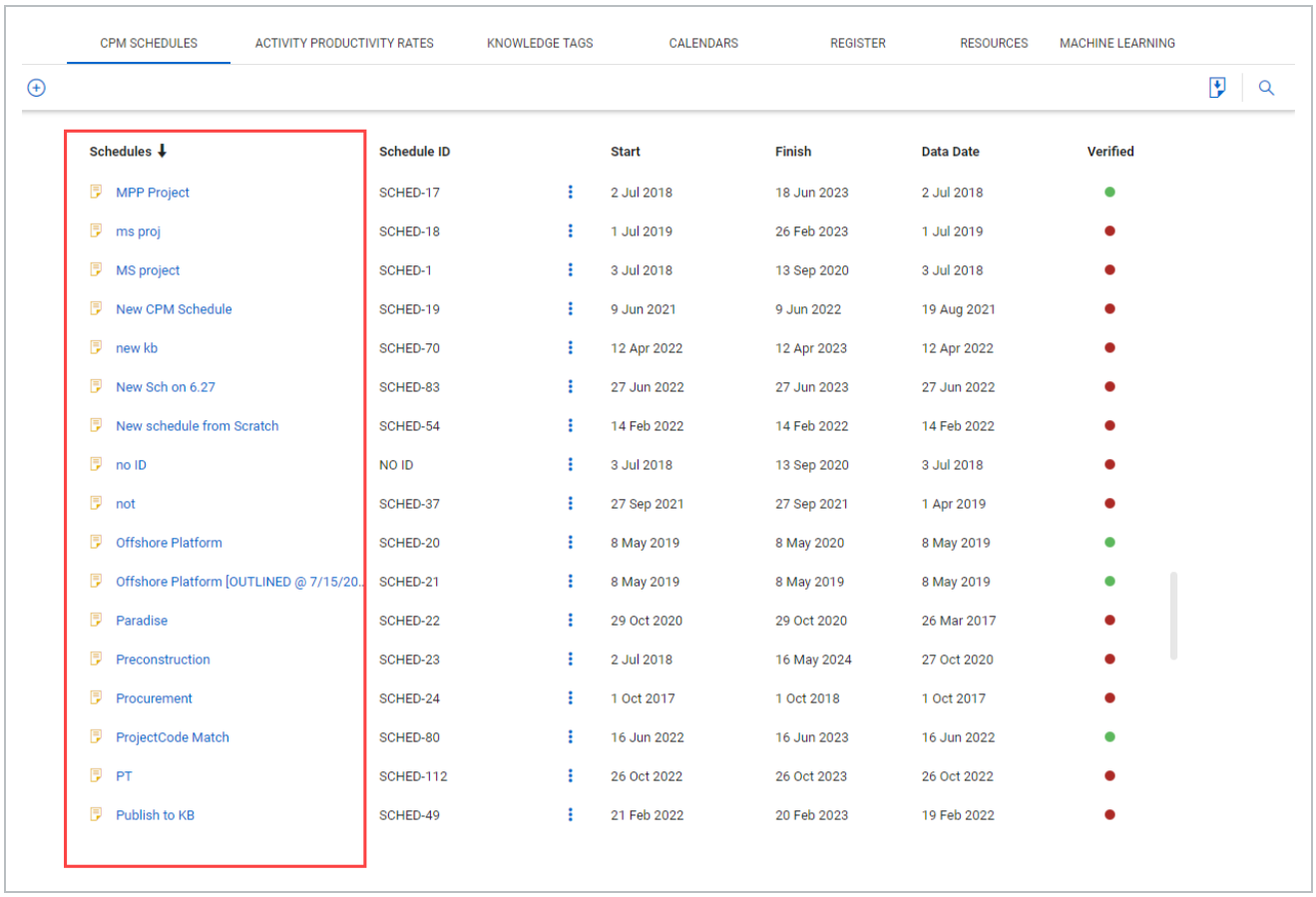


Schedules	Schedule ID	Start	Finish	Data Date	Verified
MPP Project	SCHED-17	2 Jul 2018	18 Jun 2023	2 Jul 2018	
ms proj	SCHED-18	1 Jul 2019	26 Feb 2023	1 Jul 2019	
MS project	SCHED-1	3 Jul 2018	13 Sep 2020	3 Jul 2018	
New CPM Schedule	SCHED-19	9 Jun 2021	9 Jun 2022	19 Aug 2021	
new kb	SCHED-70	12 Apr 2022	12 Apr 2023	12 Apr 2022	
New Sch on 6.27	SCHED-83	27 Jun 2022	27 Jun 2023	27 Jun 2022	
New schedule from Scratch	SCHED-54	14 Feb 2022	14 Feb 2022	14 Feb 2022	
no ID	NO ID	3 Jul 2018	13 Sep 2020	3 Jul 2018	
not	SCHED-37	27 Sep 2021	27 Sep 2021	1 Apr 2019	
Offshore Platform	SCHED-20	8 May 2019	8 May 2020	8 May 2019	
Offshore Platform [OUTLINED @ 7/15/20...	SCHED-21	8 May 2019	8 May 2019	8 May 2019	
Paradise	SCHED-22	29 Oct 2020	29 Oct 2020	26 Mar 2017	
Preconstruction	SCHED-23	2 Jul 2018	16 May 2024	27 Oct 2020	
Procurement	SCHED-24	1 Oct 2017	1 Oct 2018	1 Oct 2017	
ProjectCode Match	SCHED-80	16 Jun 2022	16 Jun 2023	16 Jun 2022	
PT	SCHED-112	26 Oct 2022	26 Oct 2023	26 Oct 2022	
Publish to KB	SCHED-49	21 Feb 2022	20 Feb 2023	19 Feb 2022	

CPM Schedule

CPM schedules in the Knowledge Base contain the same information as project schedules. CPM schedules are past or current schedules where relevant schedule data can be used in future schedules. For example: if you are working on a new schedule for bridgework, you can store past bridgework schedules in the knowledge library to use later for machine learning for new projects.

The Verified column on the far right is controlled by an administrator, and represents schedules that have been certified as schedules that contain accurate data. Schedules that show a green dot are verified, and red dots are unverified schedules.



Schedules	Schedule ID	Start	Finish	Data Date	Verified
MPP Project	SCHED-17	2 Jul 2018	18 Jun 2023	2 Jul 2018	
ms proj	SCHED-18	1 Jul 2019	26 Feb 2023	1 Jul 2019	
MS project	SCHED-1	3 Jul 2018	13 Sep 2020	3 Jul 2018	
New CPM Schedule	SCHED-19	9 Jun 2021	9 Jun 2022	19 Aug 2021	
new kb	SCHED-70	12 Apr 2022	12 Apr 2023	12 Apr 2022	
New Sch on 6.27	SCHED-83	27 Jun 2022	27 Jun 2023	27 Jun 2022	
New schedule from Scratch	SCHED-54	14 Feb 2022	14 Feb 2022	14 Feb 2022	
no ID	NO ID	3 Jul 2018	13 Sep 2020	3 Jul 2018	
not	SCHED-37	27 Sep 2021	27 Sep 2021	1 Apr 2019	
Offshore Platform	SCHED-20	8 May 2019	8 May 2020	8 May 2019	
Offshore Platform [OUTLINED @ 7/15/20..	SCHED-21	8 May 2019	8 May 2019	8 May 2019	
Paradise	SCHED-22	29 Oct 2020	29 Oct 2020	26 Mar 2017	
Preconstruction	SCHED-23	2 Jul 2018	16 May 2024	27 Oct 2020	
Procurement	SCHED-24	1 Oct 2017	1 Oct 2018	1 Oct 2017	
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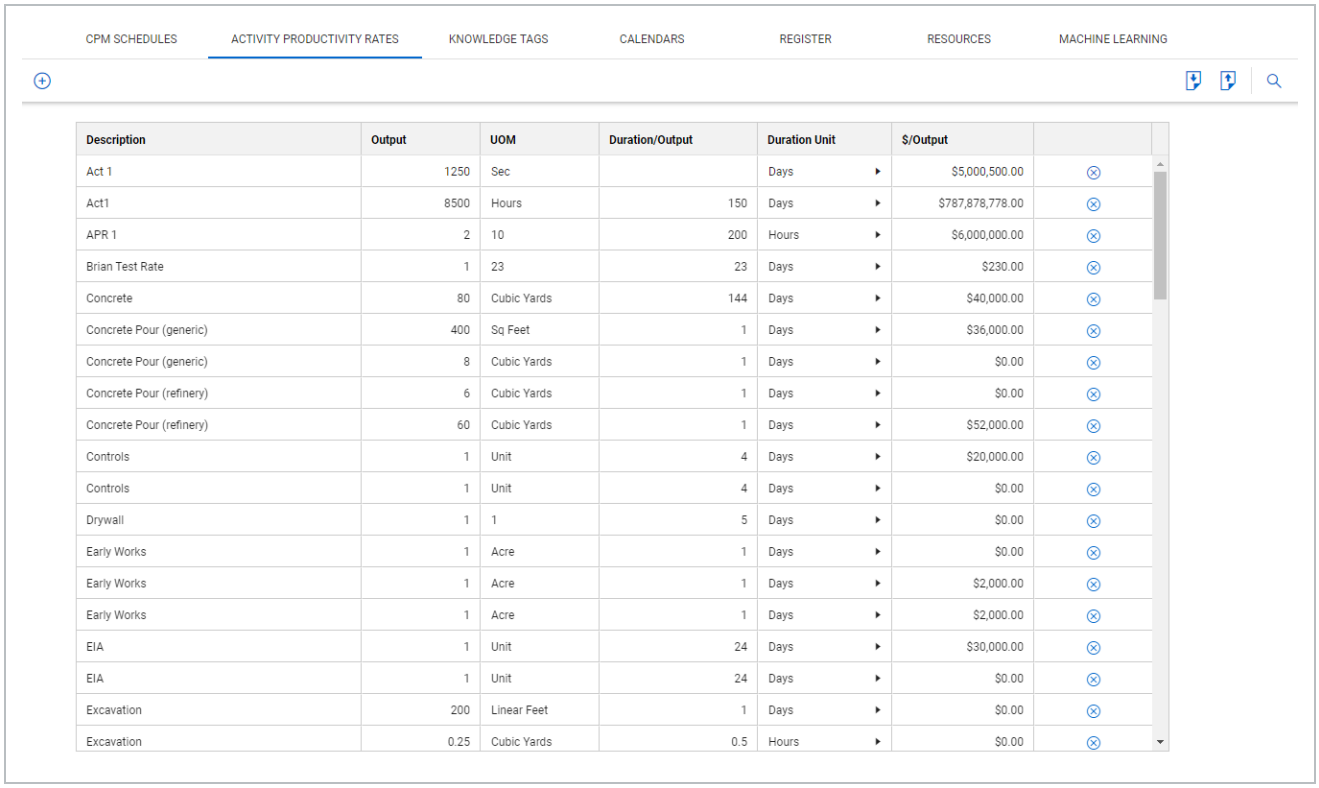
PT	SCHED-112	26 Oct 2022	26 Oct 2023	26 Oct 2022	
Publish to KB	SCHED-49	21 Feb 2022	20 Feb 2023	19 Feb 2022	

Activity Productivity Rates

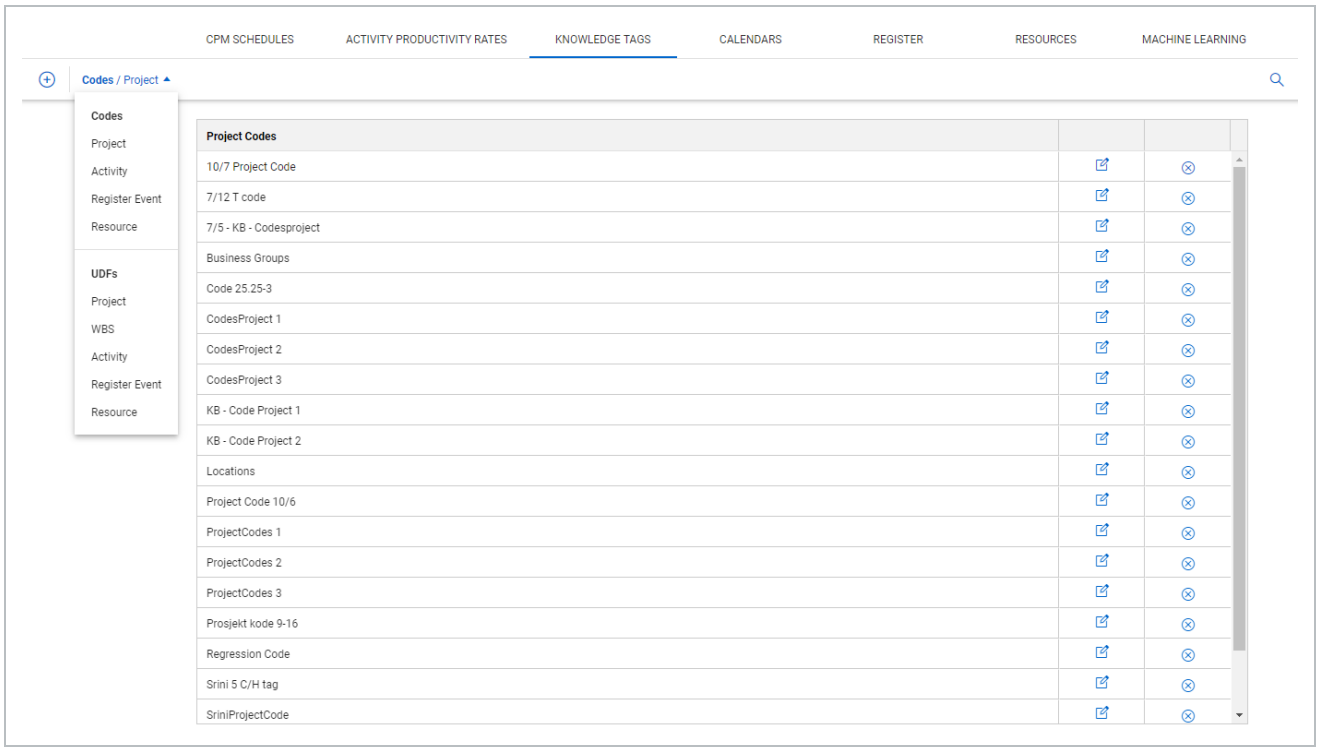
Organizations can use Activity Productivity Rates deemed as being the most productive, which can be used to give you durations.



Description	Output	UOM	Duration/Output	Duration Unit	$/Output
Act 1	1250	Sec		Days	$5,000,500.00
Act1	8500	Hours	150	Days	$787,878,778.00
APR 1	2	10	200	Hours	$6,000,000.00
Brian Test Rate	1	23	23	Days	$230.00
Concrete	80	Cubic Yards	144	Days	$40,000.00
Concrete Pour (generic)	400	Sq Feet	1	Days	$36,000.00
Concrete Pour (generic)	8	Cubic Yards	1	Days	$0.00
Concrete Pour (refinery)	6	Cubic Yards	1	Days	$0.00
Concrete Pour (refinery)	60	Cubic Yards	1	Days	$52,000.00
Controls	1	Unit	4	Days	$20,000.00
Controls	1	Unit	4	Days	$0.00
Drywall	1	1	5	Days	$0.00
Early Works	1	Acre	1	Days	$0.00
Early Works	1	Acre	1	Days	$2,000.00
Early Works	1	Acre	1	Days	$2,000.00
EIA	1	Unit	24	Days	$30,000.00
EIA	1	Unit	24	Days	$0.00
Excavation	200	Linear Feet	1	Days	$0.00
Excavation	0.25	Cubic Yards	0.5	Hours	$0.00

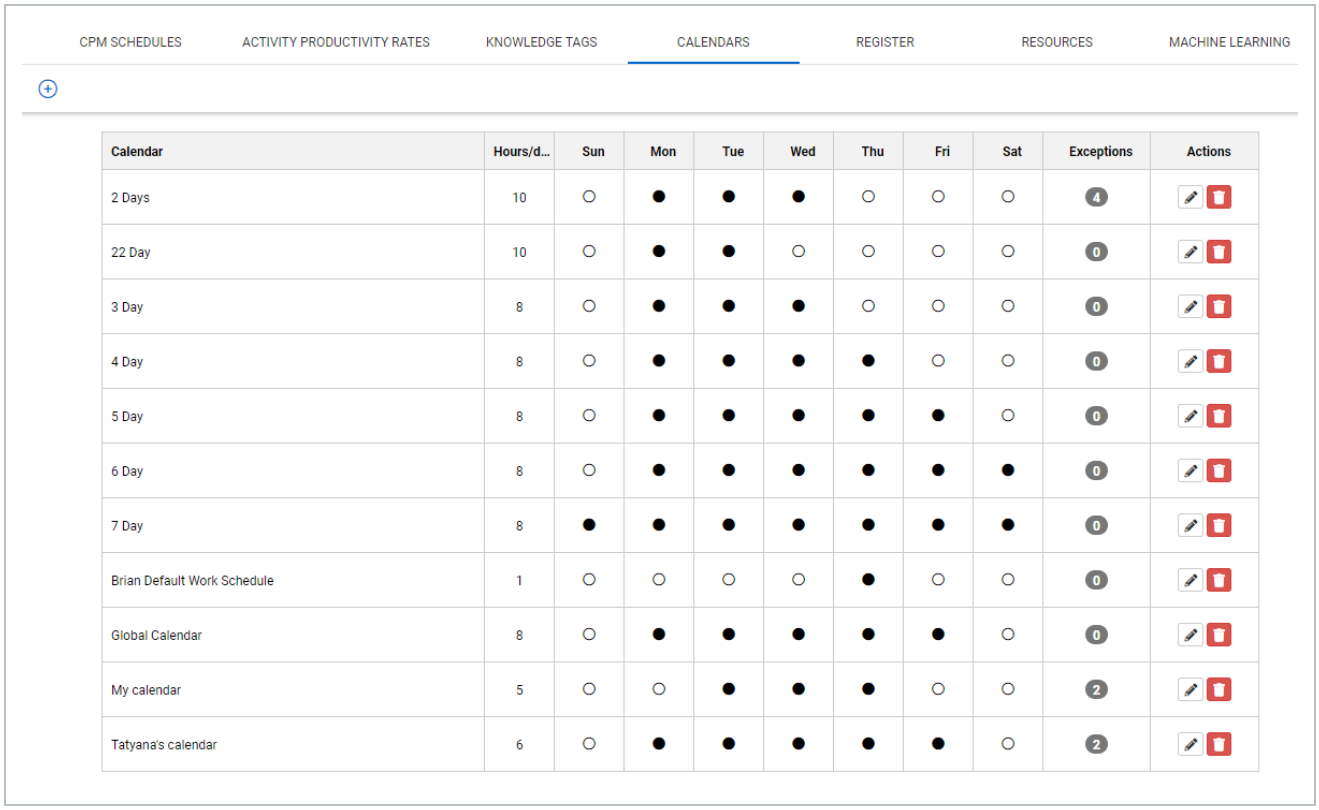
Knowledge Tags

On the Knowledge Tags tab, you can review tags defined at the organization level and exclude them as necessary from consideration by the Schedule inference engine. When a new project is created, you have the option to import these knowledge tags into the new project.



Calendars

On the Calendars tab, additional calendars can be created, working days can be edited, and a default calendar can be defined. This is also where holidays are defined.



Calendar	Hours/d...	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Exceptions	Actions
2 Days	10	○	●	●	●	○	○	○	4	
22 Day	10	○	●	●	○	○	○	○	0	
3 Day	8	○	●	●	●	○	○	○	0	
4 Day	8	○	●	●	●	●	○	○	0	
5 Day	8	○	●	●	●	●	●	○	0	
6 Day	8	○	●	●	●	●	●	●	0	
7 Day	8	●	●	●	●	●	●	●	0	
Brian Default Work Schedule	1	○	○	○	○	●	○	○	0	
Global Calendar	8	○	●	●	●	●	●	○	0	
My calendar	5	○	○	●	●	●	○	○	2	
Tatyana's calendar	6	○	●	●	●	●	●	○	2	

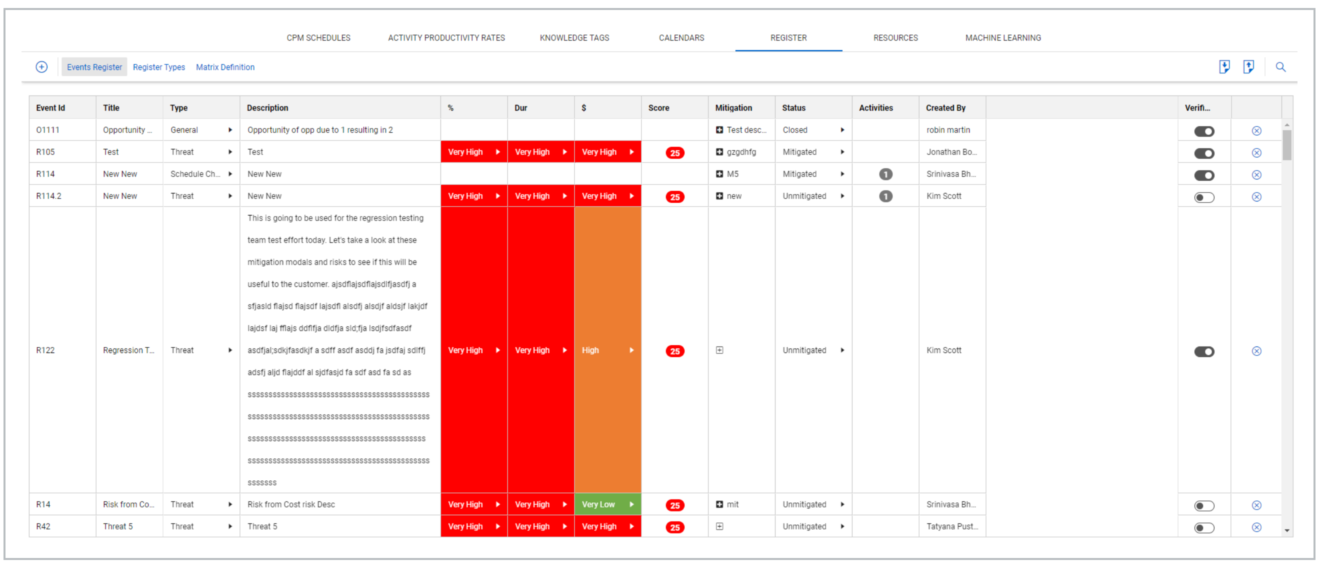
Register

Events register

The Events register is where you store persistent risks that occur on projects. The Events register is useful for pulling stored risks into new schedules and use them for risk workshops. The following fields can be quickly edited from the register.

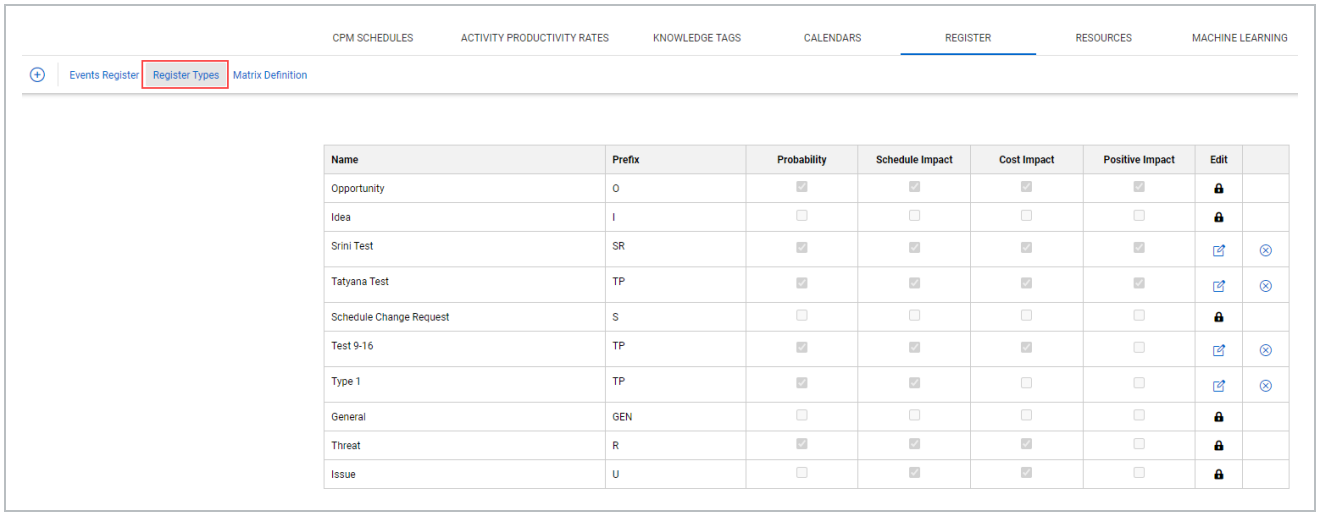
Tab	Function/Description
Title	Title of the event.
Type	This describes the type of register item, for example, Risk, Opportunity, or Action Item.
Description	Items descriptions can be edited at any time.
%	The Probability an event will occur in a risk simulation.
Dur	Impact range event would have on a simulation when it occurs.
$	Impact range event would have on a simulation when it occurs

Tab	Function/Description
Score	A score is automatically generated based on the probability and impact of items.
Mitigation	Mitigation strategies can be captured here.
Status	Indicates the status of an event in the register
Activities	The number of times the register item appears schedules. Specific Project and WBS element appearances can be reviewed by clicking on the number. You can select the All drop down to filter the list by project.
Created By	Indicates the user that created the Event.
Verified	Items can be either created directly in the Knolwedge Library, or pushed from individual projects. Items pushed from projects will appear here as unverified, and will not show up as Smart Suggestion options in other projects until verified.
Delete	Deletes the Event from the register and from any assigned instances in schedules.



Register Types

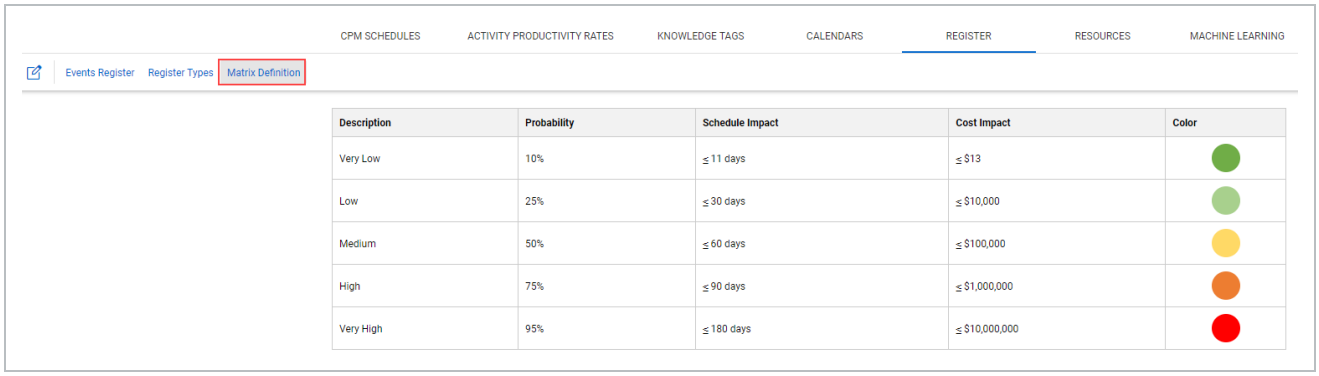
Additional Register Types can be defined by selecting the register type tab.



Name	Prefix	Probability	Schedule Impact	Cost Impact	Positive Impact	Edit
Opportunity	O	☑	☑	☑	☑	🔒
Idea	I	☐	☐	☐	☐	🔒
Srini Test	SR	☑	☑	☑	☑	✎ ⊗
Tatyana Test	TP	☑	☑	☑	☑	✎ ⊗
Schedule Change Request	S	☐	☐	☐	☐	🔒
Test 9-16	TP	☑	☑	☑	☐	✎ ⊗
Type 1	TP	☑	☑	☐	☐	✎ ⊗
General	GEN	☐	☐	☐	☐	🔒
Threat	R	☑	☑	☑	☐	🔒
Issue	U	☐	☑	☑	☐	🔒

Matrix Definition

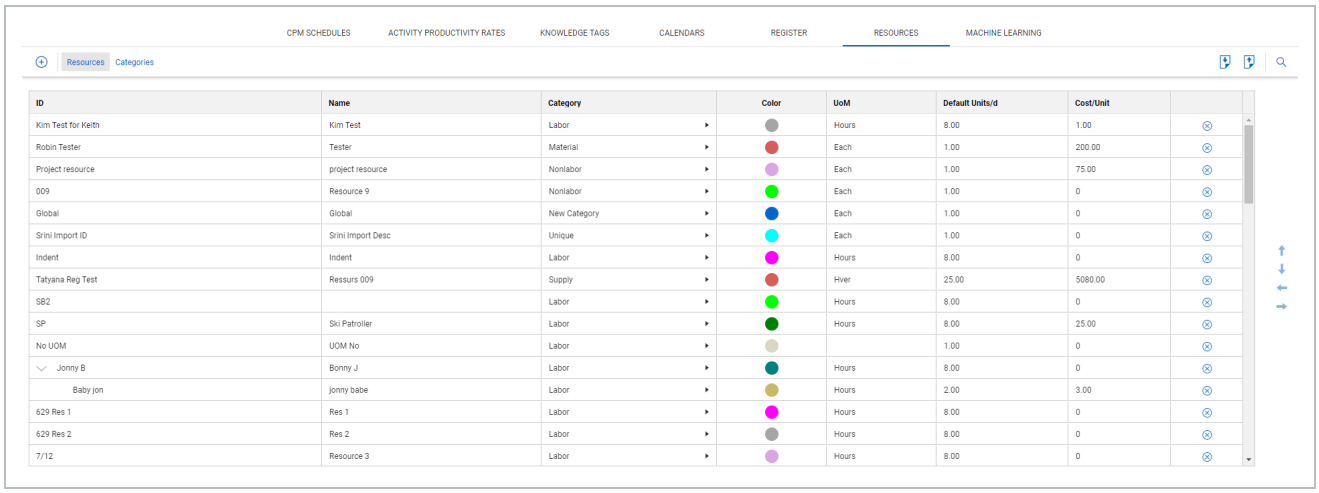
The tenant level definition of the likelihood and range of impact for both duration and cost a register event has in the cost risk, and schedule review views on risk simulations. These can be adjusted to be project or schedule specific



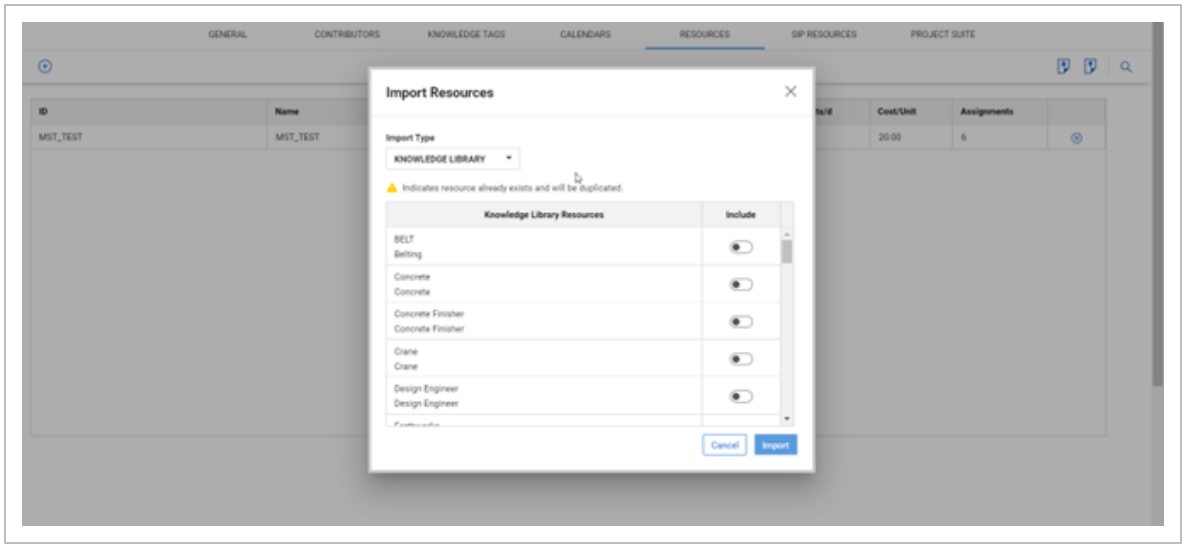
Description	Probability	Schedule Impact	Cost Impact	Color
Very Low	10%	≤ 11 days	≤ $13	
Low	25%	≤ 30 days	≤ $10,000	
Medium	50%	≤ 60 days	≤ $100,000	
High	75%	≤ 90 days	≤ $1,000,000	
Very High	95%	≤ 180 days	≤ $10,000,000	

Resources

Resource details such as ID, Name, Category, Default Units, and Costs can be edited in the register. The indent arrows located on the far right of the screen are used to create child resources or to move the resource to a different part of the grid.



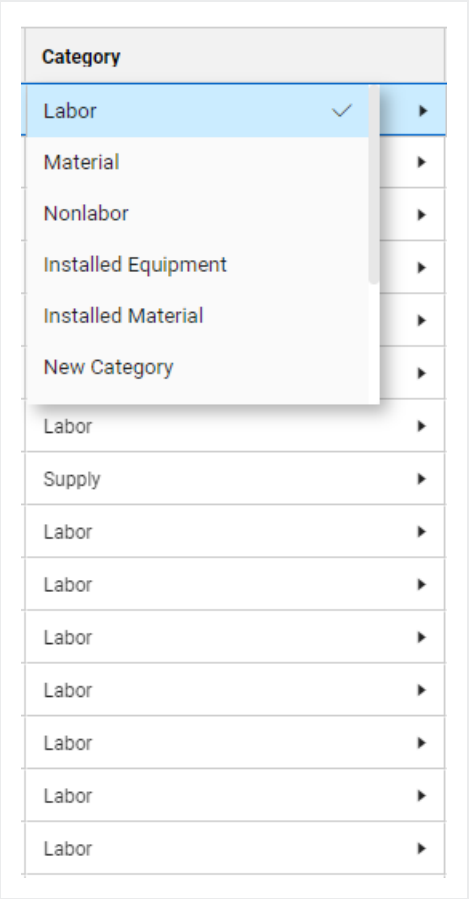
Resources can be imported from a Microsoft Excel file and also exported, which can then be edited and imported back into the Resources tab.



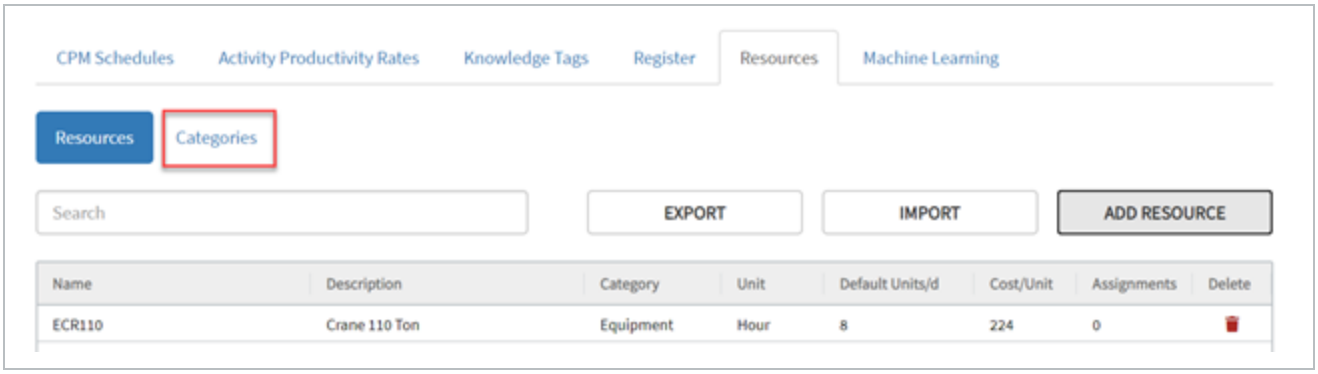
Categories

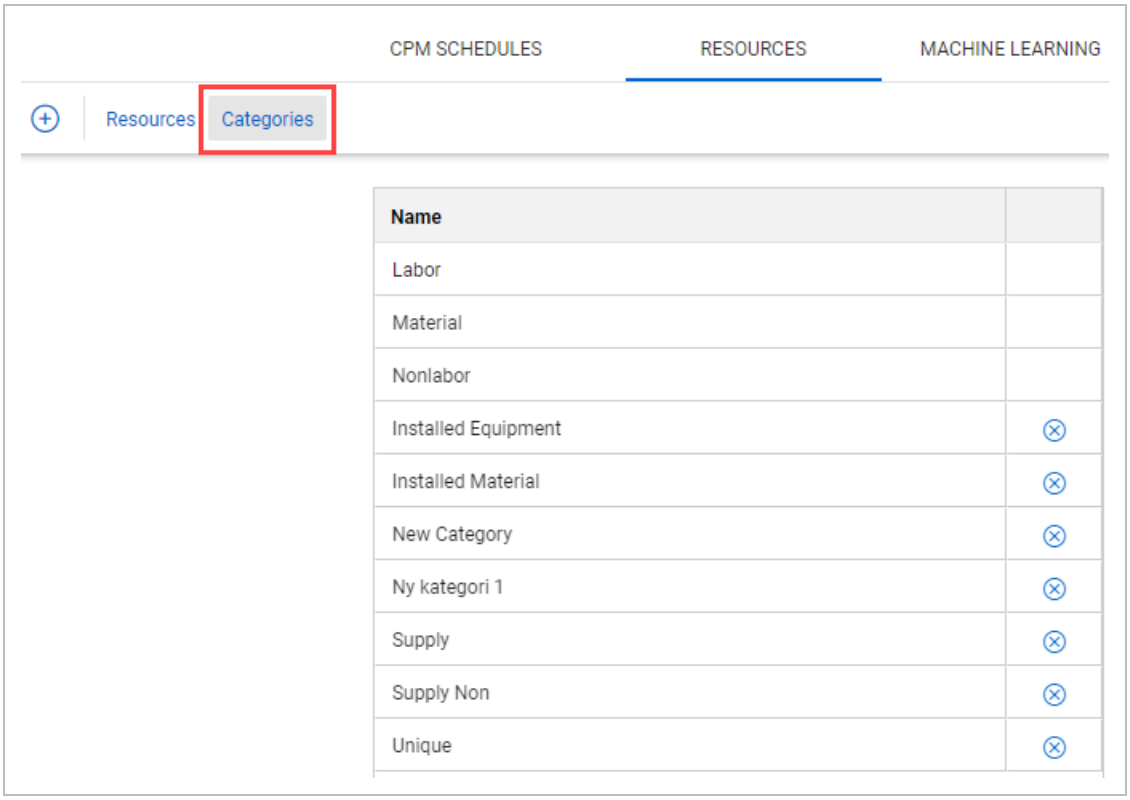
Schedule validates the Categories column in the Resources register after it is updated.

NOTE	Only System Administrators can add, edit, or delete Category types.



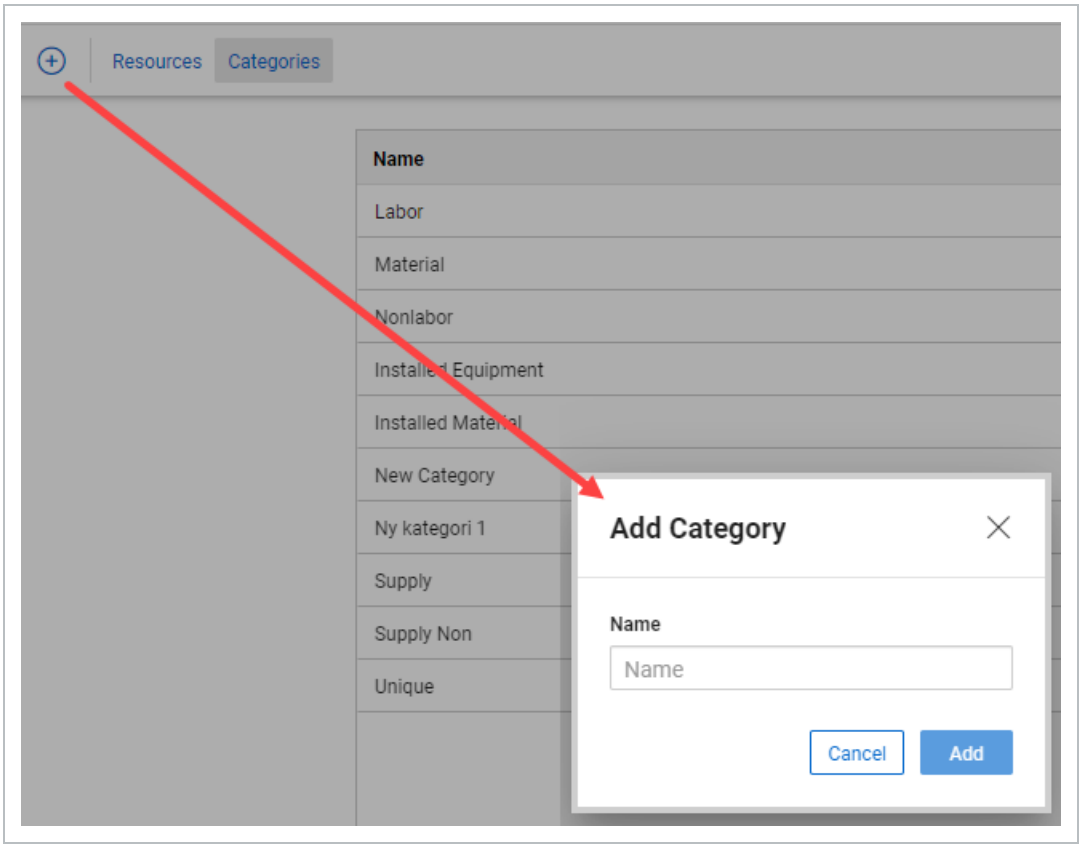
To modify the categories available, click on the Categories section of the Knowledge Library Resource register.





To add a category, click the **Add Category** button.

Type in a new category name. Click **Add** to complete the action.



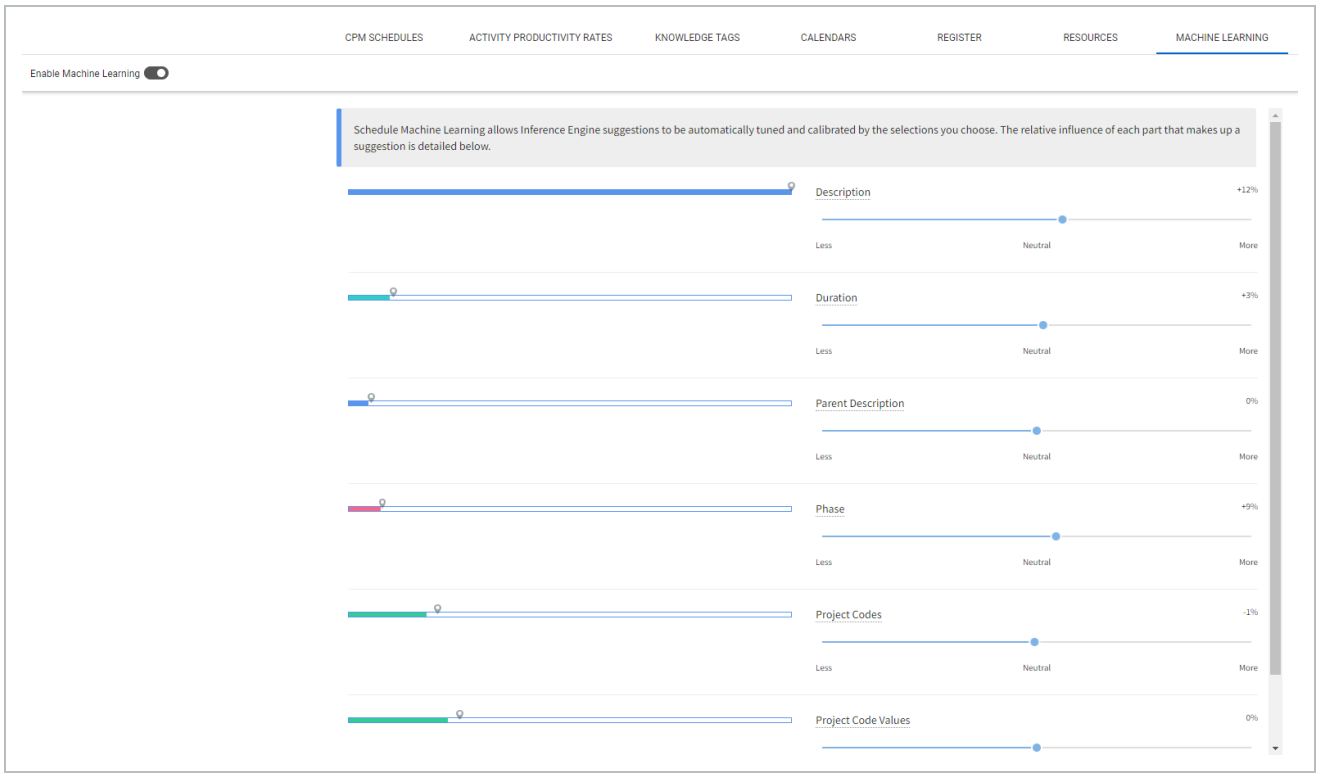
To edit a category name, click directly into the name field of the category to be modified.

If a category needs to be deleted, select the icon in the delete column.

NOTE If you are using Estimate or Control, these categories also match the default categories.

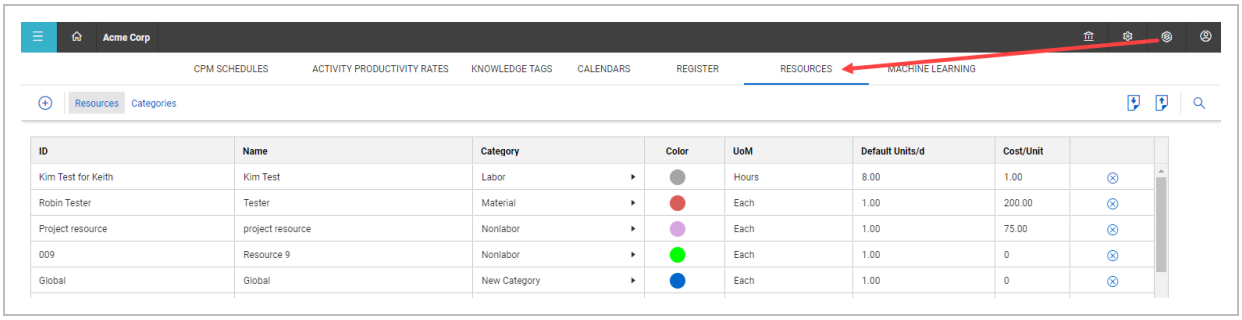
Machine learning

Machine learning lets inference engine suggestions be automatically tuned and calibrated by the chosen selection.

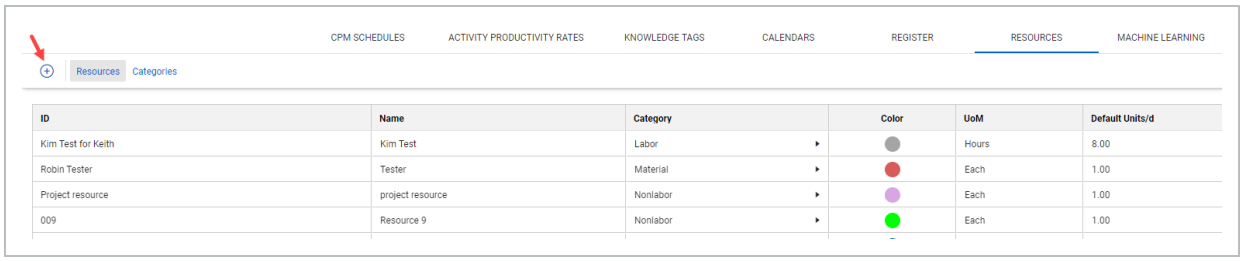


Set Up Resources

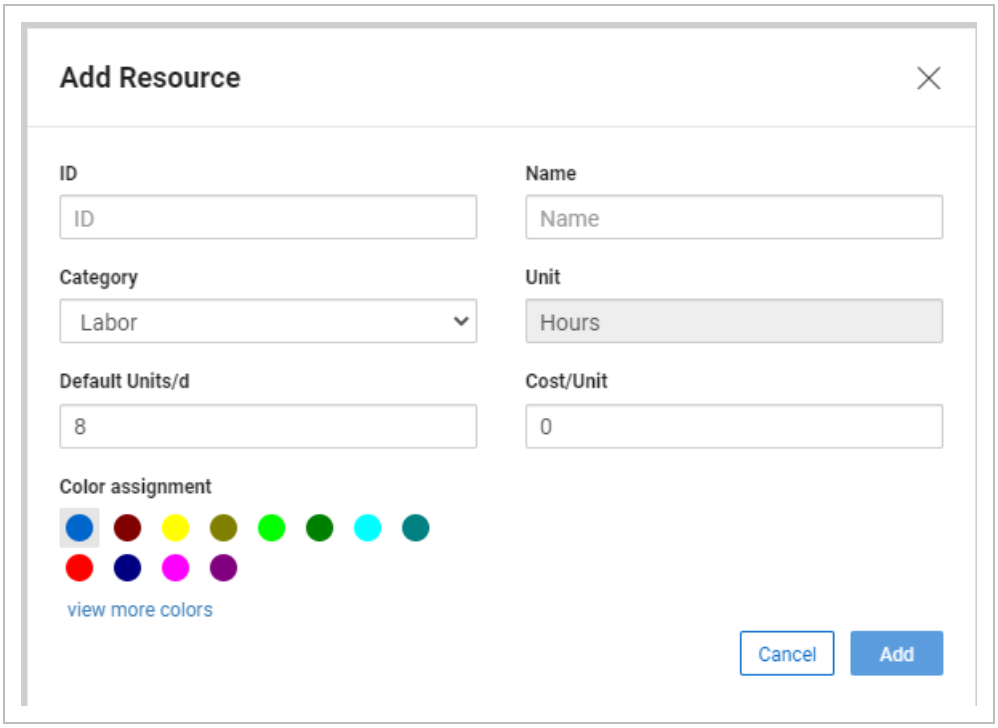
1. Open the **Knowledge Base** and then go to the **Resources tab**.



2. In the Resources Register, select the **Add Resource**button to establish a new resource.



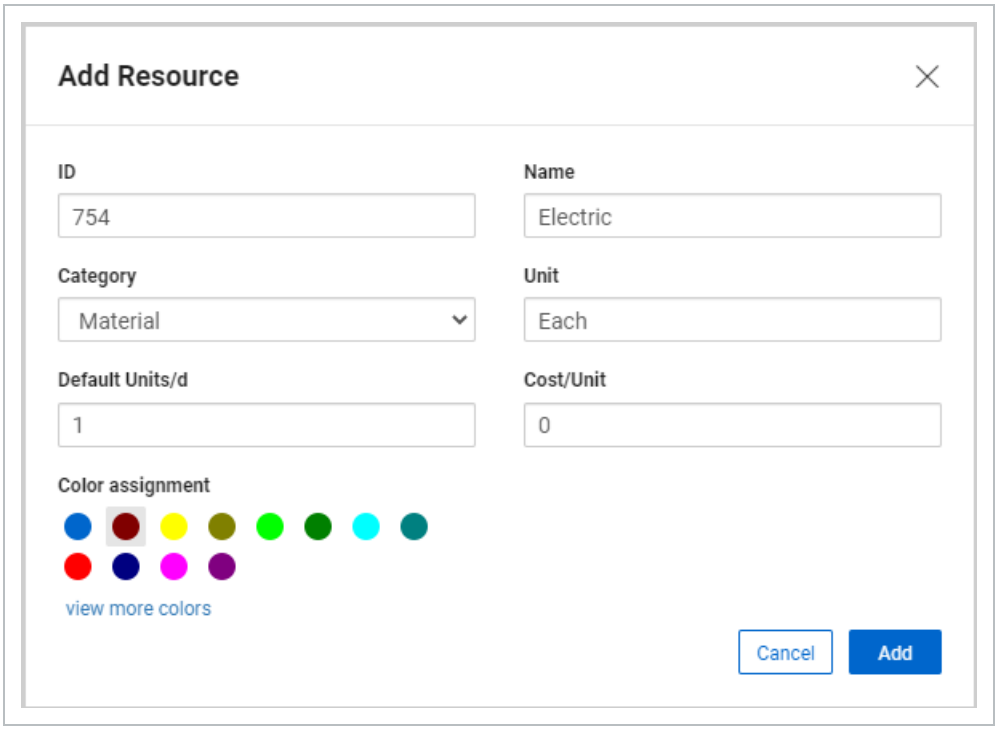
- A dialog box opens.



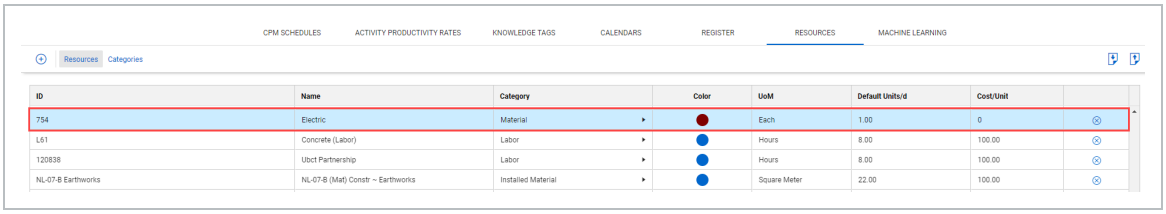
Field	Definition
Name	Recognizable resource name or abbreviation schedulers reference when selecting resources from the register
Description	Extended description or full title of the resource
Category	Resource type classification such as Labor, equipment, and material.

Field	Definition
Unit	The resource's unit of measure
Default Units/d	Daily unit production/completion rate
Cost/Unit	Cost per unit

3. Enter in the resource details and then click **Add** when complete.



- The new resource is added to the Resource register



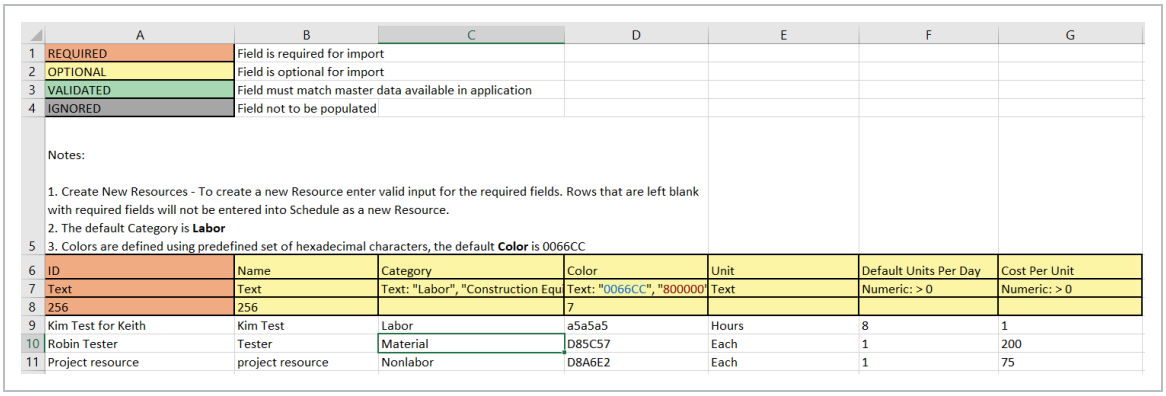
NOTE To edit a resource, click directly into the specific field of that resource in the register.
To delete a resource, click the icon in the Delete column.

4. Click the header of the column to sort by to sort resources by field.
    - Clicking the header initially sorts ascending/A-Z
    - Clicking the header a second time sorts descending/Z-A
    - Clicking the header a third time clears the sort function

Import/Export

In addition to using the Resources register to set up individual resources, you can also import and export resources in bulk.

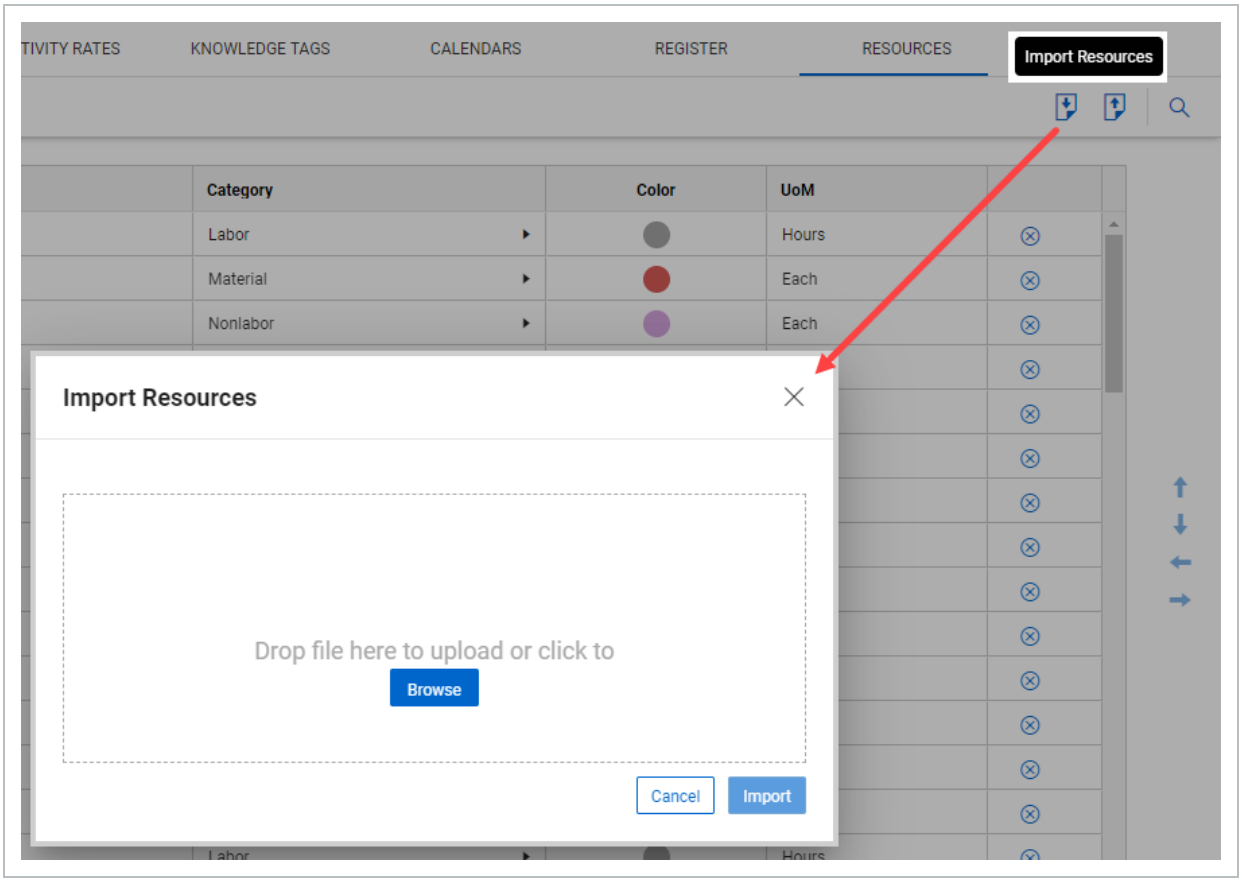
1. In the Knowledge Library Resource register, click the **Export**button.
    - Once selected, an Excel file downloads to your local drive. The file contains the list of resources currently in the organization's Resource register.



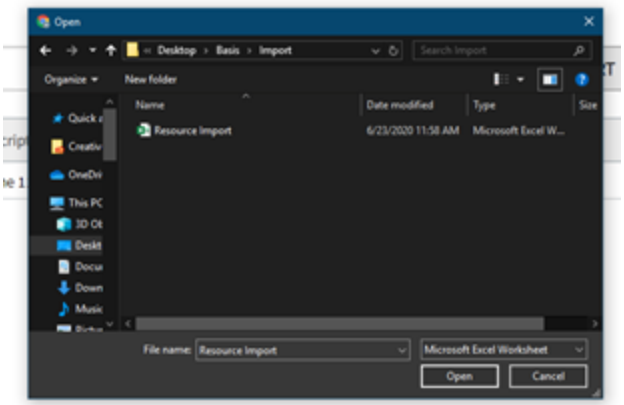
	A	B	C	D	E	F	G
1	REQUIRED	Field is required for import					
2	OPTIONAL	Field is optional for import					
3	VALIDATED	Field must match master data available in application					
4	IGNORED	Field not to be populated					
	Notes: 1. Create New Resources - To create a new Resource enter valid input for the required fields. Rows that are left blank with required fields will not be entered into Schedule as a new Resource. 2. The default Category is **Labor** 3. Colors are defined using predefined set of hexadecimal characters, the default **Color** is 0066CC						
6	ID	Name	Category	Color	Unit	Default Units Per Day	Cost Per Unit
7	Text	Text	Text: "Labor", "Construction Equ	Text: "0066CC", "800000"	Text	Numeric: > 0	Numeric: > 0
8	256	256		7			
9	Kim Test for Keith	Kim Test	Labor	a5a5a5	Hours	8	1
10	Robin Tester	Tester	Material	D85C57	Each	1	200
11	Project resource	project resource	Nonlabor	D8A6E2	Each	1	75

2. In Excel, populate the columns with additional resources and details.
    - Once complete, save the .xlsx file

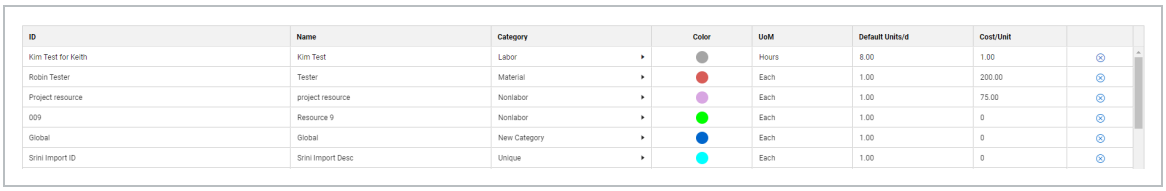
3. In the Knowledge Library Resource Register, click the **import** icon.



4. A dialog box opens where you select the updated .xlsx file. Select the file, and, click **Open**.



- Schedule processes the data and updates the register with new items and changes.



ID	Name	Category	Color	UoM	Default Units/d	Cost/Unit	
Kim Test for Keith	Kim Test	Labor		Hours	8.00	1.00	
Robin Tester	Tester	Material		Each	1.00	200.00	
Project resource	project resource	Nonlabor		Each	1.00	75.00	
009	Resource 9	Nonlabor		Each	1.00	0	
Global	Global	New Category		Each	1.00	0	
Srini Import ID	Srini Import Desc	Unique		Each	1.00	0	

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LESSON 6 – RESOURCE HISTOGRAM

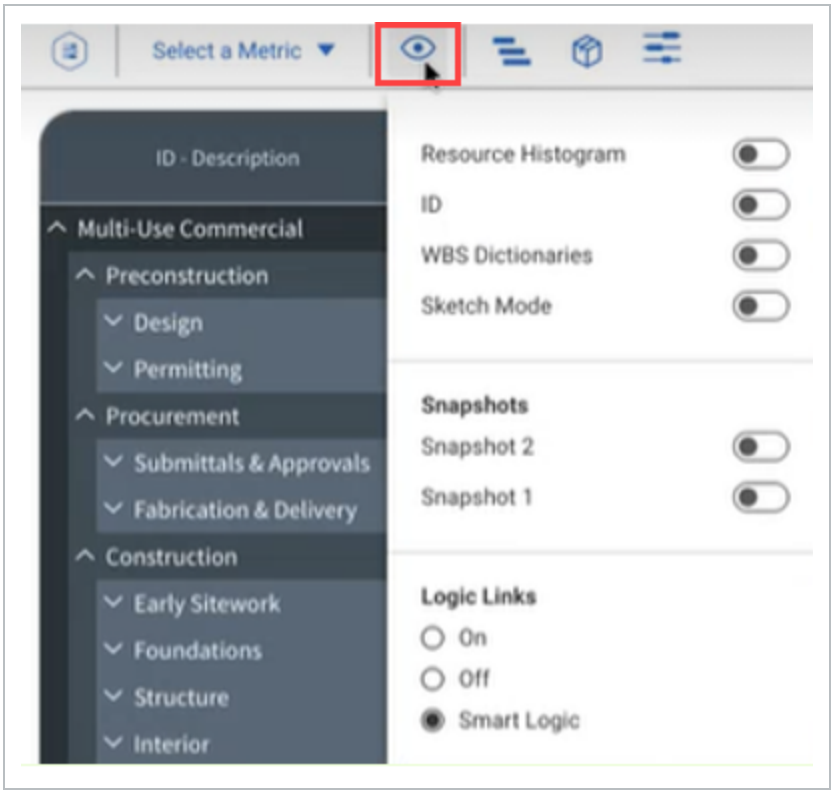
Resource histogram view

The Resource histogram shows the assigned resources for the project in the histogram window. Assigned resources can be viewed based on Planned, Remaining, Actual, and Remaining Late statuses.

Use the following step-by-step to enable the Resource histogram view.

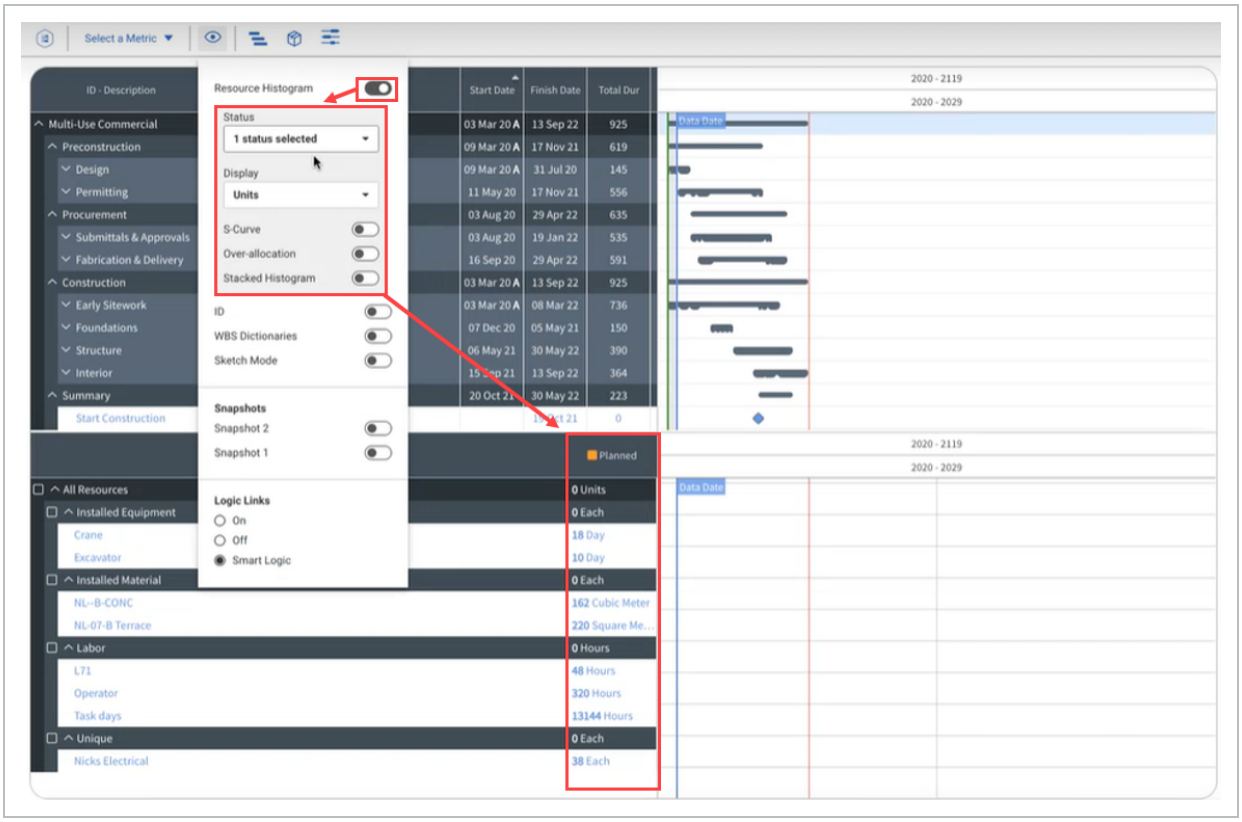
Enable the Resource Histogram View

1. In the toolbar, click the **View options** icon.

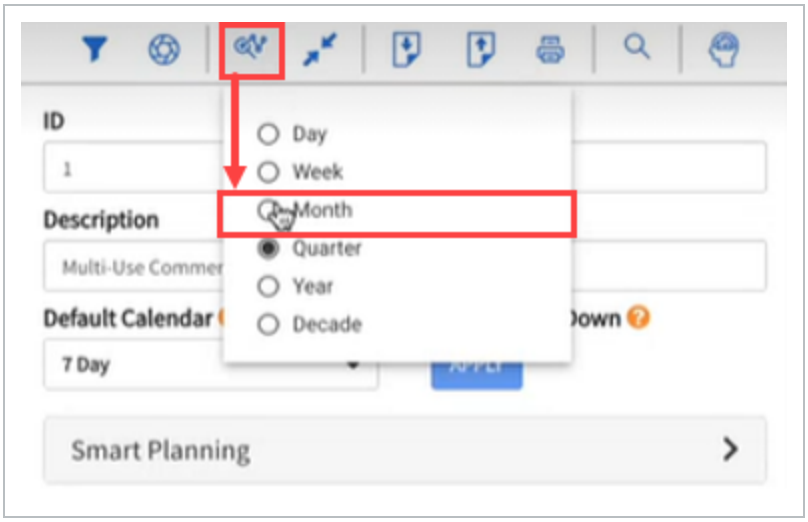


2. Switch the Resource Histogram toggle to enable the Resource histogram.

   The view options menu now shows more features in the gray box area. Resources show in the bottom left of the screen. To the right, the histogram window shows.

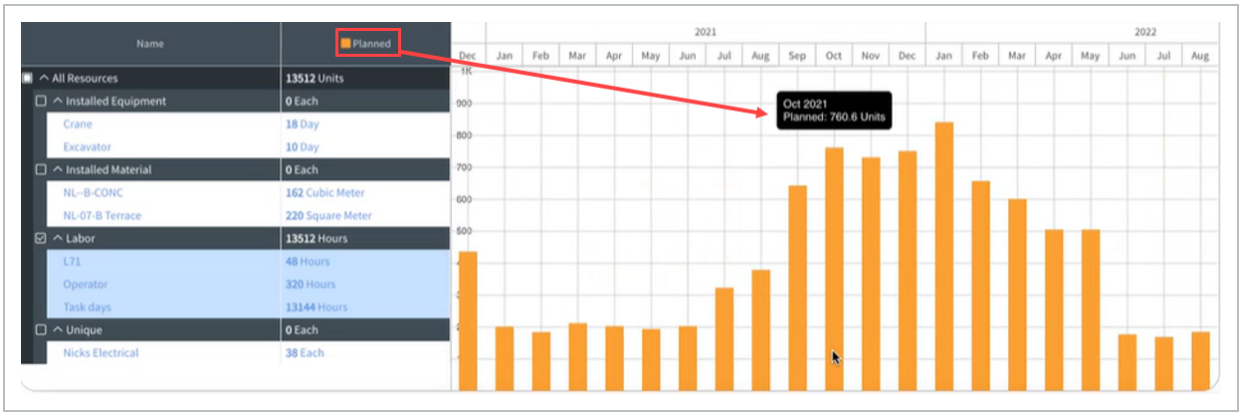


3. To view a specific date range for resources, on the right side of the screen, select the **Zoom level** icon.



In the following images for the next steps, the Zoom level is set to Month.

The histogram now shows resources allocated based on the month. By default, only the Planned status is selected.

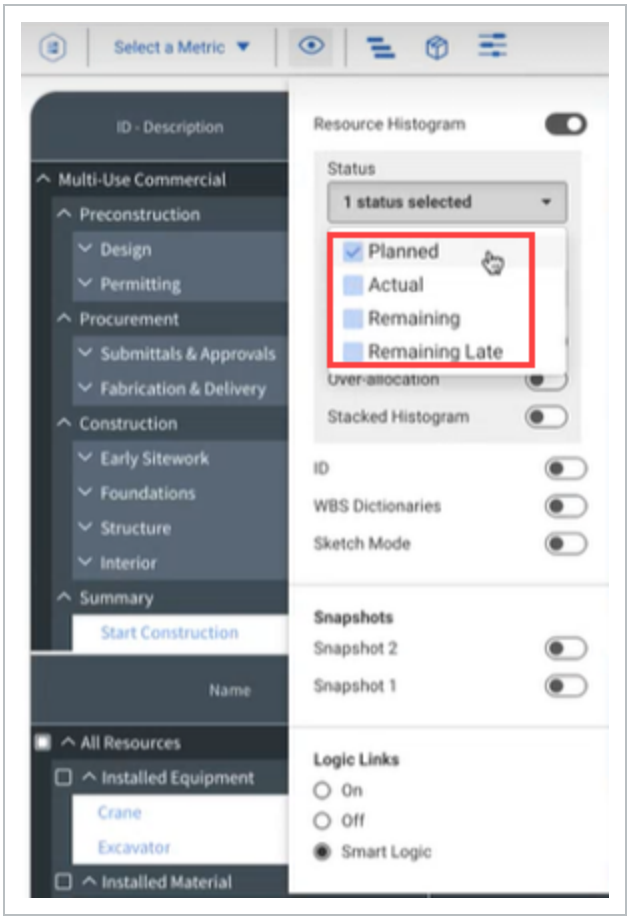


Use the following step-by-step to add statuses to the histogram.

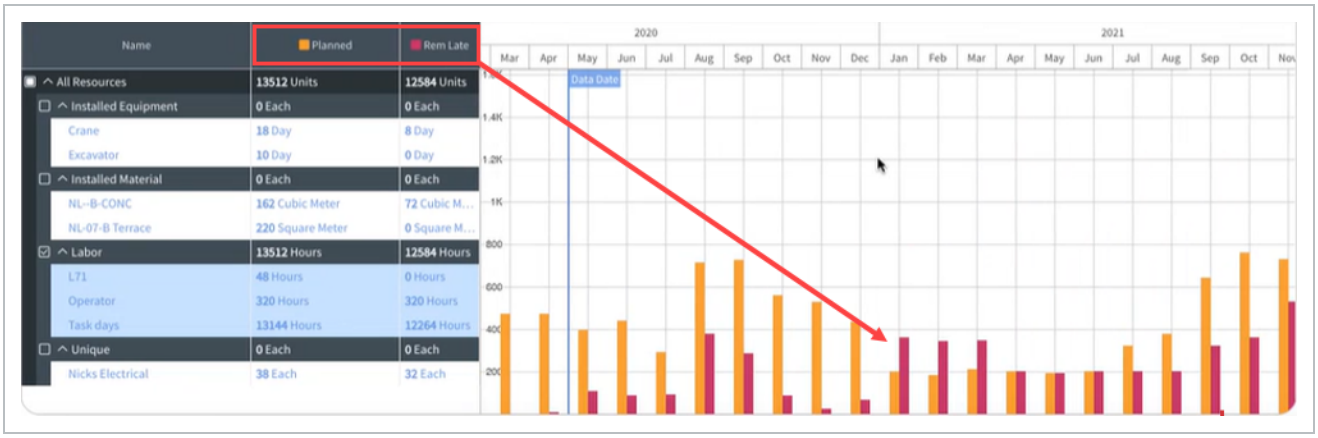
Add statuses to the Resource histogram

1. Select the **View options** icon, and then select the **Status** drop-down menu.

   The Planned status is selected by default.
2. Select another status to show on the histogram that has not been selected previously.



The additional statuses show the resource bar in different colors. You can hover over the bar to view the data or you can review the resource data in the left column. The image below shows that the Planned and Remaining Late statuses currently occupy the histogram.



In the columns on the left of the screen, the status selected brings in the units associated to it. In this case, the remaining late units are brought in because the Remaining late status is selected. You can see those units spread incrementally across the project.

NOTE The data date is also shown on the histogram. You can add the data date and the finish date of the project for reference so that you know the boundaries of your project.

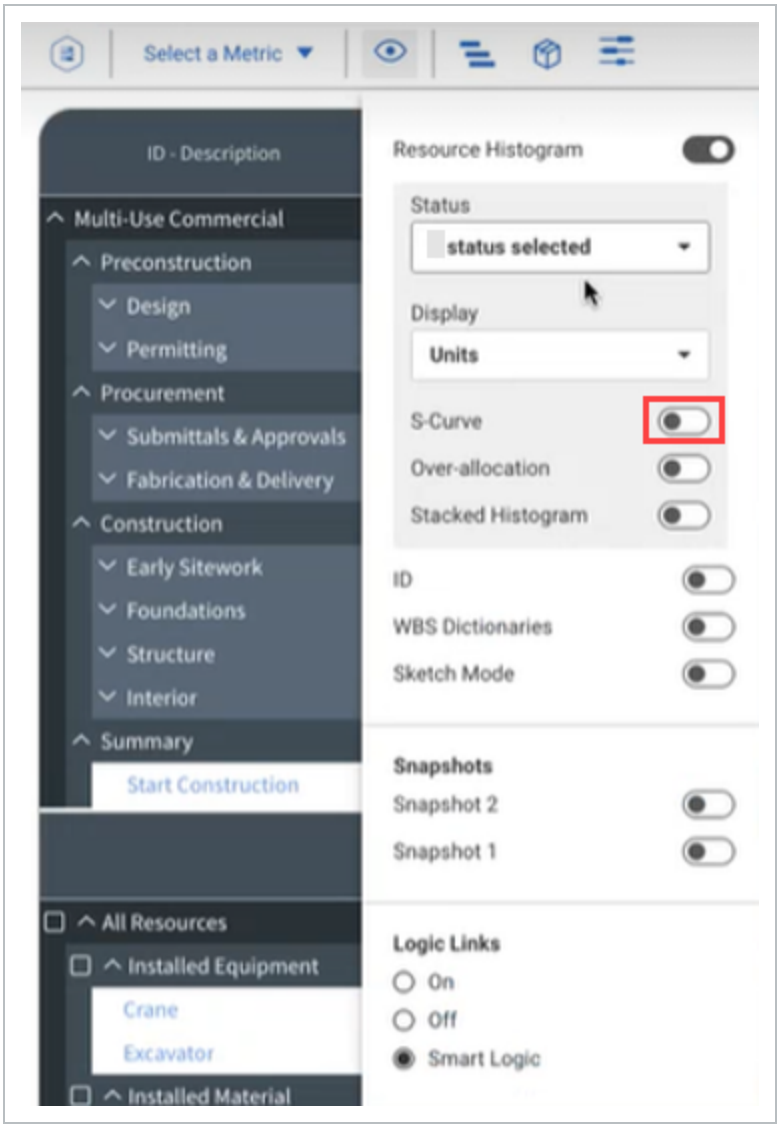
S-curve

In addition to the incremental curve, you also have a cumulative curve. This is also known as the S-curve. If you toggle the S-curve *On*, you can see two S-curves are planned on the histogram.

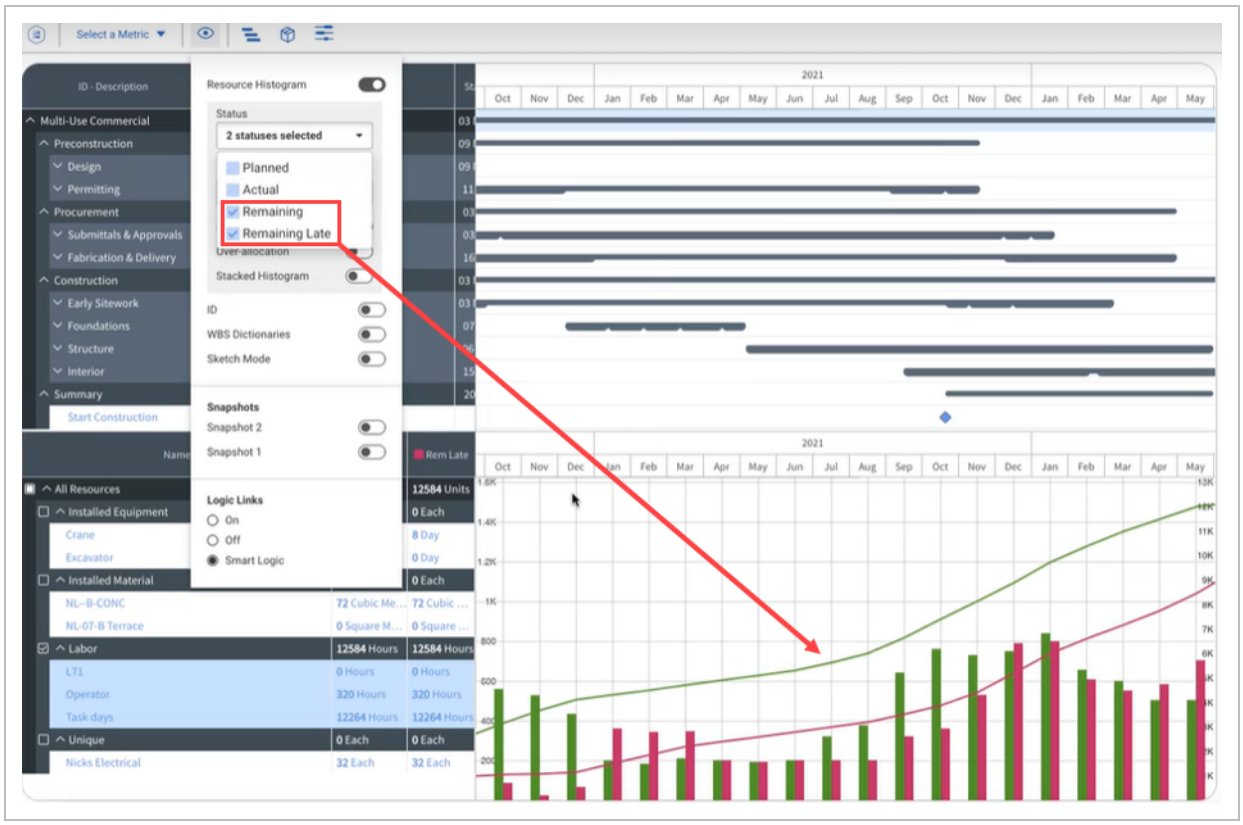
Use the following step by step to enable the S-curve in the Resource histogram.

Enable the S-curve

1. In the toolbar, click the **View options** icon.
2. Select the **Status** drop-down menu, and then select **Remaining** and **Remaining Late**.
3. Switch the S-curve toggle to enable the S-curve.

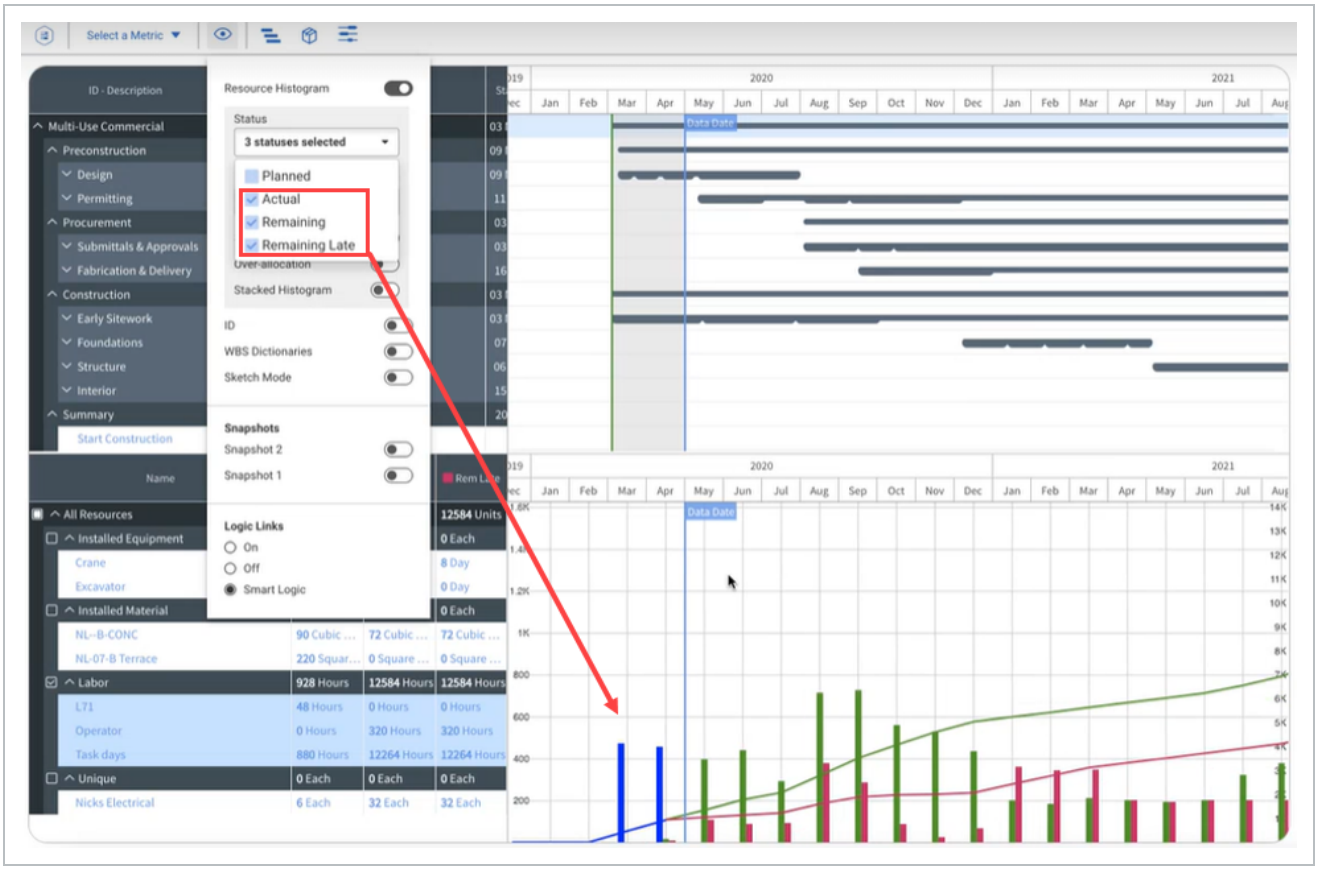


Two S-curves show on the histogram. At the conceptual phase of a project, you are shown these early and late dates. The space between those curves is the float on the project.



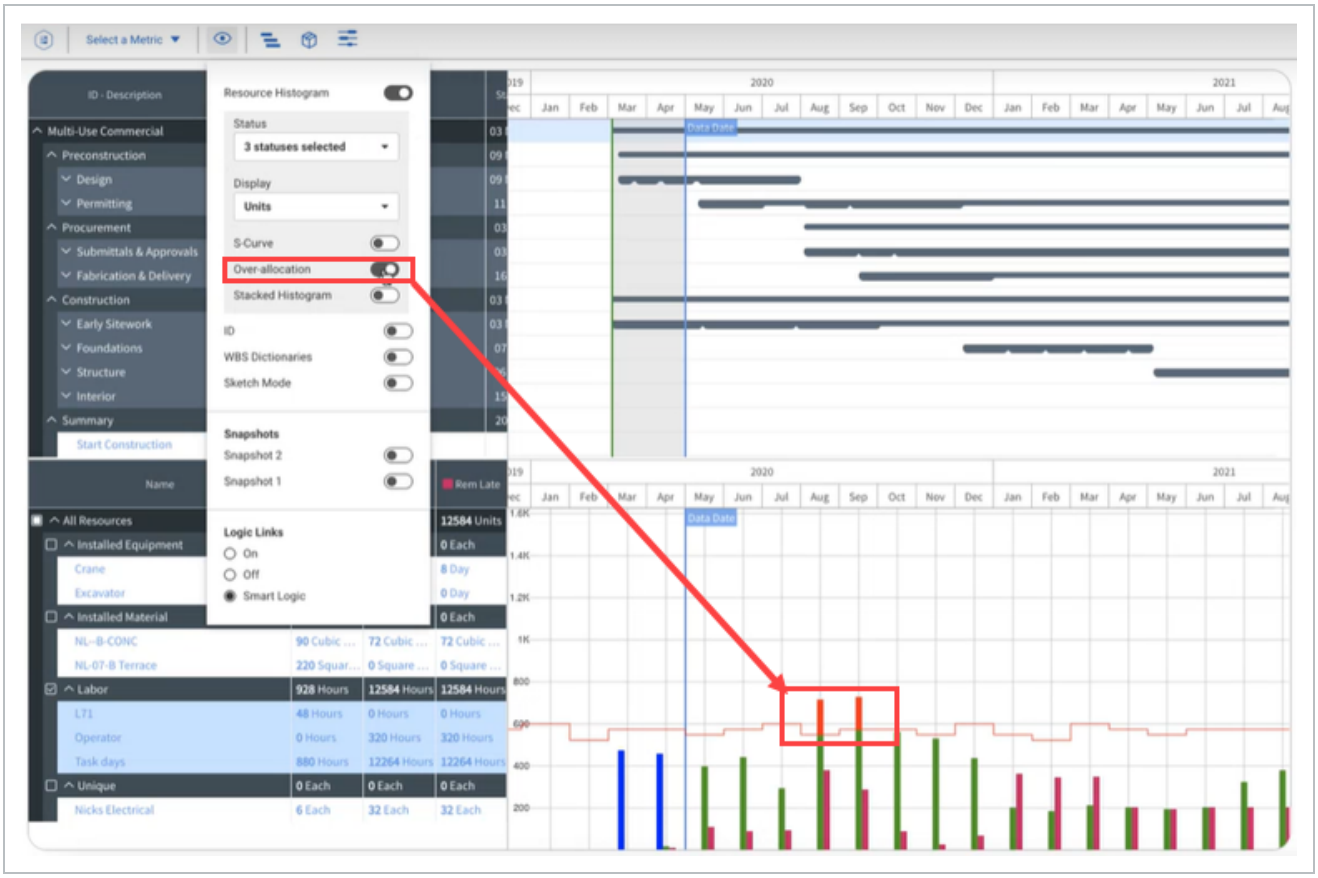
Actual status enabled with S-curve

With the Actual status enabled with the S-curve lines, you can see that the Actual line ends where the Remaining Late and Remaining lines start. This is your job to date running total for the project. For example, you had certain man-hours earned to date and the remaining hours to earn start from what you have earned to date. You started from the Actuals line in blue and then you go forward from there. The Actual line end where remaining units begin. The Remaining and Remaining late lines starts where actuals for the project end.



Over-allocation

Over-allocation shows you where you are over allocated based on your resource limits. For example, where you planned for more resources needed to complete the work than you currently plan to have on site. This means in the month of August and September, the bars above the line represent a need for more resources. To fix this over-allocation, you can move activities around to flatten that peak, add more resources, or extend the duration of your activities.



The line across the histogram represents the activity calendars on which these resources are assigned. Weekends, holidays, and exceptions make the line drop because you are working fewer days in that given period. During those periods, you have fewer days to complete the work.

Use the following step by step to enable Over-allocation in the Resource Histogram.

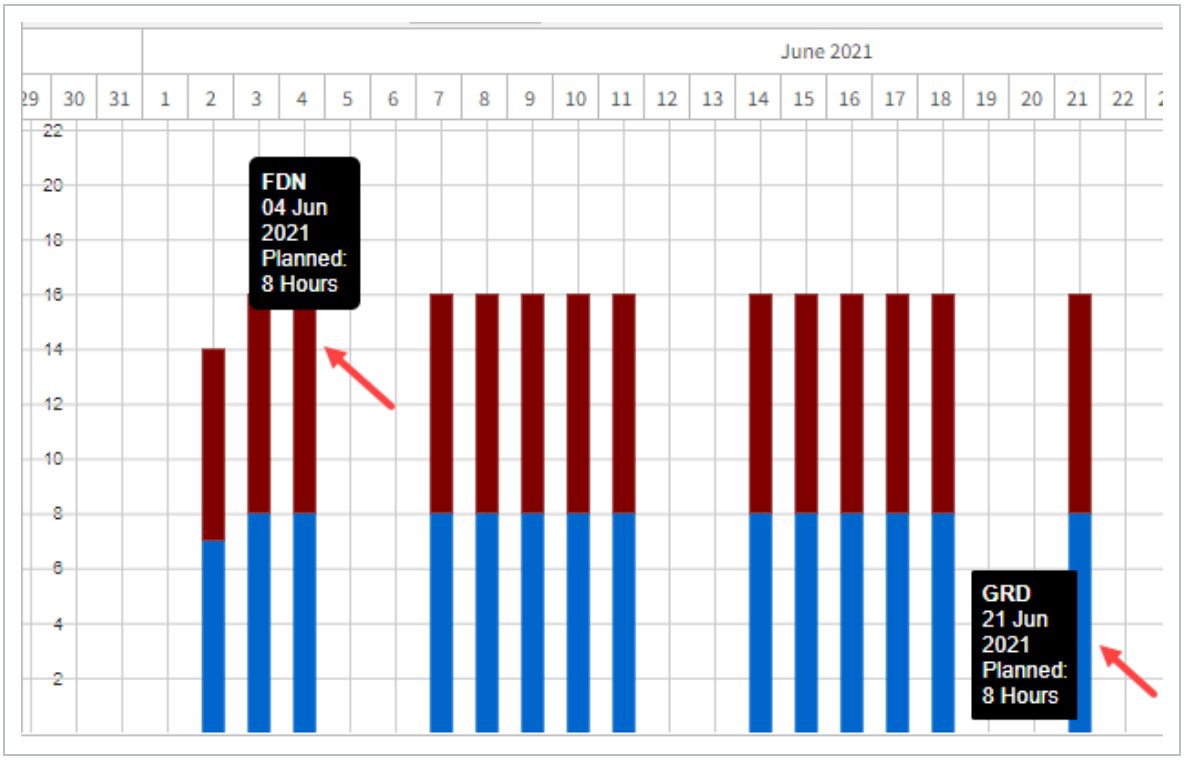
Enable the Over-allocation

1. In the toolbar, click the **View options** icon.
2. With Resource Histogram enabled, switch the Over-allocation toggle to enable Over-allocation.

Stacked histogram

The Stacked Histogram shows the different resources in the histogram using different colors. Hover over the different colored tool tips to show which resource that color represents. The tool tip also gives you data for the specific resource and period.

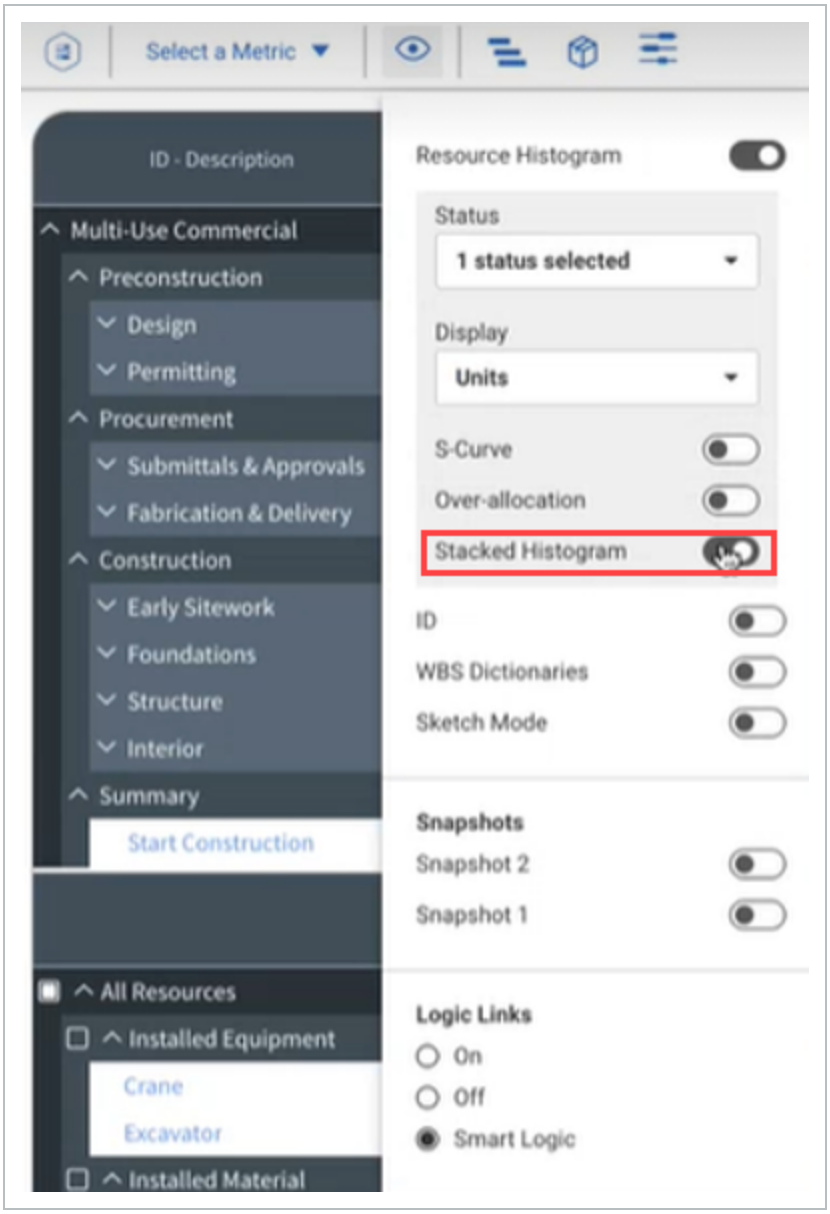
The Stacked Histogram contains advanced filtering capabilities, letting you click on a specific colored bars in a specific time period. Schedule then builds a filter to show that resource for that time period in the Gantt chart.



Use the following step by step to enable the Stacked Histogram.

Enable the Stacked Histogram

1. In the toolbar, click the **View options** icon.
2. With Resource Histogram enabled, switch the **Stacked Histogram** toggle on.



Stacked Histograms are shown on the histogram.

3. Hover over the different colored bars to show the tool tip information.

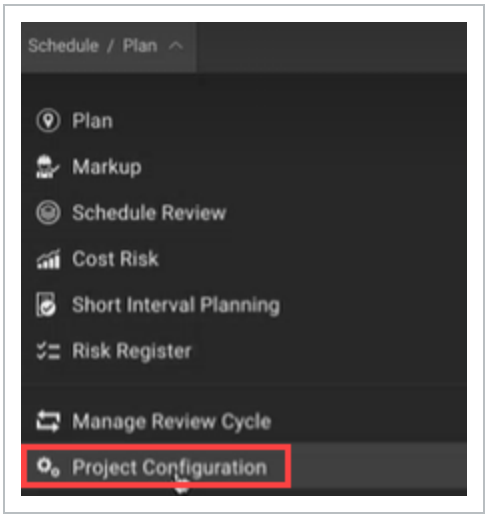
Changing the stacked histogram colors

Similar to the color column in the SIP resources, the Stacked Histogram colors are controlled at a project level in the Project Configuration.

Use the following step by step to edit the column colors for the stacked histogram.

Edit Stacked Histogram Colors

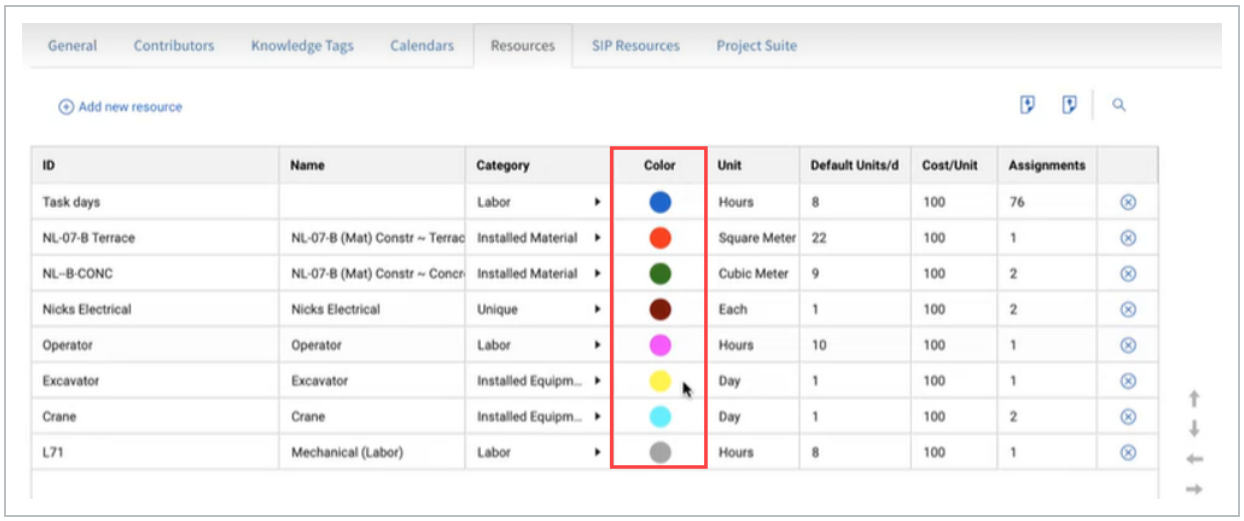
1. Select the navigation drop-down menu.
2. Select **Schedule Configuration**.



3. Select the **Resources** tab.

   Resources that have been added to the Resources tab have a column labeled Color.

4. Select the color cell in the row of the resource you want to edit. Then choose a different color for that resource.



Burn Rate

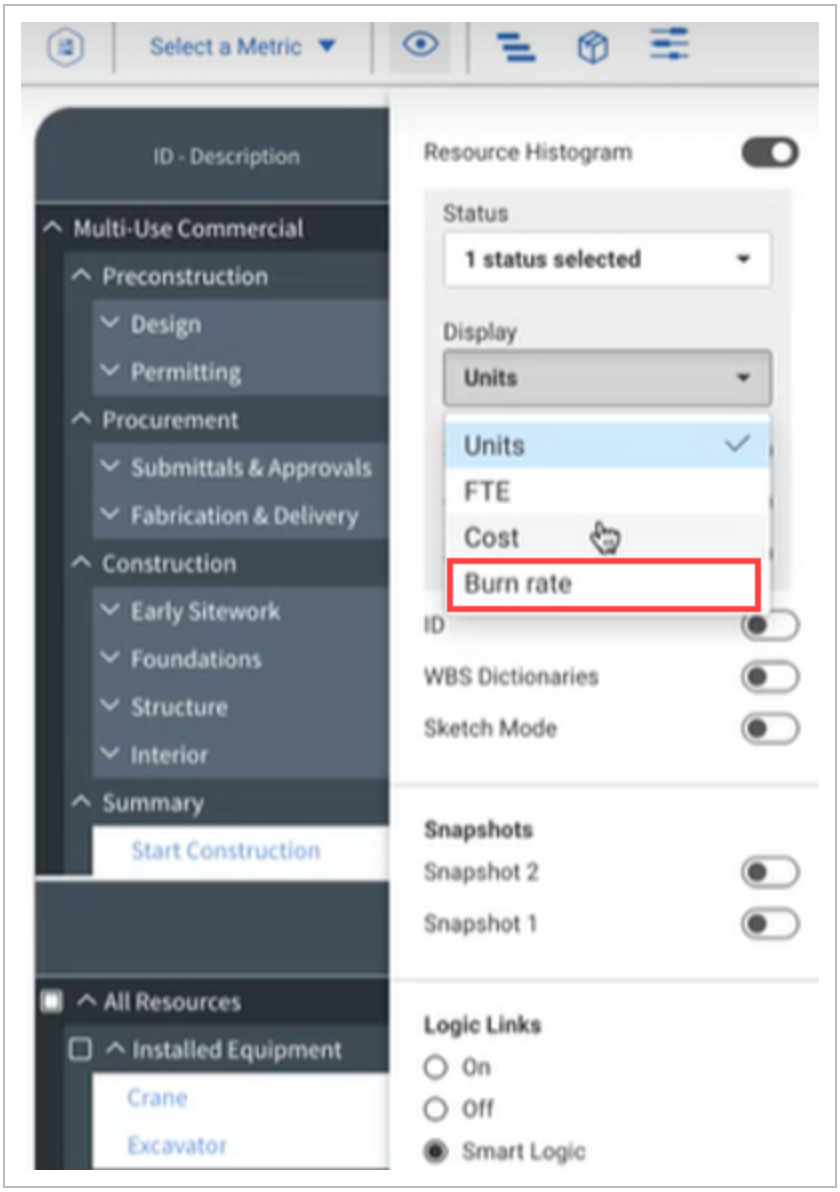
When Burn Rate is enabled, it shows as a percentage on the x-axis. The Burn rate is the percent of total man-hours in a period. The equation is the following:

Month total for a resource ÷ project total for resource(s) = Burn rate percentage

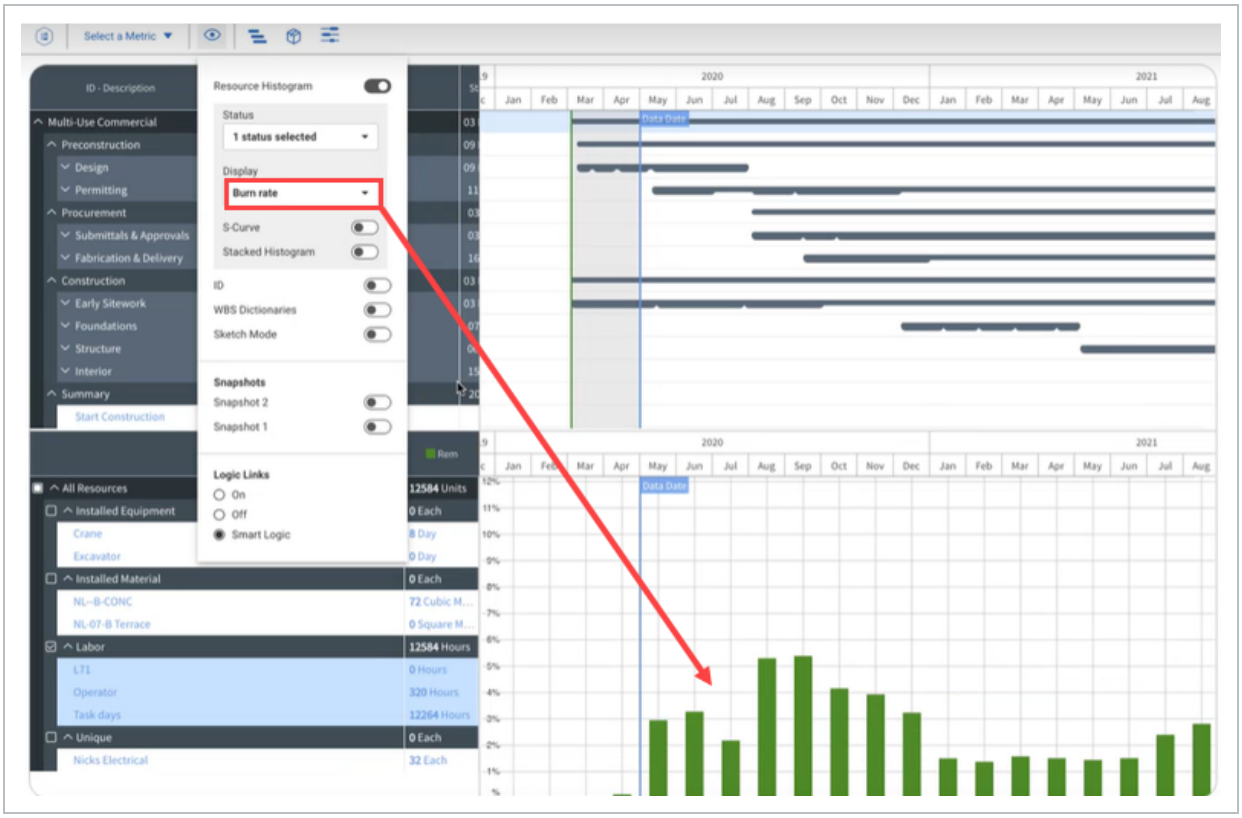
Use the following step by step to enable the Burn rate on the Resource Histogram.

Enable the Burn rate

1. In the toolbar, click the **View options** icon.
2. Select the **Display** drop-down menu.
3. Select **Burn rate**.



The histogram shows Burn rate data.



Excel Export

The Excel export feature lets you use the exported project file for reporting since it is a flat data source.

When you export from Schedule, the data from the entire project is exported including the following tabs:

- WBS
- Activity
- Logic
- Codes
- Udfs
- Resource Assignments

Each tab provides information that can be built upon each other. This lets you pivot on different data to create slicers for your reports. The Excel export also lets you make bulk edits to a schedule. You can

build an entire schedule in Excel and then import it back into Schedule. This includes logic, resource assignments, and the WBS. Each tab contains the following fields:

- Required
- Optional
- Validated
- Ignored

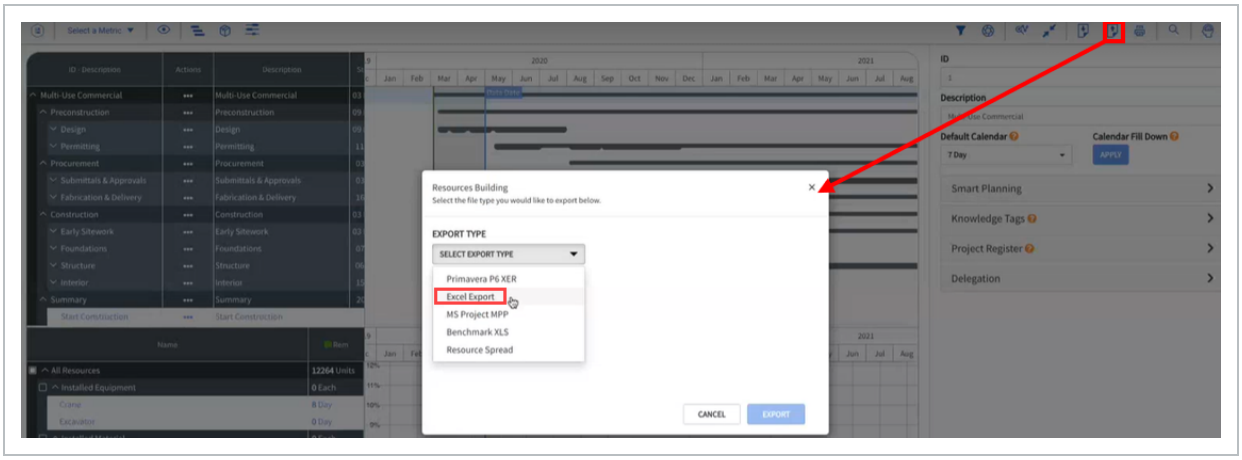
When considering what to import back into a Schedule project, you have the option to delete some tabs and import in only the specific tabs that were changed.

> **NOTE** If there are no changes to the file imported back into a Schedule project, the import shows no changes have been made.

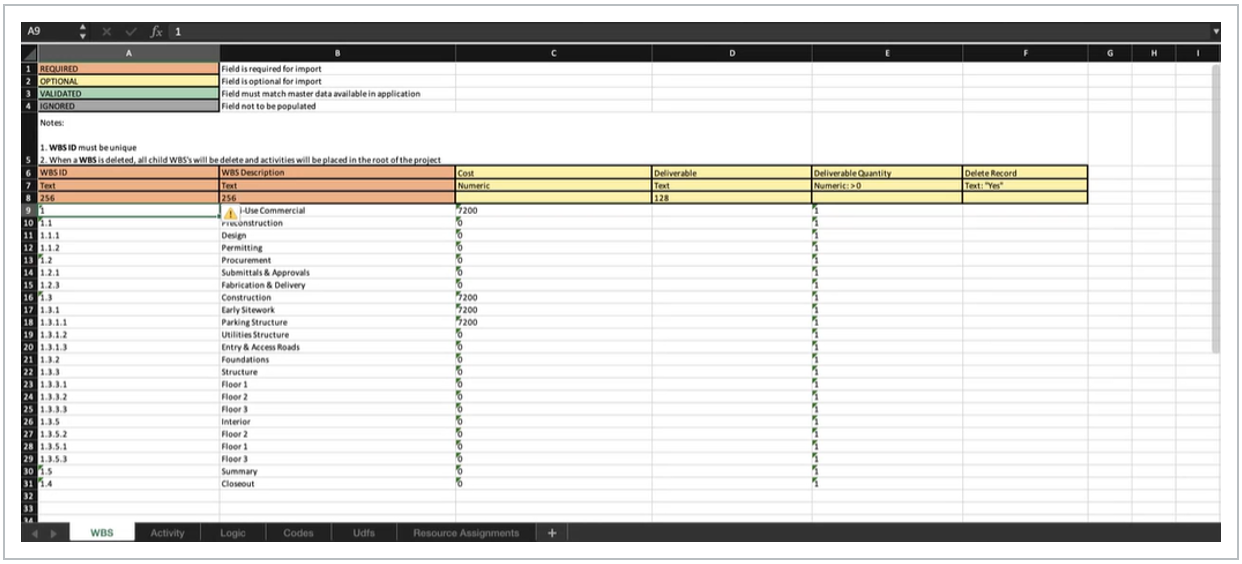
Use the following step by step to export a Schedule project.

Export from Histogram

1. Select the **Export** button on the right of the screen.
    - The Resources Building dialog box is shown



2. Select the **Export Type** drop-down menu.
3. Select **Excel Export**, and then select **Export**
    - An Excel project file opens



	A	B	C	D	E	F
1	REQUIRED	Field is required for import				
2	OPTIONAL	Field is optional for import				
3	VALIDATED	Field must match master data available in application				
4	IGNORED	Field not to be populated				
	Notes:					
	1. **WBS ID** must be unique					
5	2. When a **WBS** is deleted, all child WBS's will be delete and activities will be placed in the root of the project					
6	WBS ID	WBS Description	Cost	Deliverable	Deliverable Quantity	Delete Record
7	Text	Text	Numeric	Text	Numeric: > 0	Text: "Yes"
8	256	256		128		
9	1	I-Use Commercial	7200		1	
10	1.1	Preconstruction	0		1	
11	1.1.1	Design	0		1	
12	1.1.2	Permitting	0		1	
13	1.2	Procurement	0		1	
14	1.2.1	Submittals & Approvals	0		1	
15	1.2.3	Fabrication & Delivery	0		1	
16	1.3	Construction	7200		1	
17	1.3.1	Early Sitework	7200		1	
18	1.3.1.1	Parking Structure	7200		1	
19	1.3.1.2	Utilities Structure	0		1	
20	1.3.1.3	Entry & Access Roads	0		1	
21	1.3.2	Foundations	0		1	
22	1.3.3	Structure	0		1	
23	1.3.3.1	Floor 1	0		1	
24	1.3.3.2	Floor 2	0		1	
25	1.3.3.3	Floor 3	0		1	
26	1.3.5	Interior	0		1	
27	1.3.5.2	Floor 2	0		1	
28	1.3.5.1	Floor 1	0		1	
29	1.3.5.3	Floor 3	0		1	
30	1.5	Summary	0		1	
31	1.4	Closeout	0		1	
32						
33						
34						

WBS | Activity | Logic | Codes | Udfs | Resource Assignments | +

Use the following step by step to import an Excel file into a Schedule project.

Import into the Schedule

1. From Schedule, select the **Import** button on the right of the screen.
2. Browse to the file you want to import back into Schedule.
3. Select **Import**.

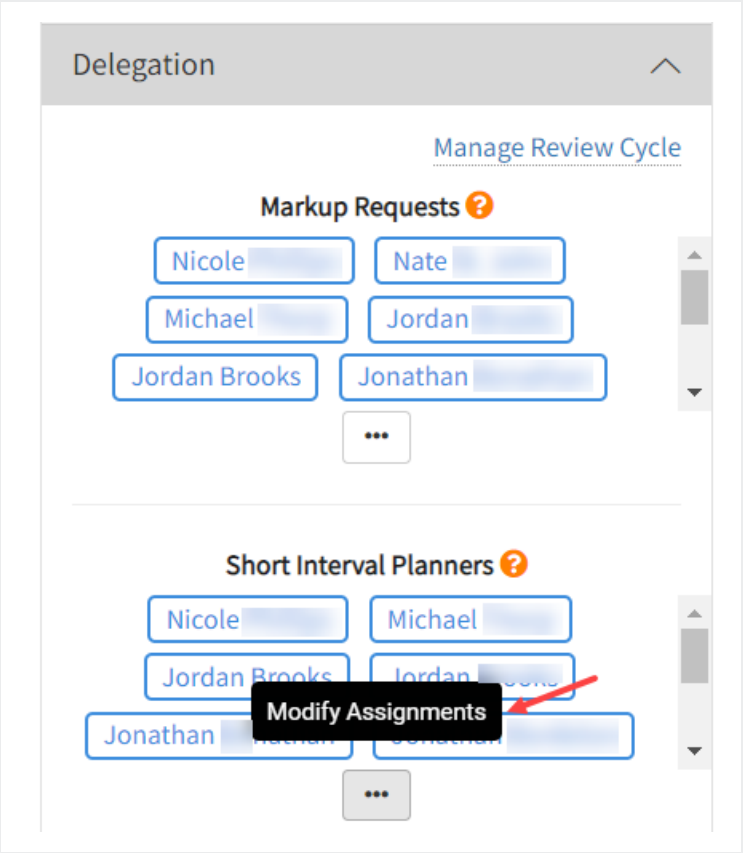
> **NOTE** An error message can be shown during the Import process. This error message can show where an error occurred in the Excel template and where the fix needs to be made. The import still brings in the data that is correct, but it skips over the data that generated the error. The error is then logged in Schedule.

LESSON 7 – MARKUP PROCESS

Markup Process Overview

Assigning Markup

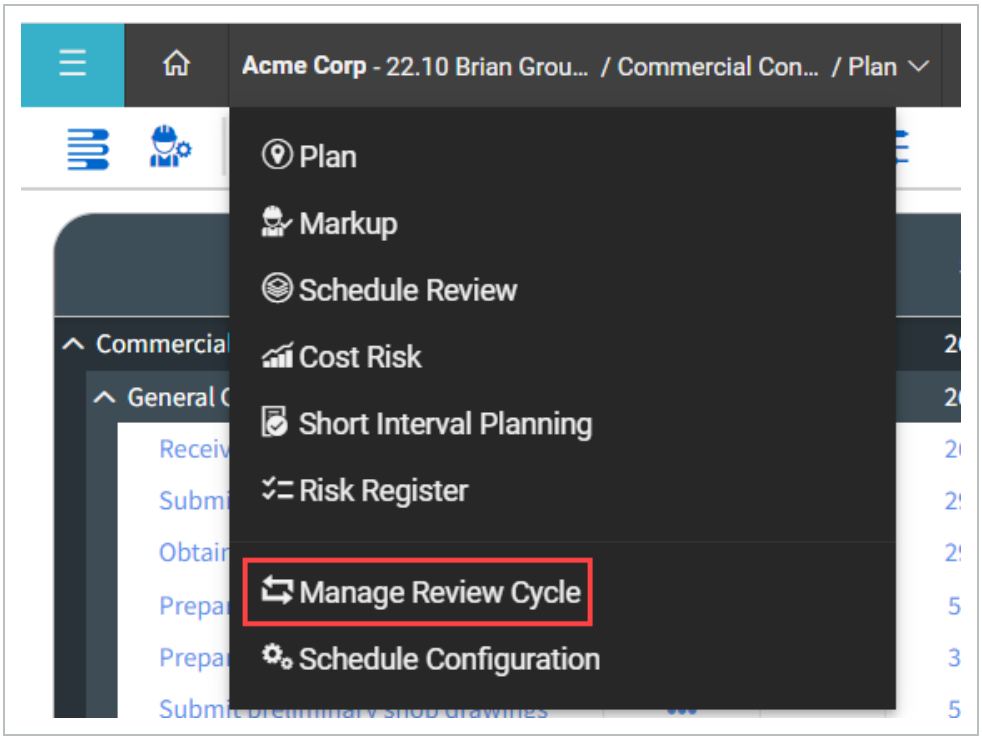
Markup is assigned in the plan project view from the first level drop-down menu in a project. Select a project WBS summary level, then expand the delegation panel and click the **Modify Assignments** icon, where users can be assigned at various levels within the schedule to provide markup.



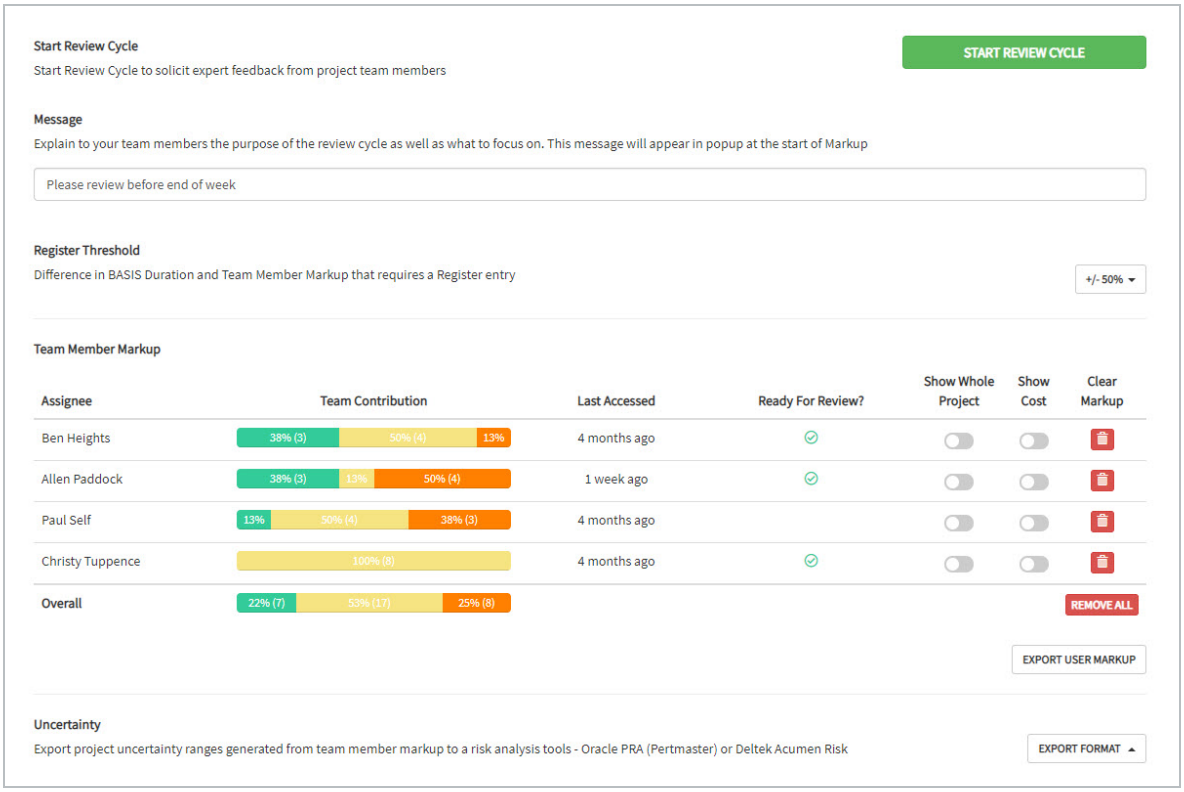
Click the **blue ellipse** icon and select users to assign to WBS elements.

Initiating the Review Cycle

Once contributors are assigned, the review cycle can be initiated by clicking on the Manage Review Cycle link in the top right of the delegation panel or go to the project settings view from the 1st level drop-down menu within a project and select Manage Review Cycle.

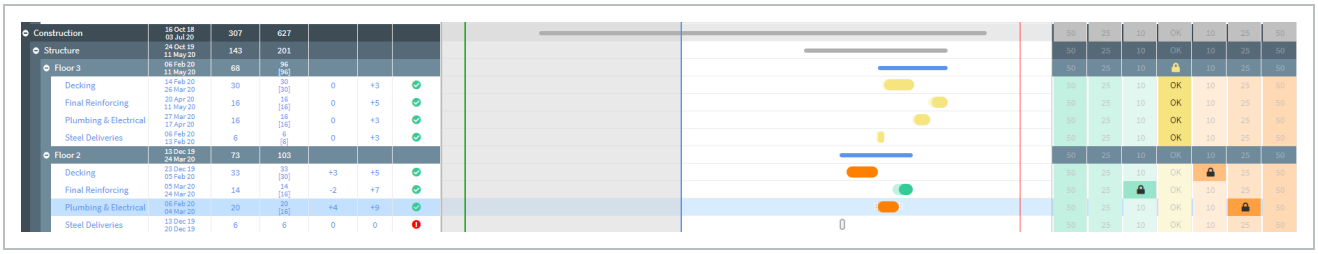


Assigned contributors and a review message can be validated here. After the Start Review Cycle button is clicked, an invitation email is sent to contributors.



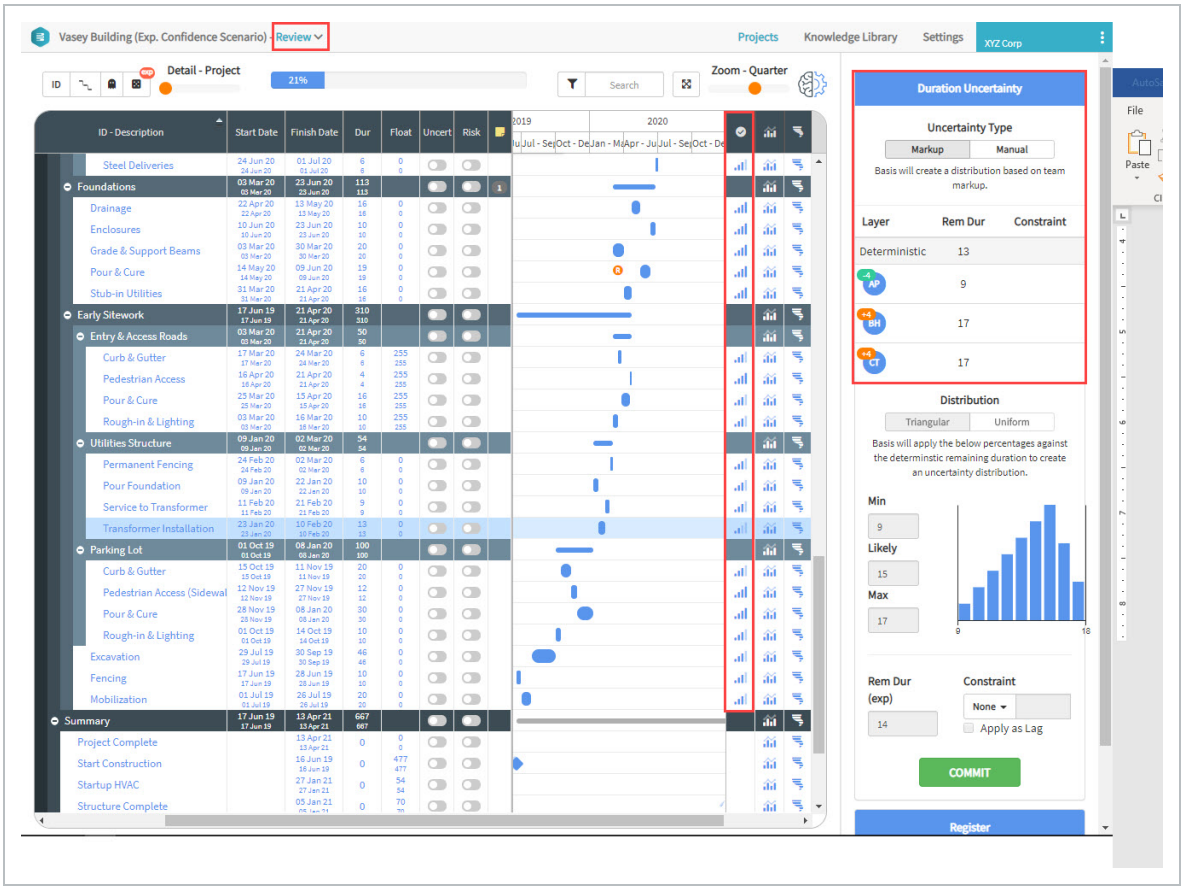
Marking up the Schedule

After the review cycle is in process, assigned contributors should log into the project, confirm they are in the Markup project view from the first level drop-down menu in a project, and provide feedback to sections of the schedule assigned to them.



Reviewing Markup

After Markup is complete, group consensus and individual responses can be assessed from the Review project view from the first level drop-down menu in a project. Consensus is indicated by the signal bars in the tabular WBS view, and individual responses can be viewed by selecting a WBS element and looking in the Duration Uncertainty slide-out panel to the left.



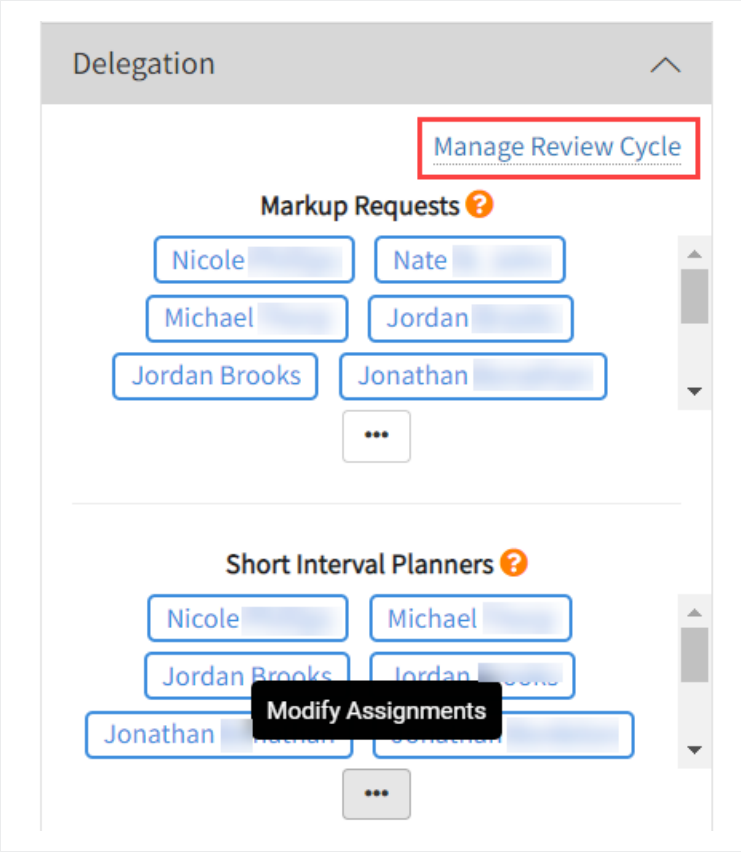
After a review is complete, the cycle can be ended by returning to the Manage Review Cycle page, and clicking **End Review Cycle**.

Initiating the Review Cycle

Now that users have been assigned to various sections of the schedule, you can initiate a review cycle. This will send a notice (email) to contributors assigned to provide markup, notifying them that they may start their review.

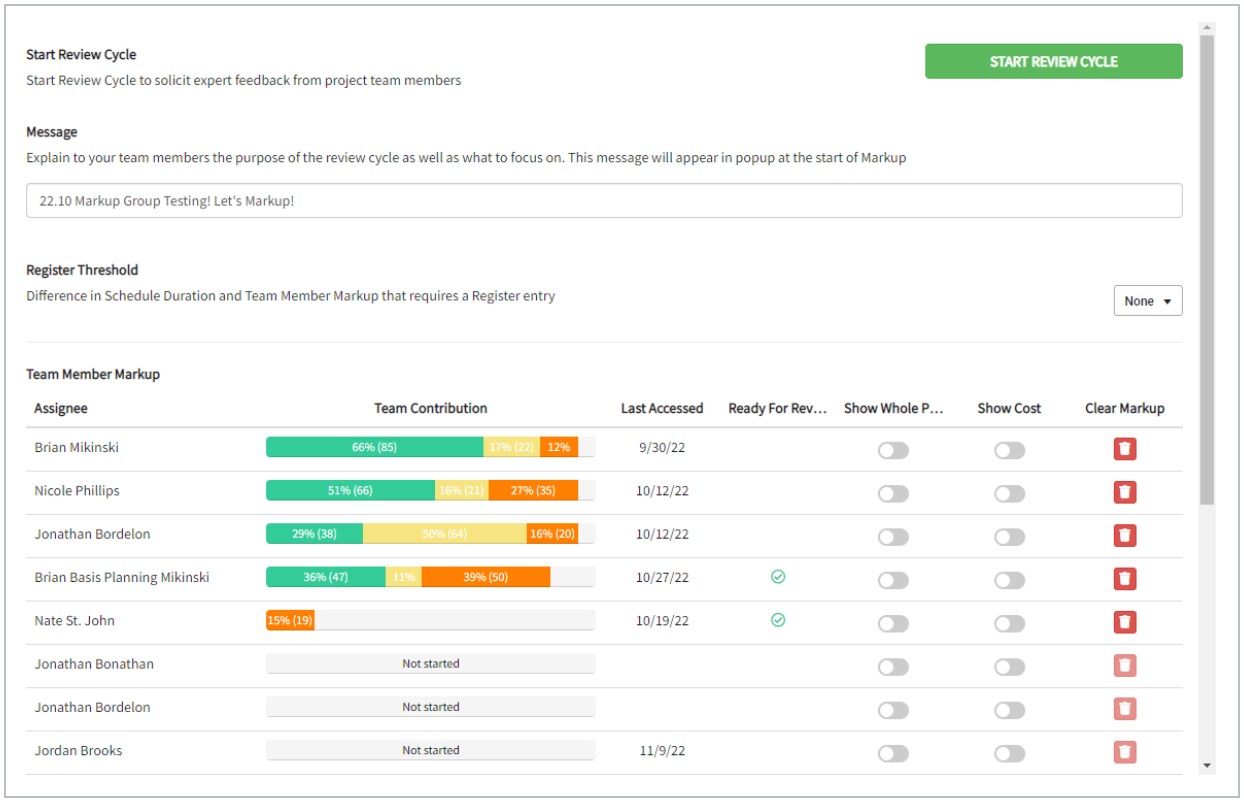
Opening the View Cycle

1. To access the Review Cycle settings, open the **Delegation tab** from Iris and select Manage **Review Cycle**.



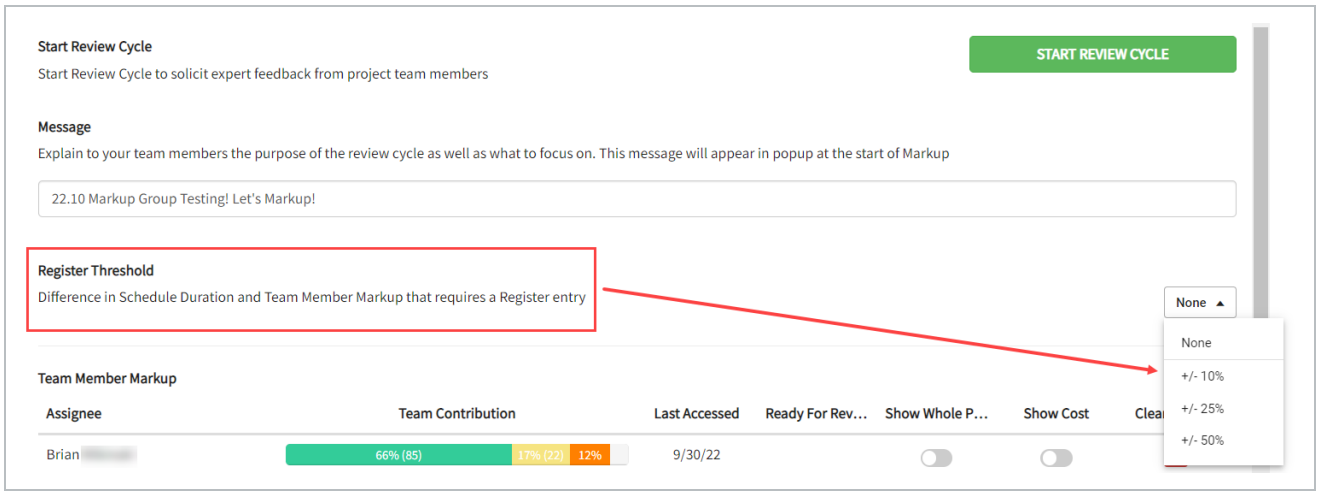
TIP In the Manage Review Cycle screen, settings can be adjusted prior to initiating the cycle.

The Manage Review Cycle window opens.



Register Threshold

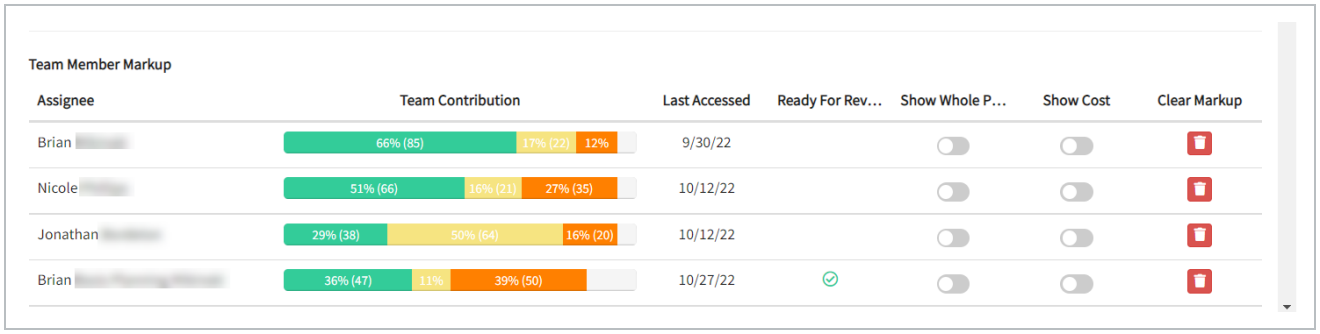
If a markup is provided with a schedule duration adjustment more higher than the value defined, a Project Register Event is required with the markup.



Team Member Markup

The Team Member Markup, shows a list of users who have permissions to provide feedback.

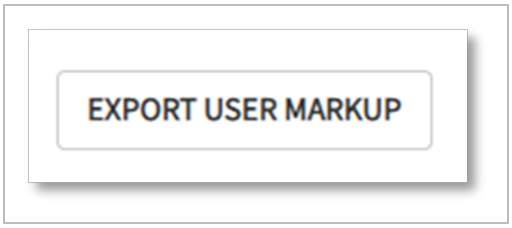
NOTE To remove reviewers, go back to the plan view and use the Iris to unassign them as Markup Contributors.



Column	Description
Assignee	First and Last name of contributor.
Team Contribution	Visual percent complete of items reviewed vs assigned.
Last Accessed	Last instance the contributor was in the Schedule system.
Ready for Review?	Confirmation the contributor has finished their markups.
Show Whole Project	Toggle if contributors see the whole project or only items they are assigned to.
Show Cost	Toggles if cost is shown when providing markups.
Clear Markup	Clear/delete markups made.

Export Options

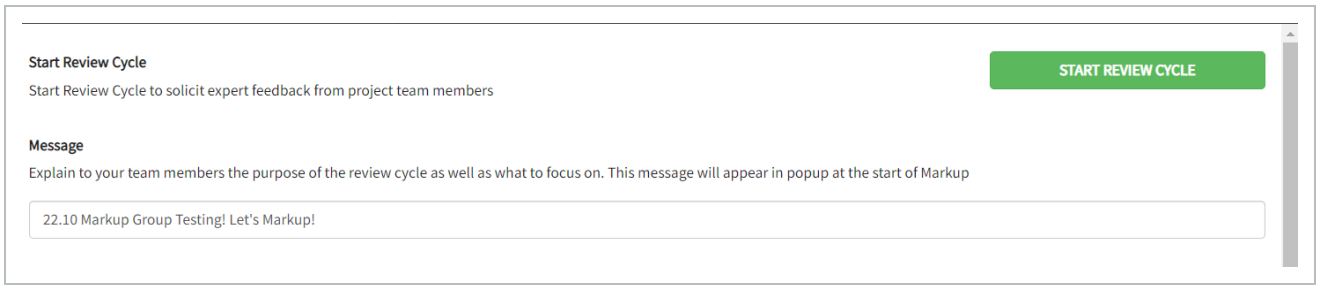
The Export User Markup function lets you export the markup data to excel after the review has been completed. This creates an archive of the data for reference.



NOTE Markups can only be exported per cycle. Once a new cycle is initiated, the previous cycle is over written. Exporting after a cycle saves the data before it is overwritten.

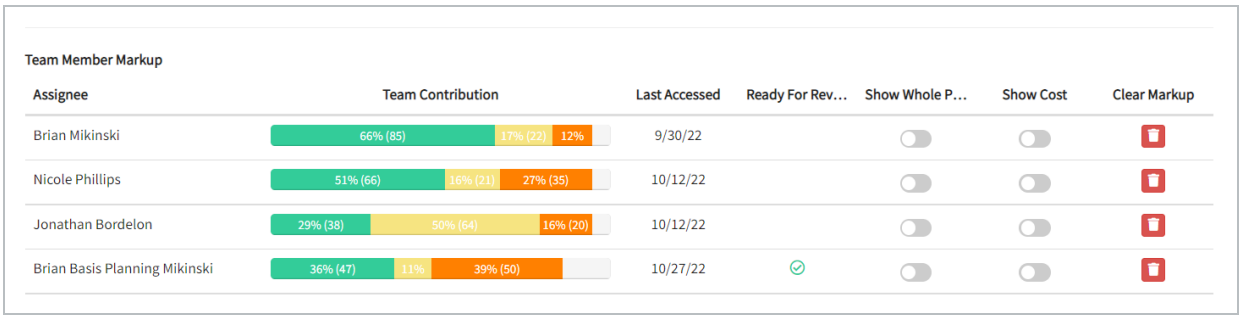
Start/Stop a Review Cycle

Once all the Review Cycle settings have been set, select the Start Review Cycle button at the top of the page in . This will begin the review cycle for Project Contributors to provide feedback and markup the schedule.



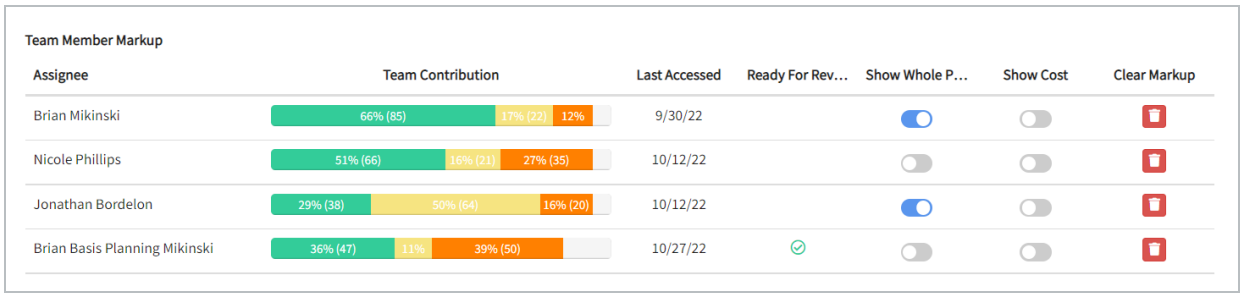
Generate a Review Cycle

1. Select **Manage Review Cycle**. The team members that you added are listed but they have not taken any action yet

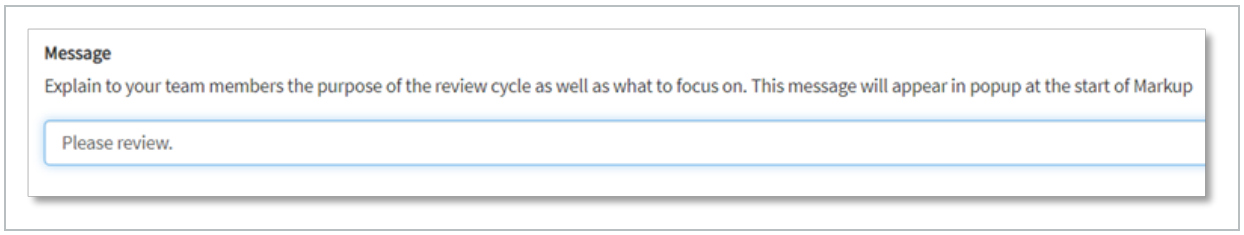


2. Switch the Show Whole Project to **ON** for the persons you want to be able to view the entire project schedule. By default the markup users only see the section of the project that

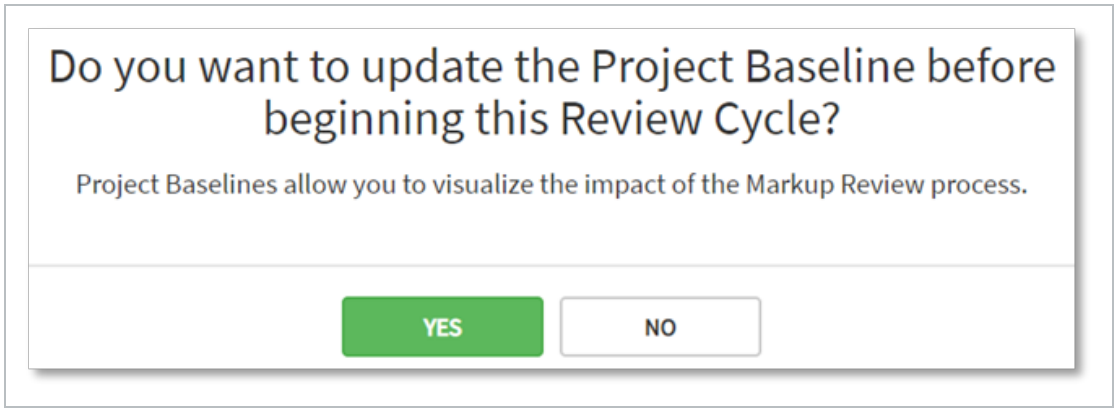
you have assigned them to



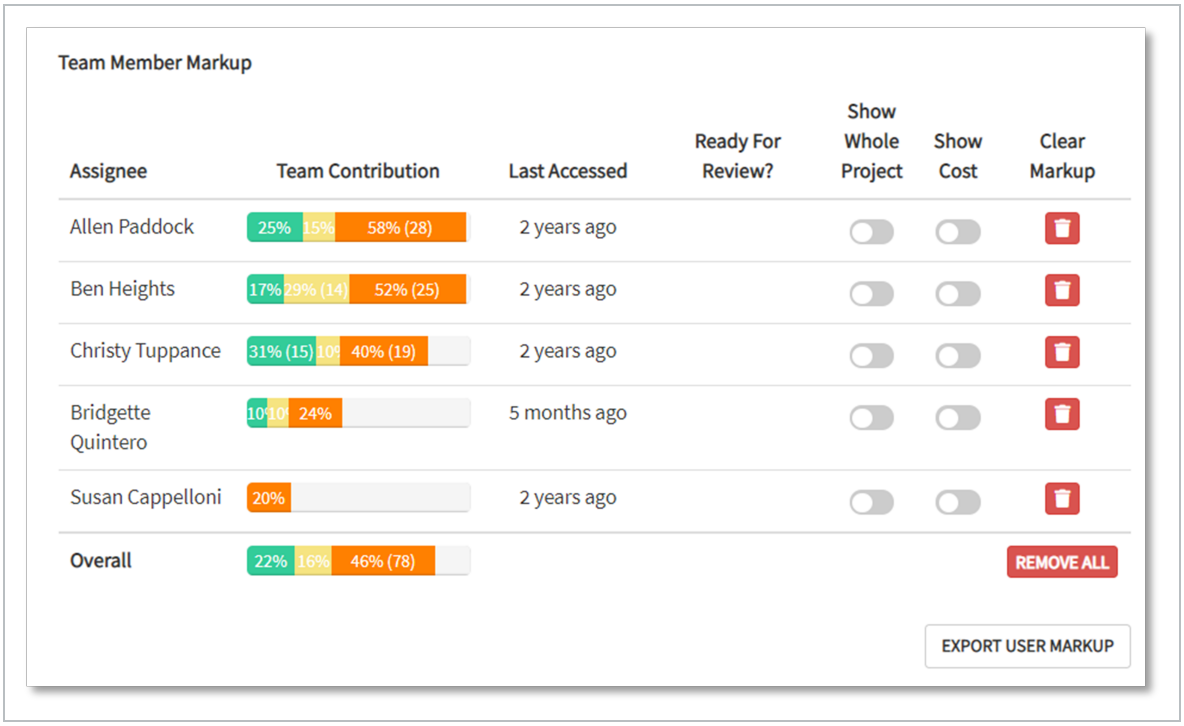
3. Enter your message to provide guidance to the team members.



4. Click **Start Review Cycle**.
5. Click **Yes** to updating the project baseline.



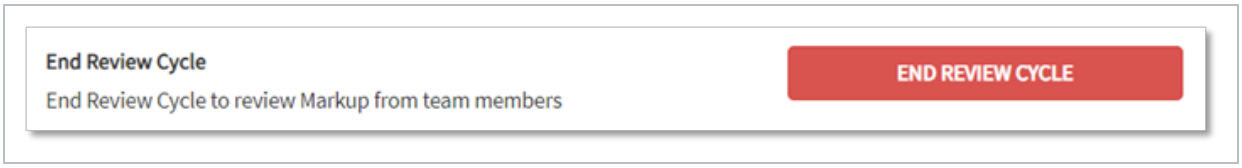
As markups are being made, you can refresh the Manage Review Cycle page to see what percent complete contributors are with their markups



NOTE The color coding of the Team Contribution visualizes the summaries:

Green: Percent of items marked up reducing duration
Orange: Percent of items marked up increasing duration
Yellow: Percent of items marked as planned duration is OK
White: Percent of items pending review

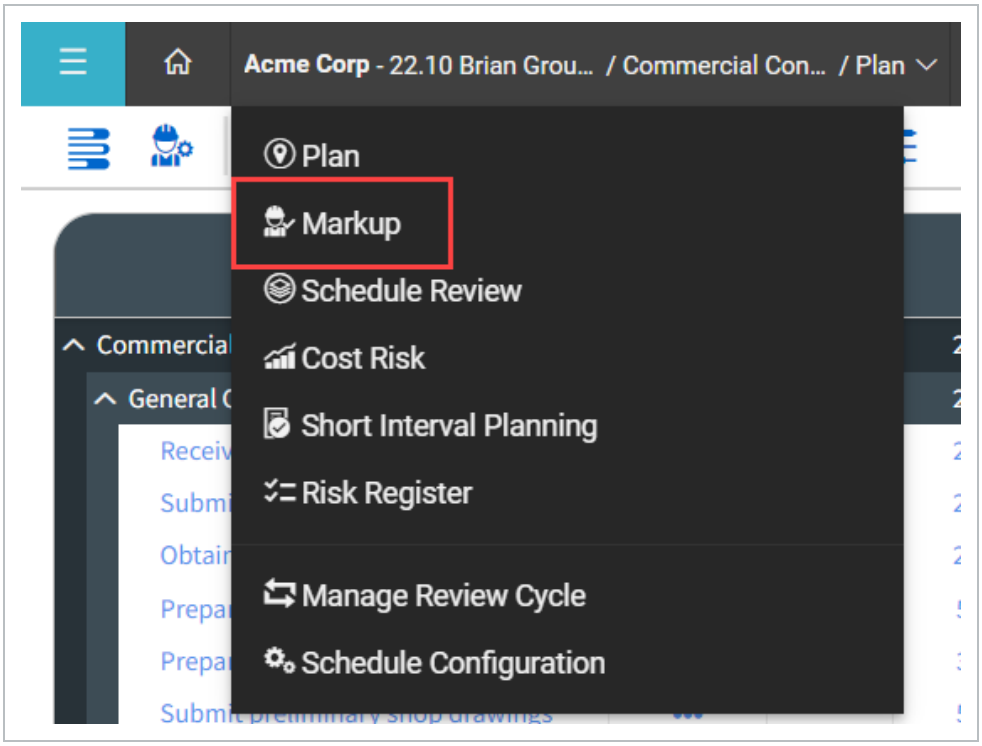
6. Click **End Review Cycle** after markups have been submitted.



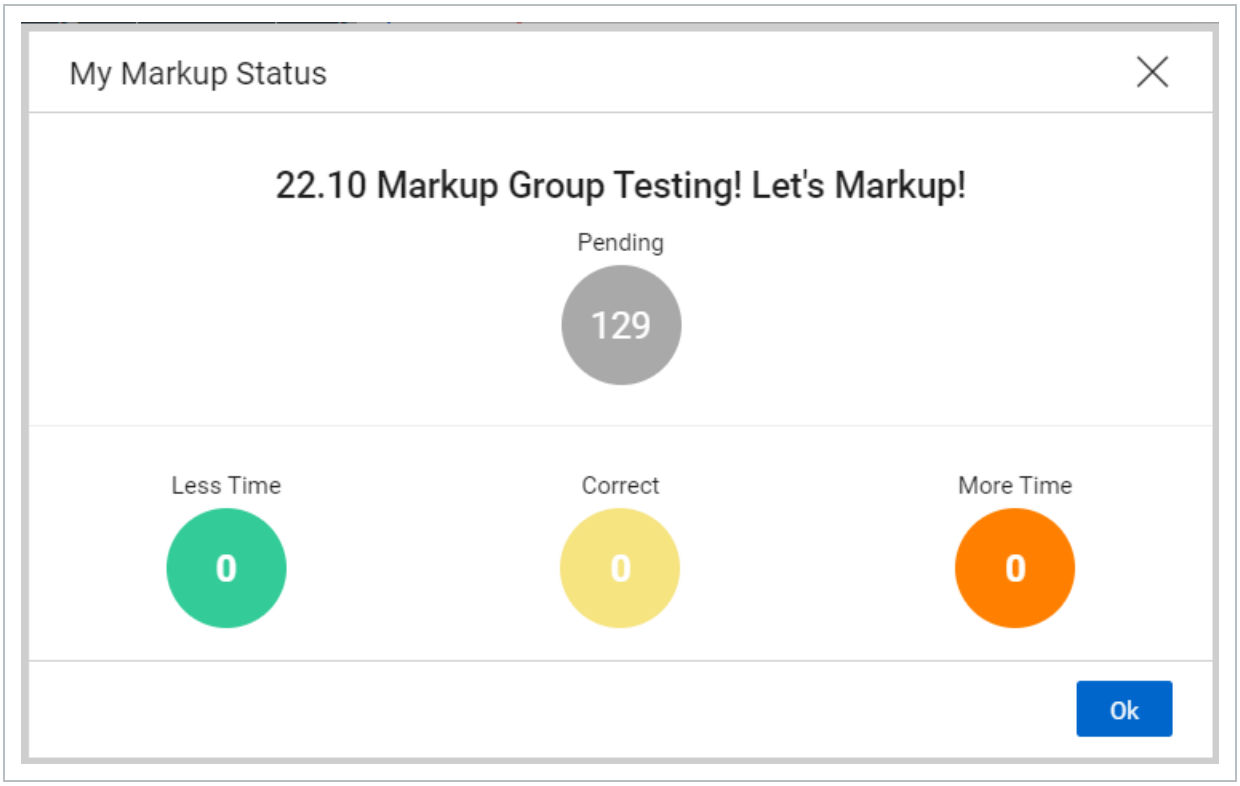
Marking Up the Schedule

Uncertainty

User assigned sections for markup and review can begin to provide feedback in the Markup view.

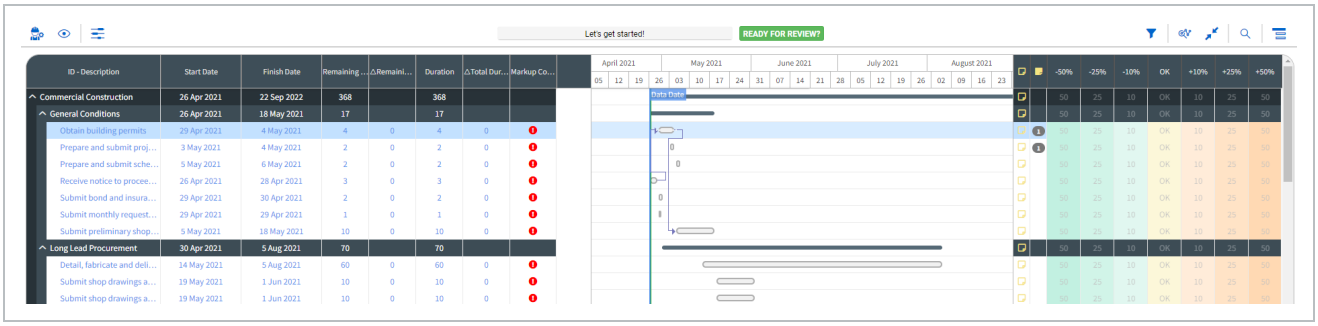


The My Markup Status confirmation box opens to show markup status information.



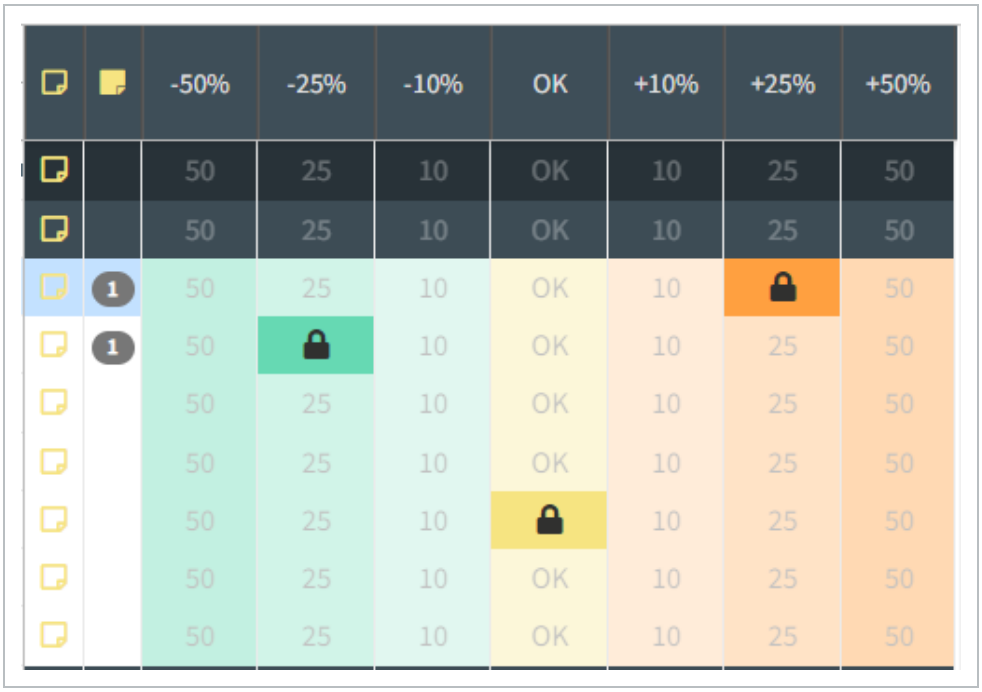
After the schedule is in the Markup view, contributors can begin to give feedback on the schedule. Markups made to increase or decrease durations on the schedule in turn generate uncertainty.

Uncertainty is an internal factor, such as quantity growth or productivity loss or gain. It evaluates duration or cost realism and plan confidence.

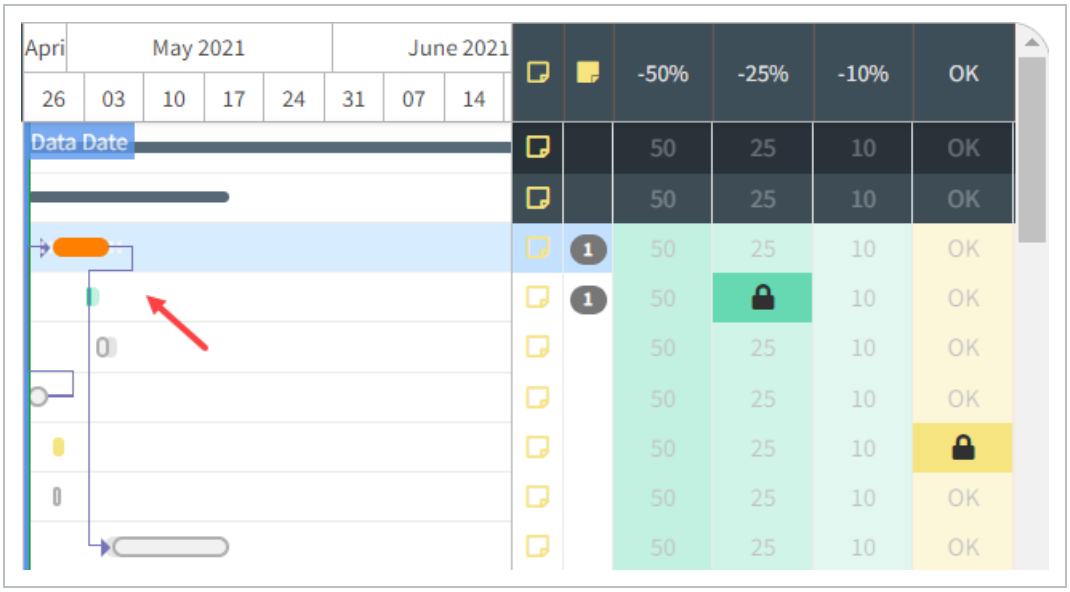


Scorecard Values

The scorecard provides a quick and easy way to give an estimate of whether the planned durations need to be increased or decreased. Selecting a percentage increases or decreases the duration by that amount.

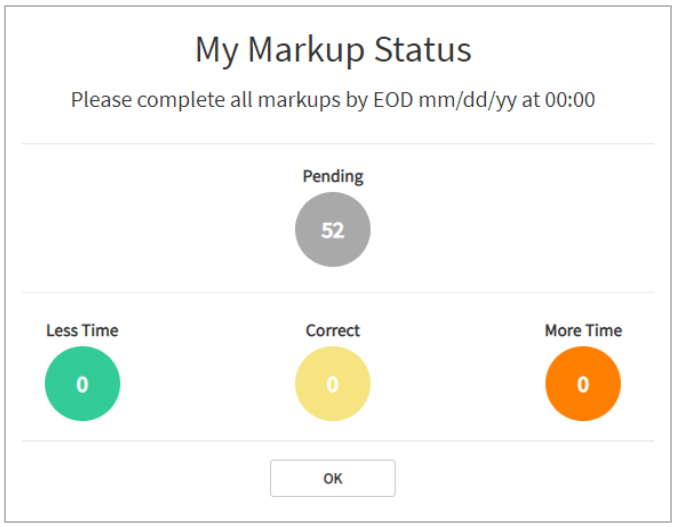


As markups are made on the scorecard, the bars on the Gantt chart adjust accordingly. This gives project contributors a live view of how the schedule is impacted by their markups.

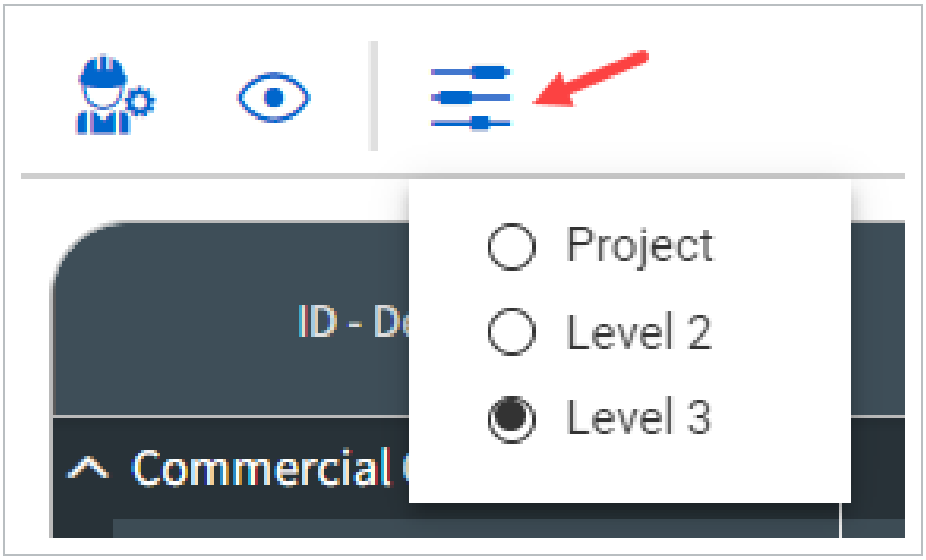


Marking Up the Schedule via the scorecard

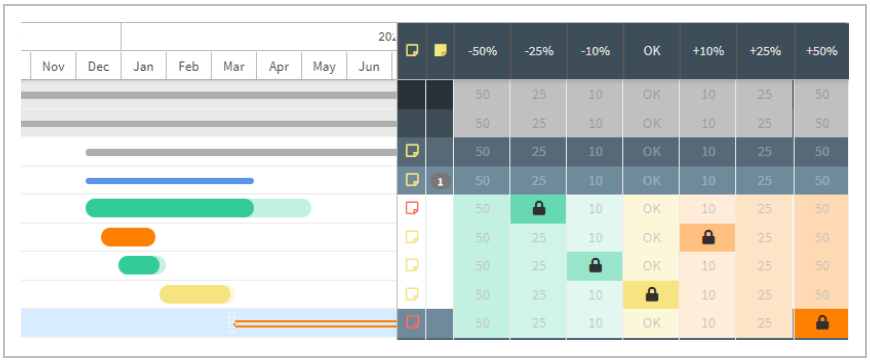
1. Open the Markup view.The markups made by the individual user are summarized
2. Under My Markup Status, look for Review Cycle Notes.
3. Click **OK** to close.



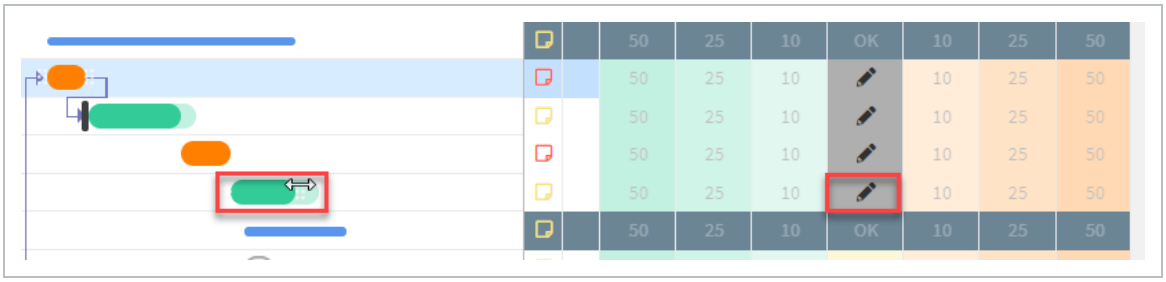
4. Adjust the detail slider to the right to see all activities assigned for review.



5. Go to the scorecard and adjust activities by selecting a markup score. Activities should show a Lock icon once selected, confirming the markup made.

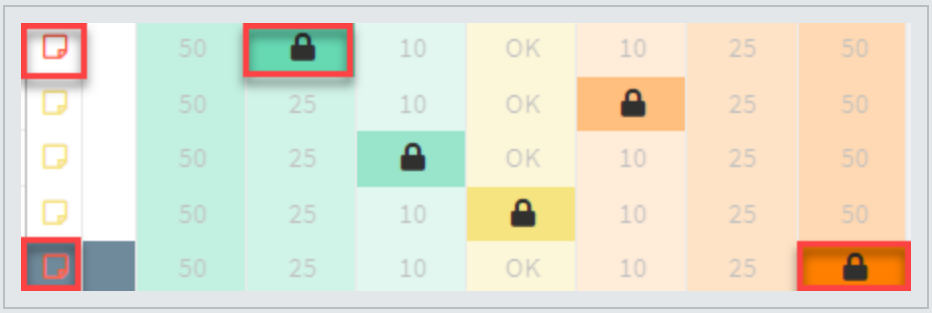


6. Go to the Gantt chart and slide the start or end bars around to adjust duration.
    - The scorecard will changes the icons to a pencil, signifying a custom duration adjustment was made.



NOTE

Markups meeting or exceeding the threshold, established in the Manage Review Cycle settings, will change the Event Register icon to red, signifying the user is to add an event to the Events Register.



LESSON 8 – REVIEW PROCESS- RISK OVERVIEW

Review And Risk Process Overview

The Review process is where you can review feedback from markup, and apply a variety of intelligence rankings in order to run a risk assessment on your project.

Uncertainty is an internal factor, such as quantity growth or productivity loss or gain. It evaluates duration or cost realism and plan confidence.

A **Risk Event** is an external factor where events are discrete and measurable, such as third-party delays or unexpected labor shortages. It evaluates the probability of the event occurring, the schedule impact should the event occur, and any impact in associated costs.

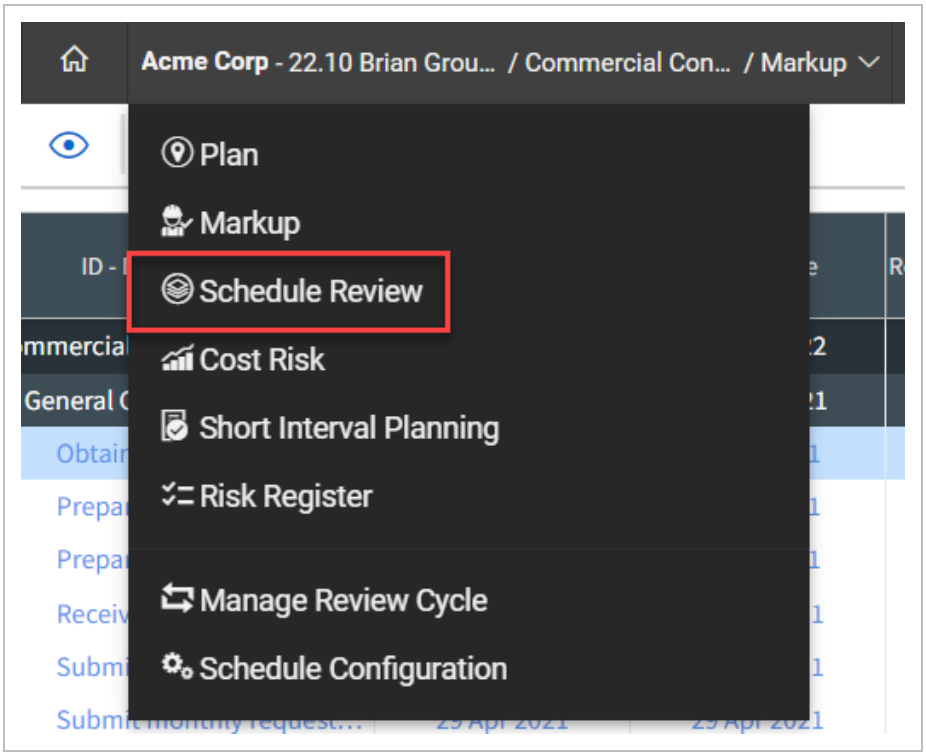
NOTE

Projects often tend to mix uncertainty and risks events together resulting in less accurate mapping of risk characteristics to projects. It is important to evaluate risk items and place each in their appropriate categories, Uncertainty or Risk Event.

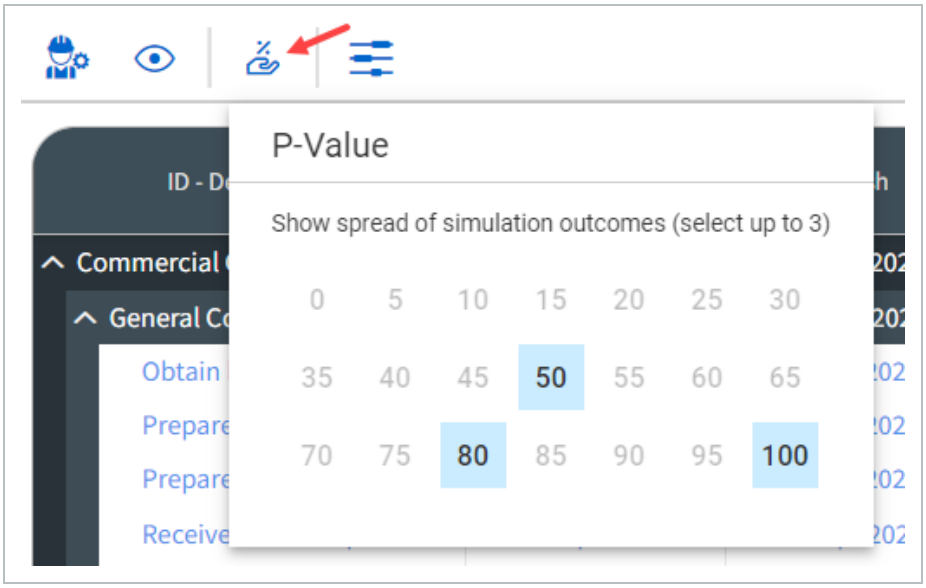
This feedback can come from the Markup process outlined in other topics. From here, the following review process steps can help you conduct a risk assessment utilizing a confidence level, called a **P-value**.

The below steps explain how to generate a Risk Adjust project:

1. From the Project View drop-down, select **Review**.



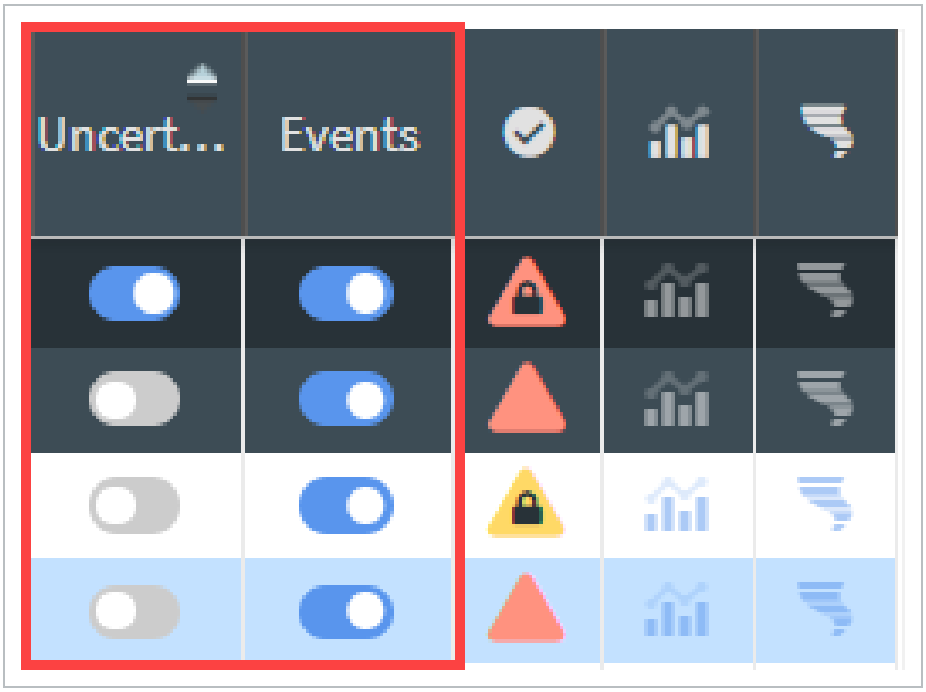
2. Select a P-value for instant insight during the review process by first selecting the **P-value** icon .



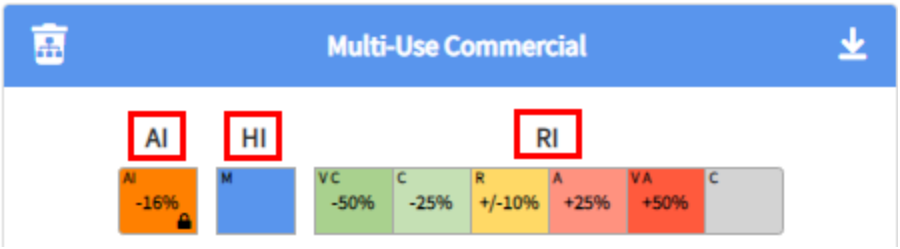
- A P-value of 100 represents a worst case scenario, while a value zero represents a best case scenario

- You are assigning a confidence level against a target goal

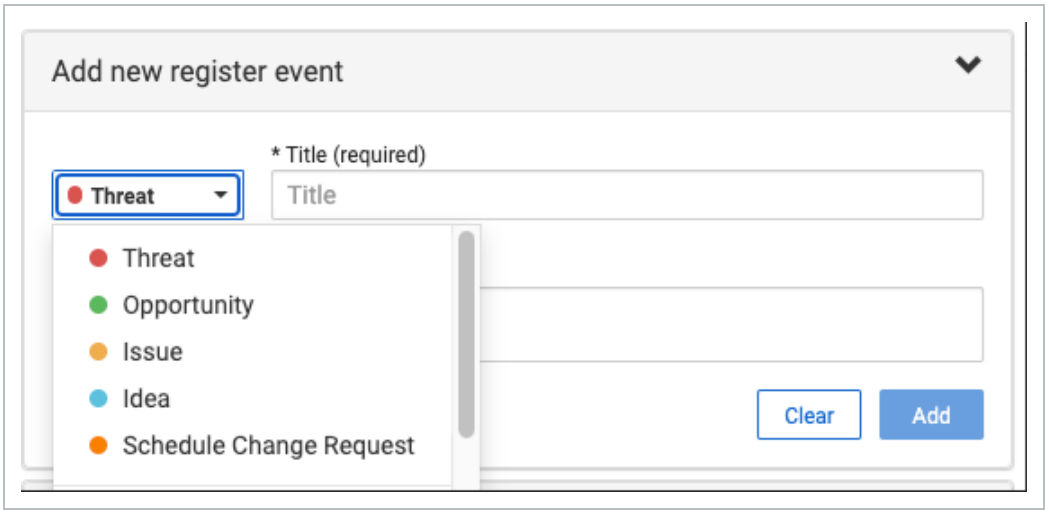
3. Switch the **Uncert** and **Events On/Off** to be applied to the corresponding work package or terminal level.
    - This feature includes or excludes that detail in the risk model. It is recommended to begin analysis with both options switched to the *On* position.



4. Move down the project and review contributor's Uncertainty rankings for each line item.
    - When reviewing Uncertainty, there are three main options for generating adjustments to the project: Artificial Intelligence (AI), Human Intelligence (HI), and Risk Intelligence (RI)

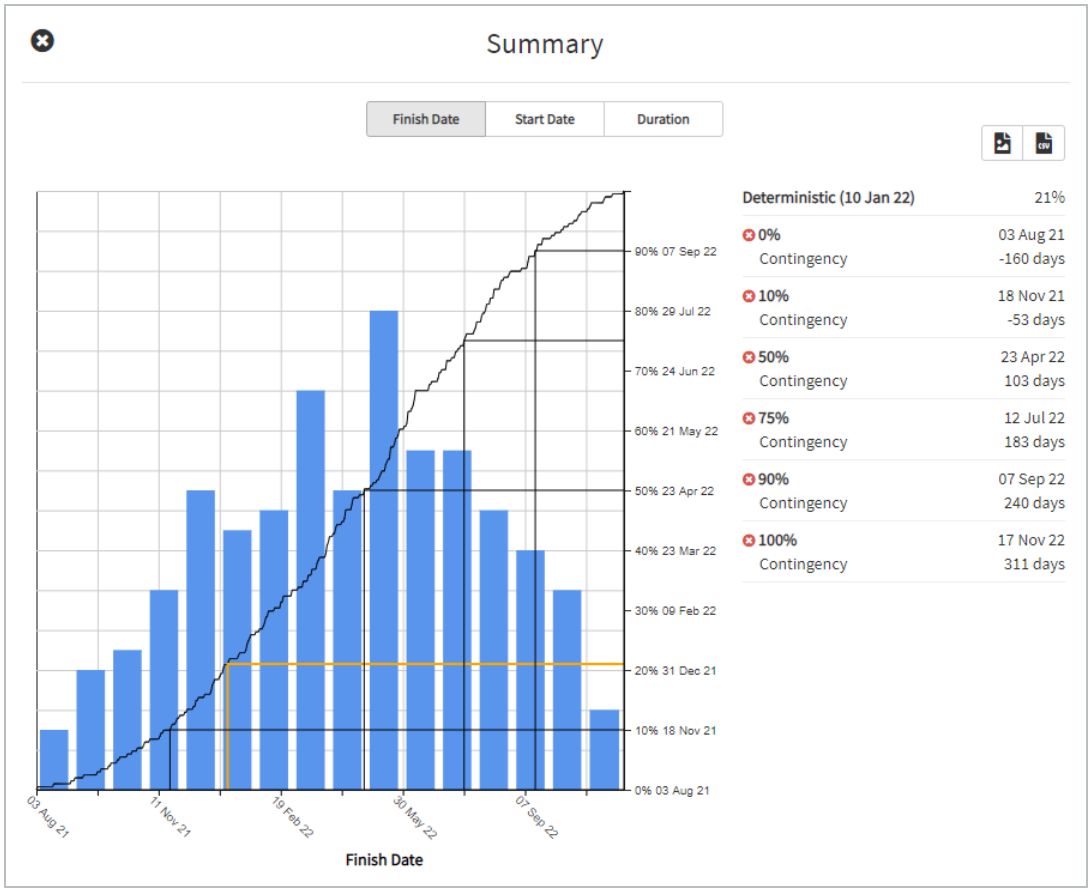


5. As needed, assign **Register Events** to project items.
    - Any item in a project may be assigned a Register Event
    - The default categories are shown below:



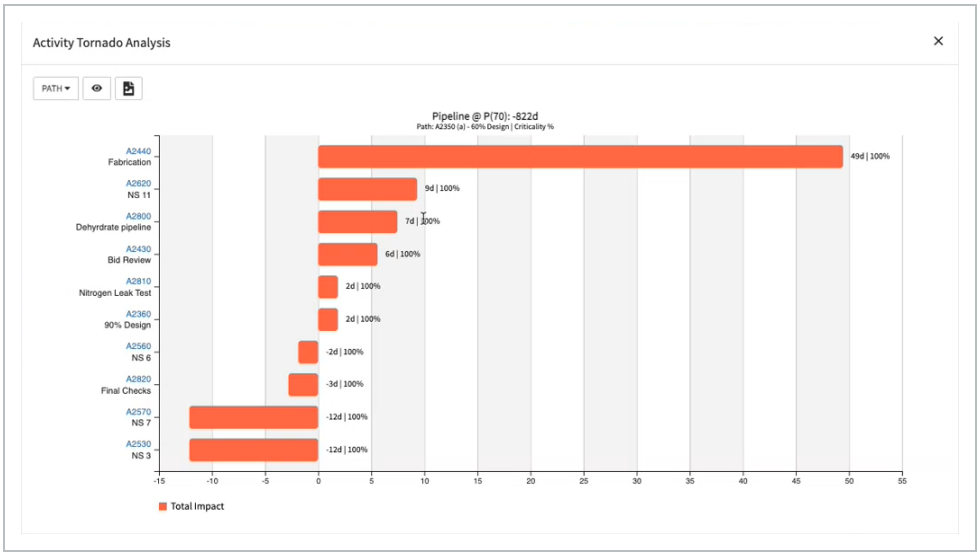
    - After all uncertainty and events have been agreed to, you can access two main reports that provide insight into the project's risk:

- Risk histogram

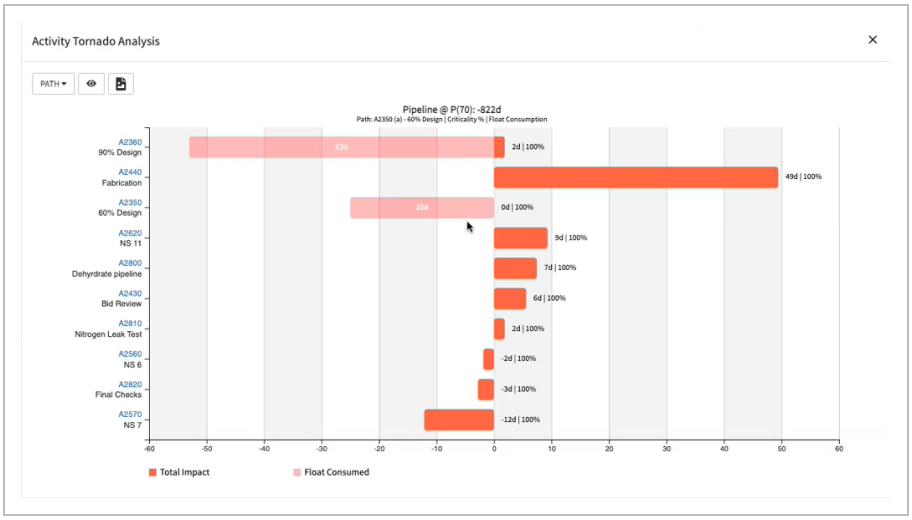


- Tornado analysis

  You can identify how often activities fall upon the critical path during Monte Carlo simulation runs. The image below shows the Criticality % view active.



Using Float Consumption, you can visualize hidden risk assignments due to float consumption and compare activity risk tolerance versus net impacts. The image below shows the Float Consumed and the Criticality % views active.

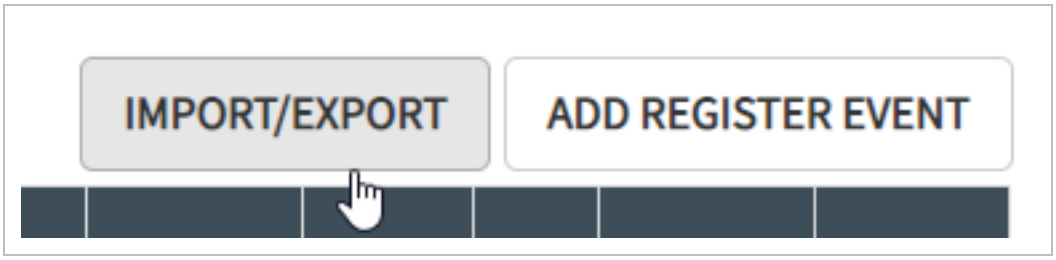


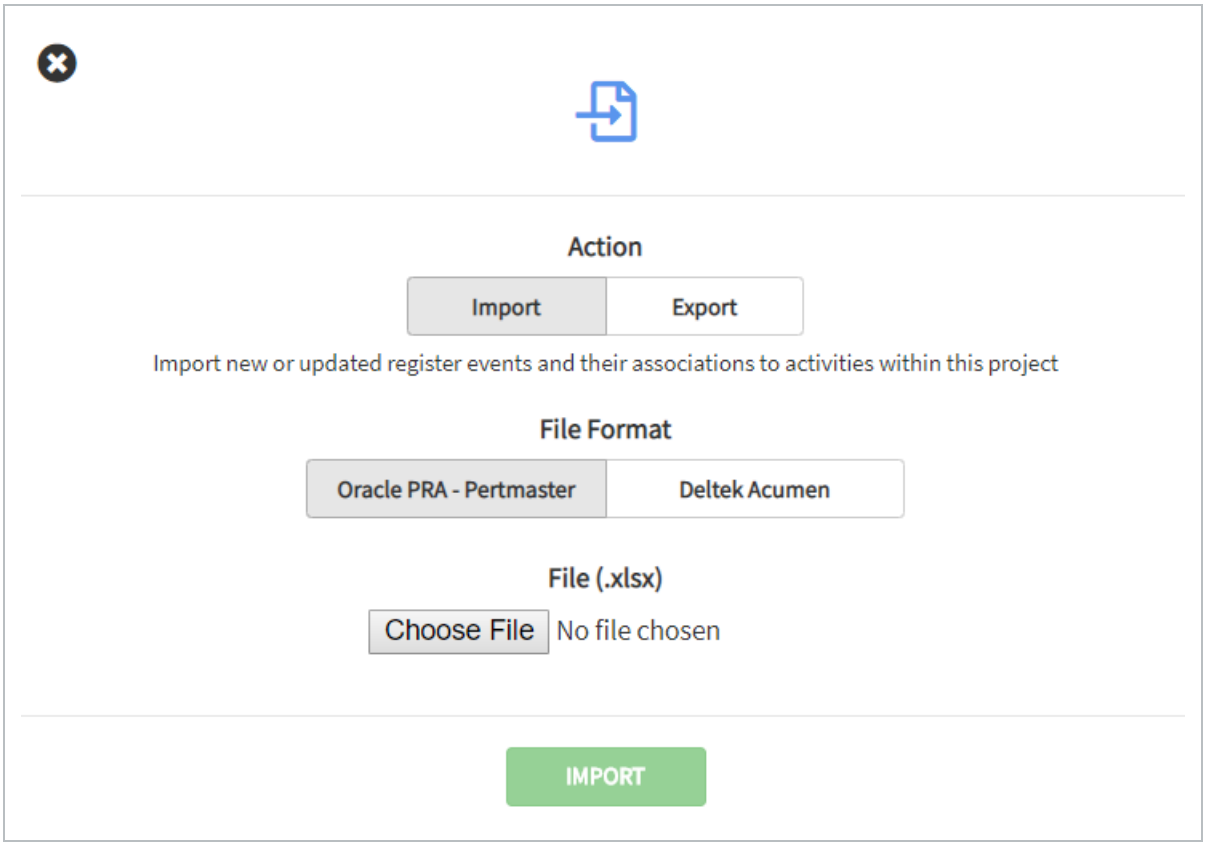
6. Adopt any part of the risk model by selecting **Adopt Markup** or **Apply Uncertainty adjustments to deterministic schedule**. Both options will run a Critical Path Method schedule calculation and generate a new risk adjusted project schedule.

Import/Export

You can Import and Export risks in the project register. There are options for Oracle PRA – Pertmaster and Deltek Acumen. These are simple Excel formats that can also be generated outside of any tool and

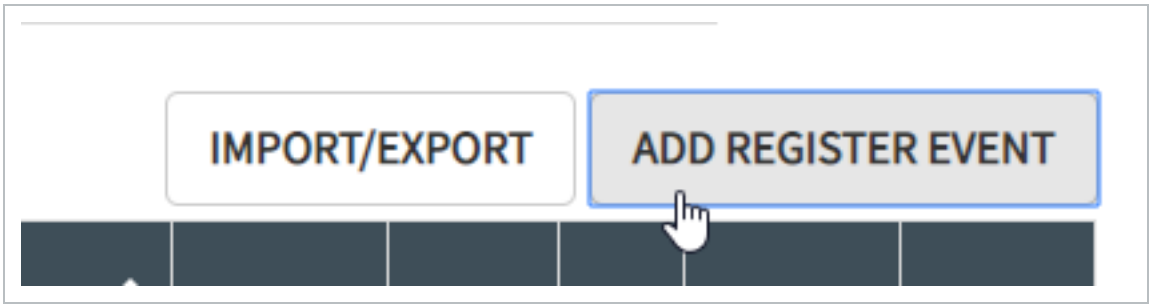
used for importing into Schedule.

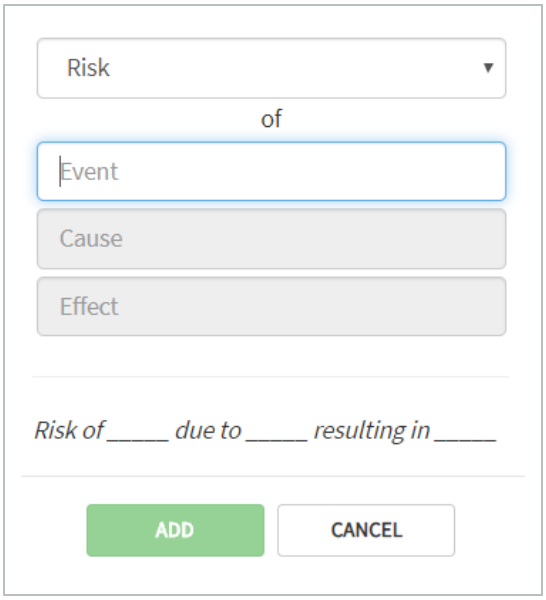




Add Register Event

You can manually add a register event to the project register. Select **Add Register Event** and then define the event type and description.



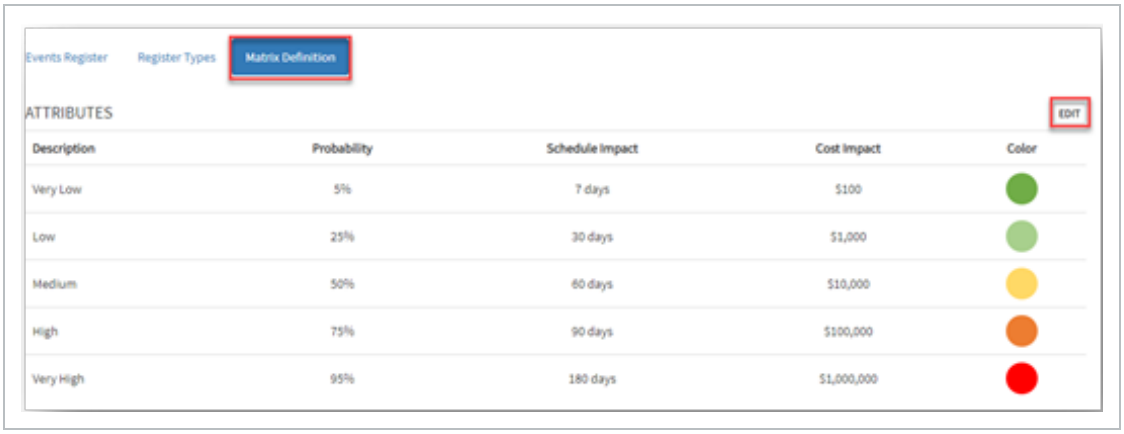


Filter

Select the **filter** icon to enable filtering for the register view.

Matrix Definition

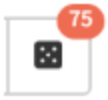
The default matrix in the Knowledge Library is adopted when the project is created. The matrix can be tailored by project to create a probability and severity range that is appropriate for the project.



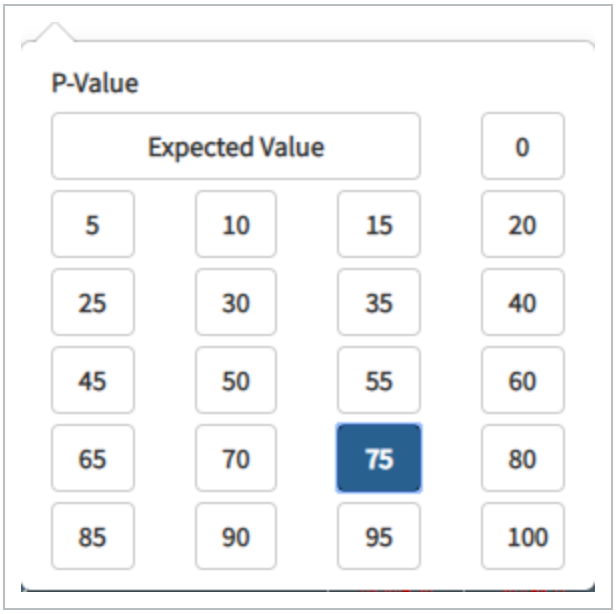
P-Value Overview

Probability Values or **P-values** are the lens with which you can view instant feedback related to the affects risk or opportunity items have on the planned schedule and/or cost structure.

You can interact with P-Value to manipulate your visibility into a risk-adjusted project.

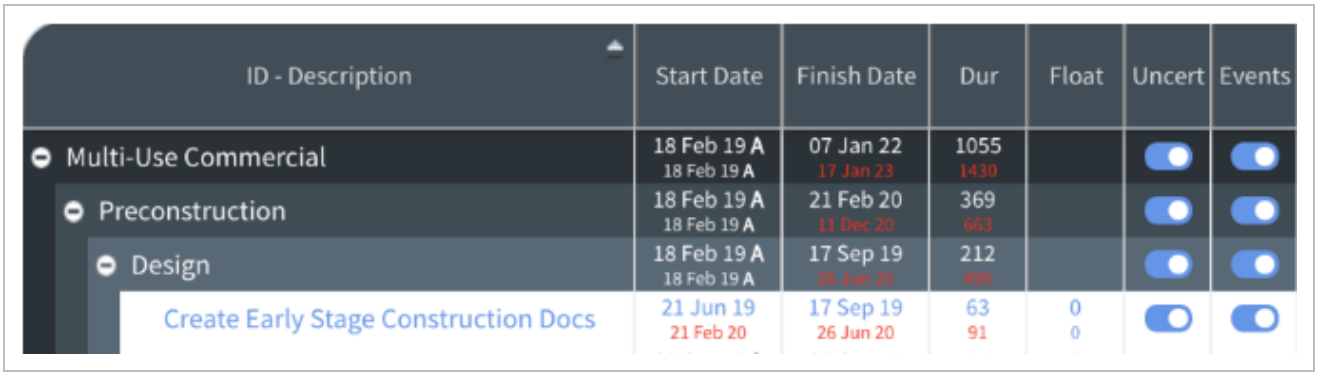
Select a P-value by clicking on the P-value icon 

to show a drop-down displaying the options for selecting a value.



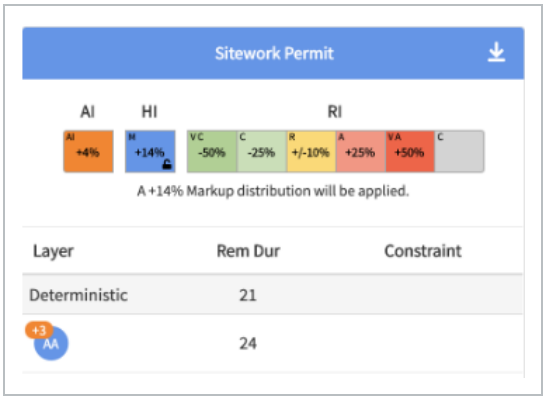
A P-value of 75 can be interpreted as “we are 75% confident in hitting or beating a target goal”.

The selected P-value shows adjustments to items such as dates and durations. When a risk assignment has an effect to the project, the P-value lens shows in red, how it affects the project. In this example, the duration for “Create Early Stage Construction Docs” increases from a planned duration of 63 to a P-value 75 adjusted duration of 91.



Markup Feedback and Consensus

Once a markup cycle has been completed, it is ready for review. When selecting a line item for review, options appear in IRIS located on the right of the panel.

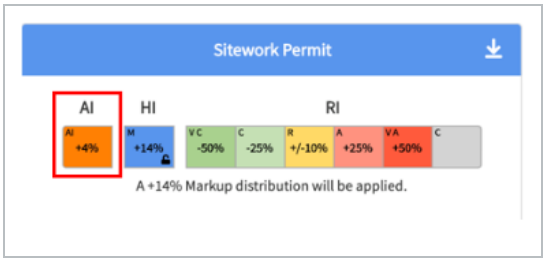


The reviewer has three options for providing markup feedback:

- **Inference Engine (AI)** suggested distribution
- **Human Intelligence (HI**) to leverage the feedback given during the Markup phase
- **Risk Intelligence (RI)** allows you to assign designated uncertainty ranges to any line item

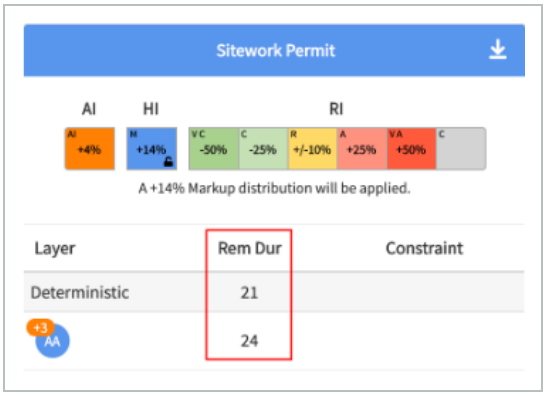
Inference Engine (AI)

In this example, if you use the Inference Engine (AI), it applies the suggested distribution of 4%.



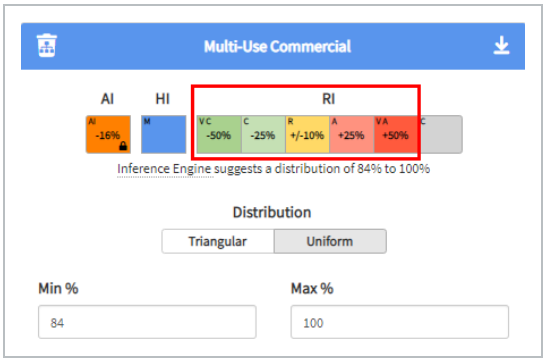
Human Intelligence (HI)

If you use the **Human Intelligence (HI**) of +14%, using AA's (delegate's initials) feedback, that Remaining Duration will take +3 days longer (24d v 21d).



Risk Intelligence (RI)

By selecting RI, you have chosen to not use HI or AI for that line item.



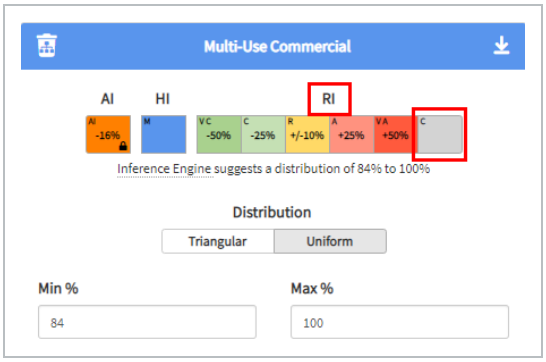
Uncertainty ranges are based on one of five categories the following categories:

Classification	Range	Guidance
Very Conservative	50% - 100%	Could take as little as 50% less
Conservative	75% - 105%	Most likely less
Realistic	90% - 110%	Within +/- 10%
Aggressive	95% - 125%	Most likely more
Very Aggressive	100% - 150%	Could take up to 50% more

NOTE You may only use one type of intelligence source per line. By selecting RI, you have chosen to not use HI or AI for that line item.

Custom

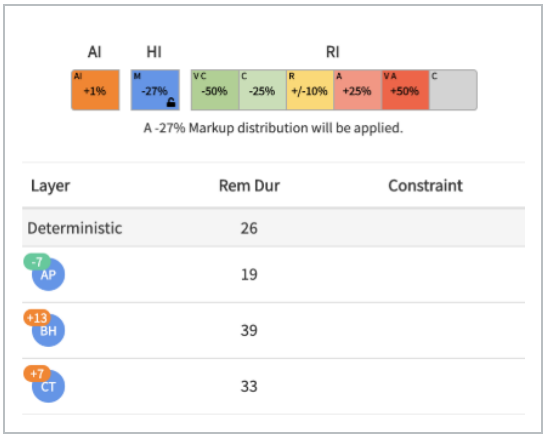
Using the Custom Intelligence lets you use a user defined level of risk.



Any changes that impact the project, either positive or negative, are shown in red.

Multiple User Feedback

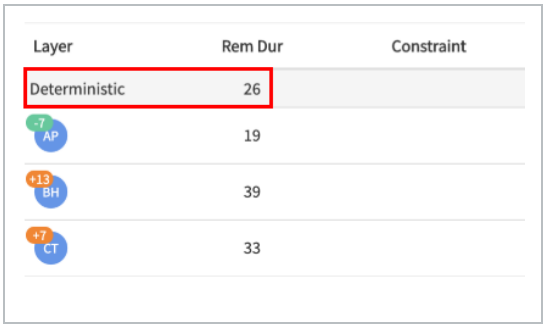
In the event an item contains more than one member's feedback, you can still decide between the different intelligence types. The Layer column shows all the members that contributed to that item.



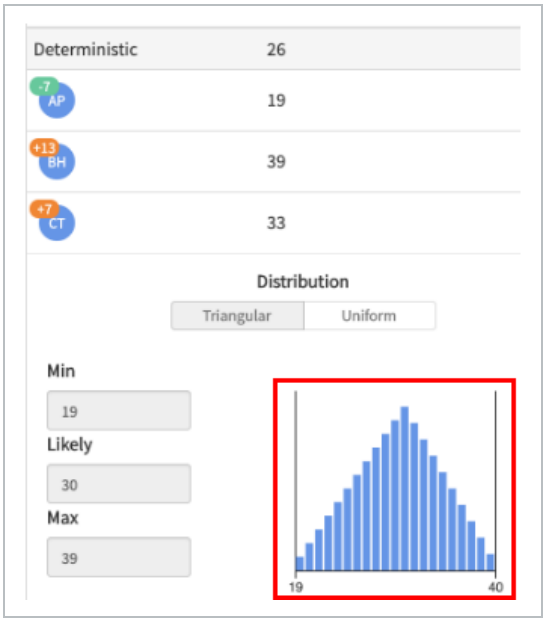
Notice here where three members contributed their feedback:

- AP (-7)
- BH (+13)
- CT (+7)

These values are added to the deterministic value to generate corresponding values.

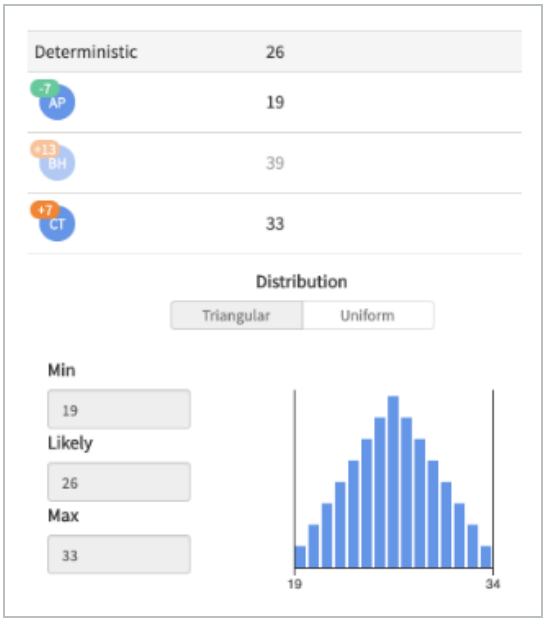


If you decide to consider all the HI feedback, then a distribution triangle is automatically applied for the risk simulation distribution.



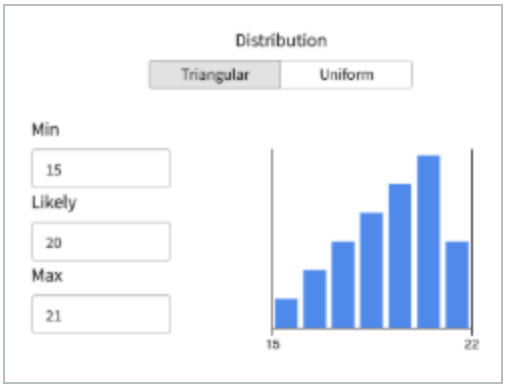
In some scenarios you have the option of setting a distribution to a triangular or uniform curve. A triangle uses the three points (min, likely, max) to generate a weighted distribution. A uniform distribution will use two points (min,max) as limits to a range and set the probability to an equal state for within the parameters.

If you want to discount or ignore a particular feedback, click on the contributor to remove them from the feedback. The distribution triangle adjusts automatically.

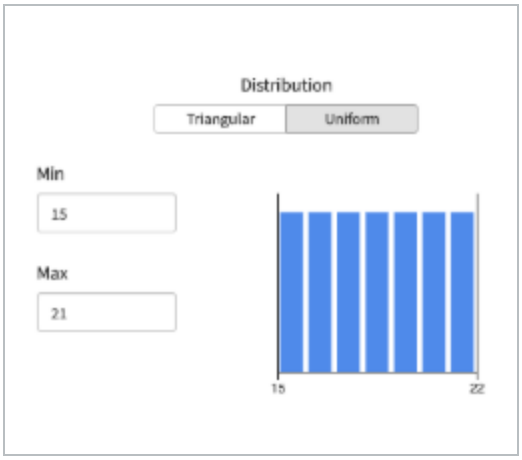


Distribution Options

When applying RI to a project item, you have the options to either set distribution to triangular or uniform distribution. A triangle uses three points of information, Min, Likely, and Max, to form a weighted distribution.



A uniform distribution uses two points, Min and Max to set limits on the range and models an even likelihood of hitting any points along the distribution.



Uncertainty Status

The Uncertainty Status column indicates what type of markup feedback is applied to each line item, using one of the following symbols:

Symbol	Markup Feedback Assigned
	Inference Engine (AI)

Symbol	Markup Feedback Assigned
	Human Intelligence (HI) with no markup values
	Human Intelligence (HI) with strong consensus, with little variations
	Human Intelligence (HI) with a large variation
	Risk Intelligence (RI) Very Conservative (-50%)
	Risk Intelligence (RI) Conservative (-25%)
	Risk Intelligence (RI) Realistic (+/-10%)
	Risk Intelligence (RI) Aggressive (+25%)
	Risk Intelligence (RI) Very Aggressive (+50%)
	Risk Intelligence (RI) Custom

NOTE For Human Intelligence (HI) feedback, you can hover over the symbol to find the variation percentage.
For Inference Engine (AI) and Risk Intelligence (RI) feedback, the Uncertainty Status

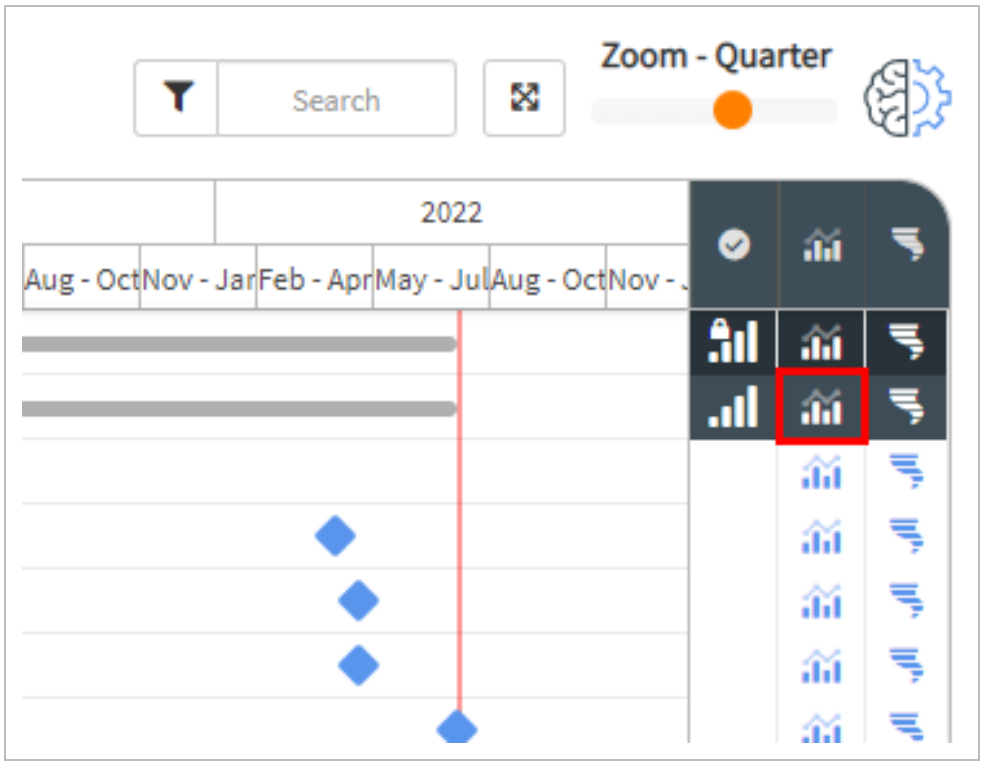
Symbol will be a  if using Triangular distribution and a square  if using Uniform distribution.

TIP The lock symbol represents that an uncertainty value has been applied to that line item and locks that value in place. For example, if a user assigns an uncertainty value to a parent line item, that value will be assigned to all its' children lines, expect for those that are locked in with a value previously assigned.

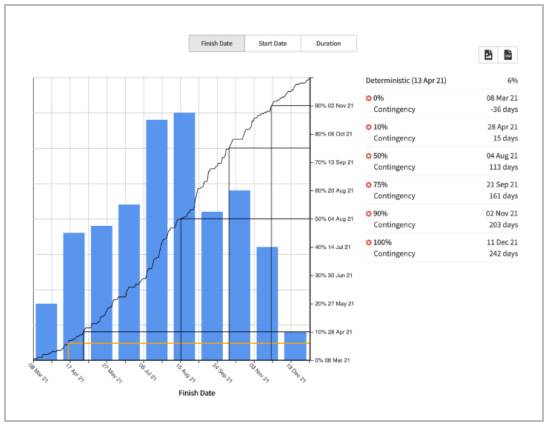
Once feedback on uncertainty and events are reviewed, you are ready to generate outcomes via Risk Histograms and Tornado Analysis.

Risk Histogram

The Risk Histogram visualizes results from numerous iterations made using the distributions assigned to line items. Click on the **Risk histogram** icon next to any line item to report against that point in the project.



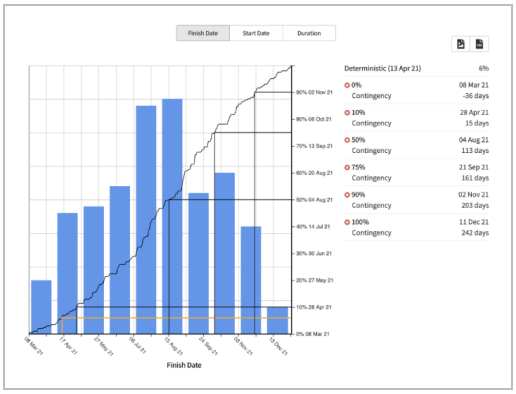
By clicking on the Risk histogram icon at the top level, you can report on the total project, as shown below.



Blue bars indicate the number of iterations that land on a specific date; for this example, finish date. The information on the right provides insight into the probability of hitting the deterministic end date and indicate which dates align with various P-values. This example shows the following:

- A 6% chance of completing the project by the deterministic date of 13 Apr 21.
- P-75% shows a date of 21 Sep 21, a 161-day extension upon the deterministic date. This corresponds to the need for a contingency value of 161 days to be 75% confident in finishing the project on 21 Sep 21 or earlier.

- P-0% is best case scenario and conversely, P-100% is worst case.

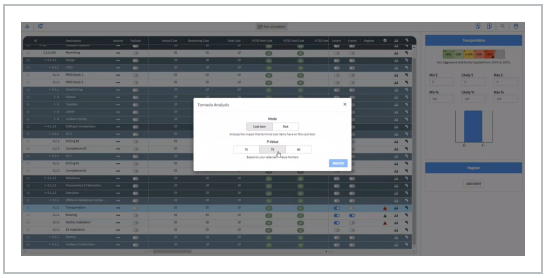


Tornado Analysis

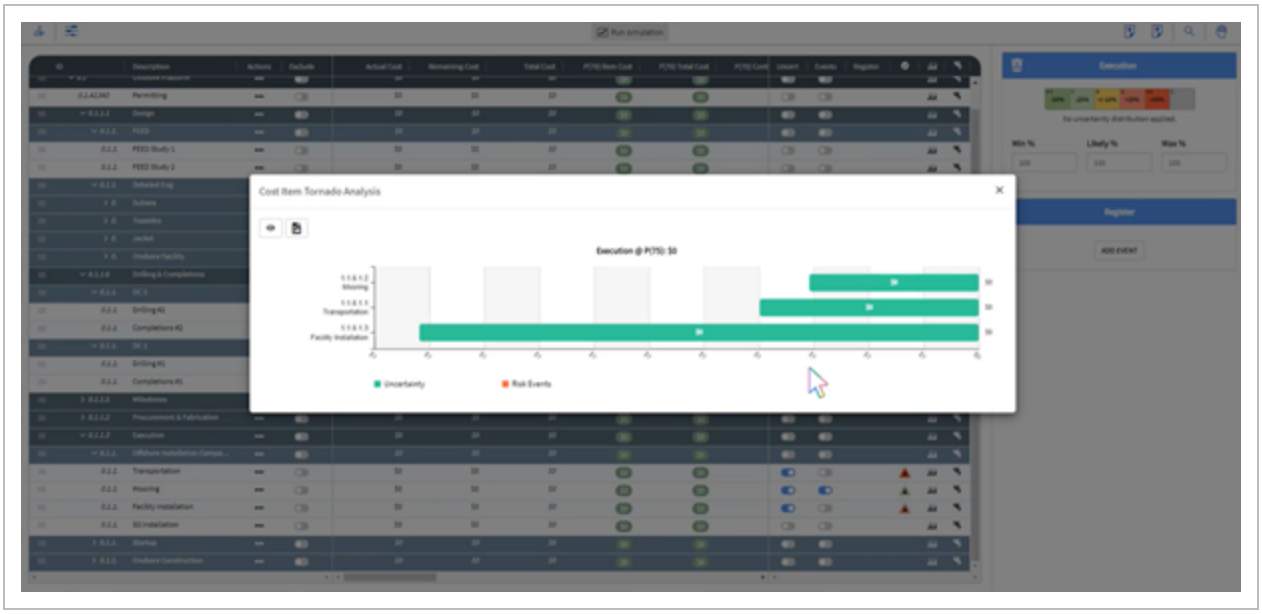
Tornado Analysis shows key drivers that are responsible for the largest impact to a risk model. There are two main modes to choose from, Activity Mode or Risk Mode. Click on the **Tornado analysis** icon to select a mode. Similar to Risk Histogram, selecting a tornado icon at the top level will report on the total project.

Cost Item Mode

Analyze the impact that terminal cost items have on the selected cost item.

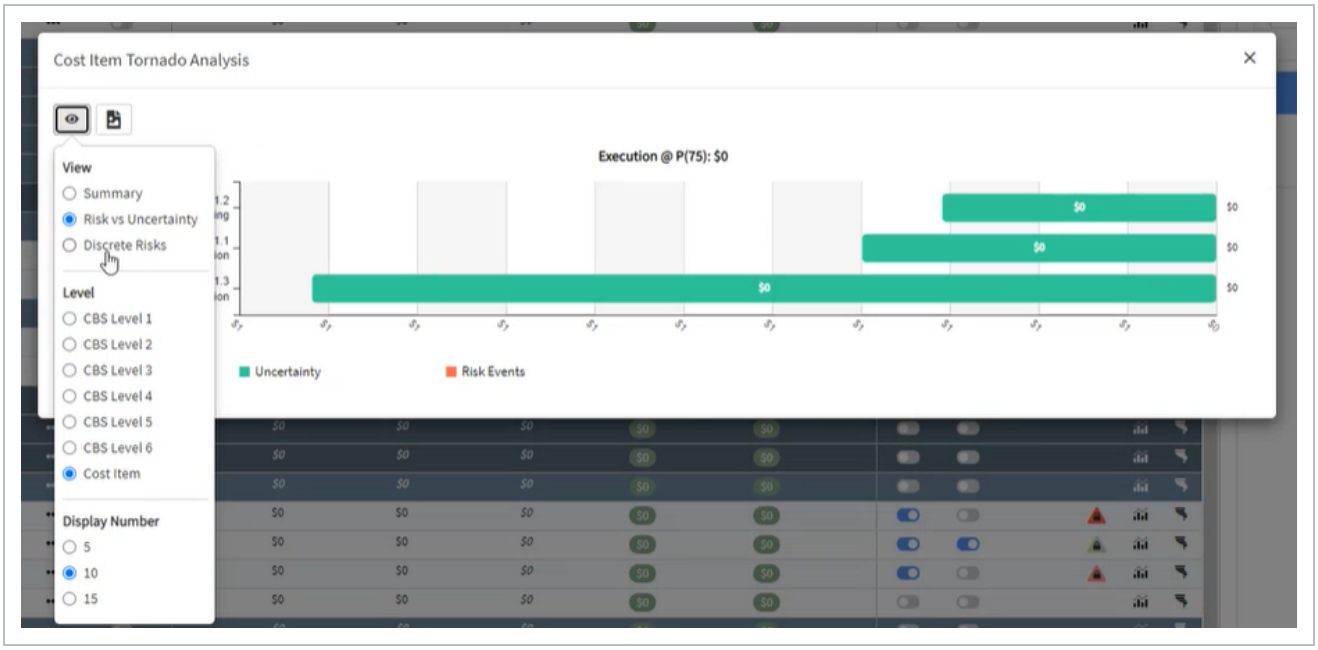


In this example, the P-Value is set to 75 based on the selected P-Values Markers. Selecting **Analyze** shows the Uncertainties and Risk Events for the Cost Item Tornado Analysis.



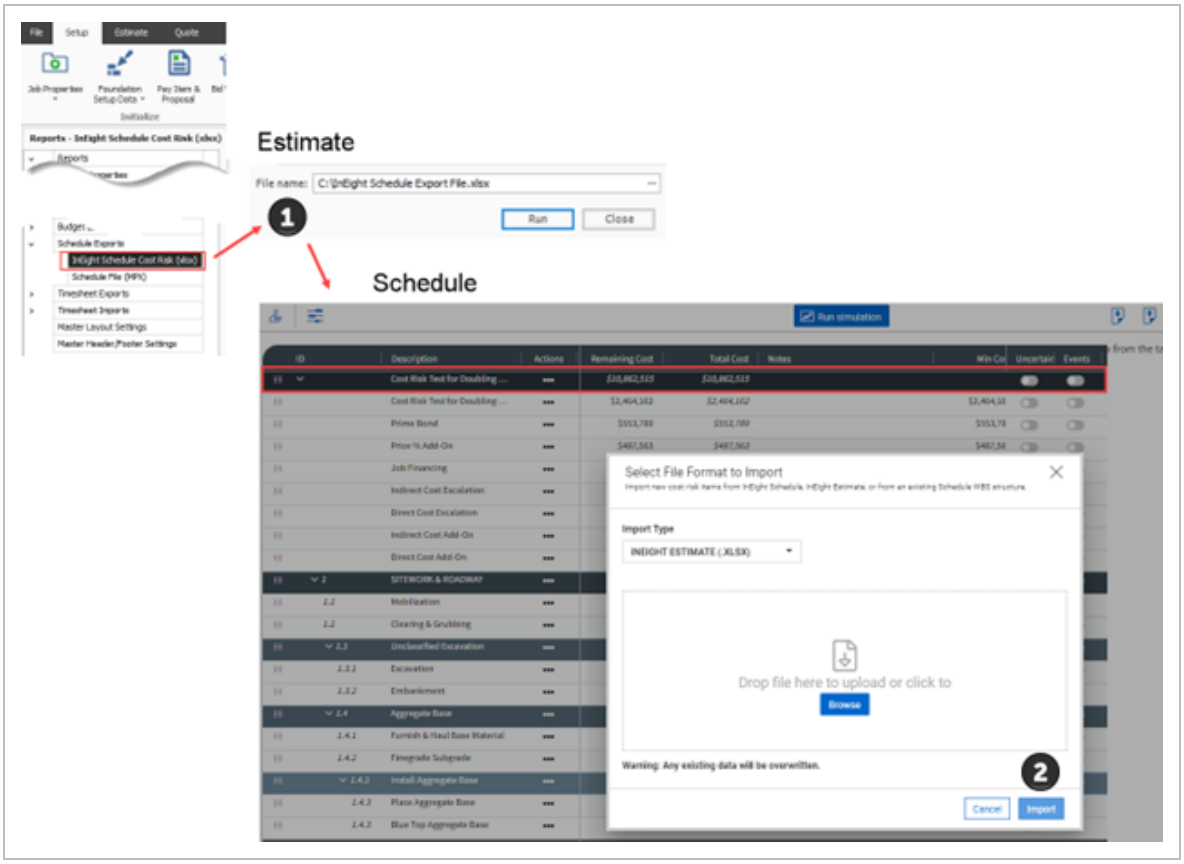
Interact with the following options to explore your project in Cost Item Mode:

- View
- Level
- Display Number



Root node in Cost Risk

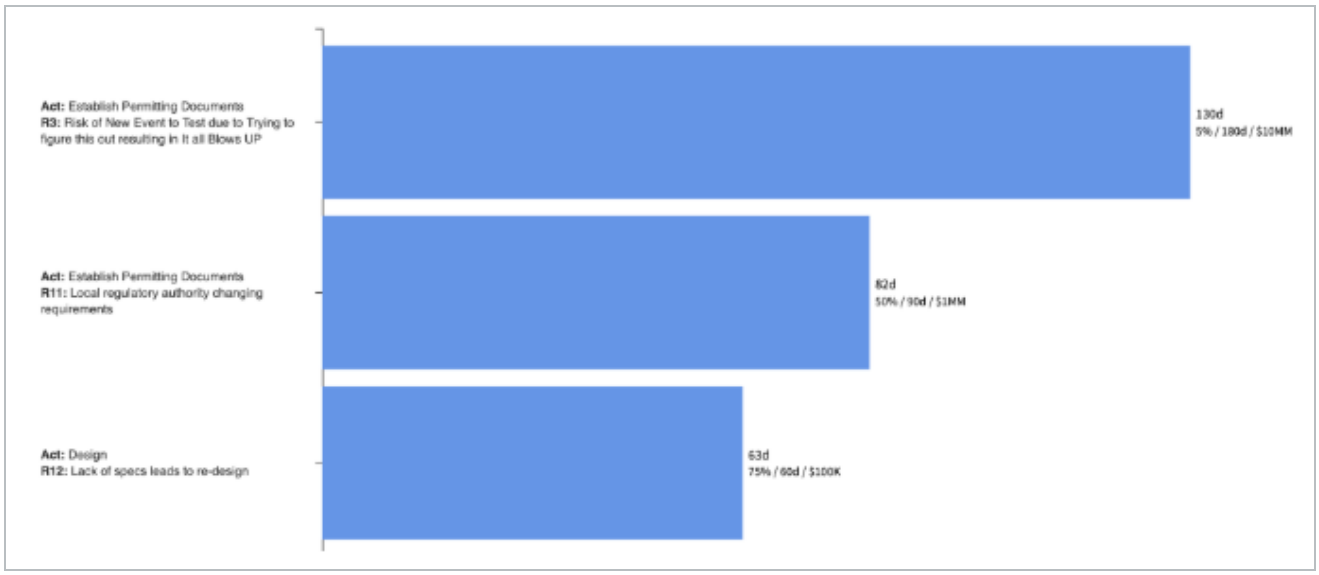
Importing the Schedule Export report from Estimate to Schedule > **Cost Risk** inserts a root node into the project. The root node captures project-level data in Cost Risk for you to reference and report on. It also retains the hierarchical breakdown of the Estimate file.



Risk Mode

Analyze the impact that risks have on the selected line item.

In the example below, you can visualize the most impactful risk events and their corresponding activities. The largest driver is Risk #3 (R3) on activity Establish Permitting Documents and accounts for 130d of risk exposure.


Act: Establish Permitting Documents
R3: Risk of New Event to Test due to Trying to figure this out resulting in It all Blows UP
130d
5% / 180d / $10MM
Act: Establish Permitting Documents
R11: Local regulatory authority changing requirements
82d
50% / 90d / $1MM
Act: Design
R12: Lack of specs leads to re-design
63d
75% / 60d / $100K

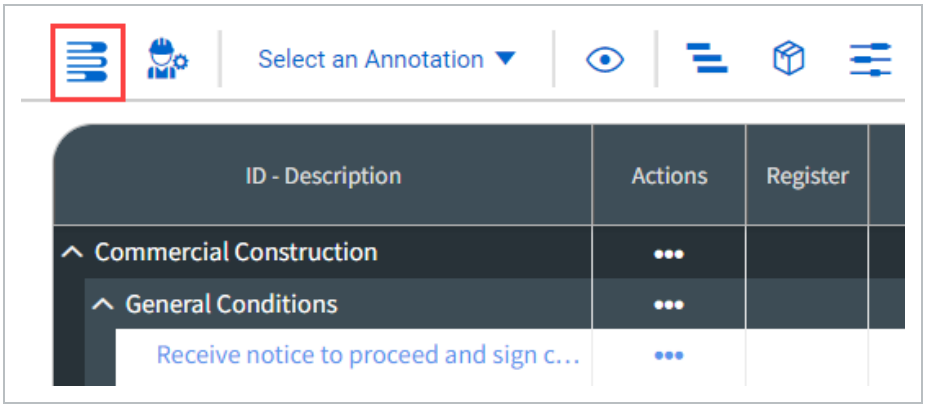
LESSON 9 – SCHEDULING

Scheduling Overview

Scheduling

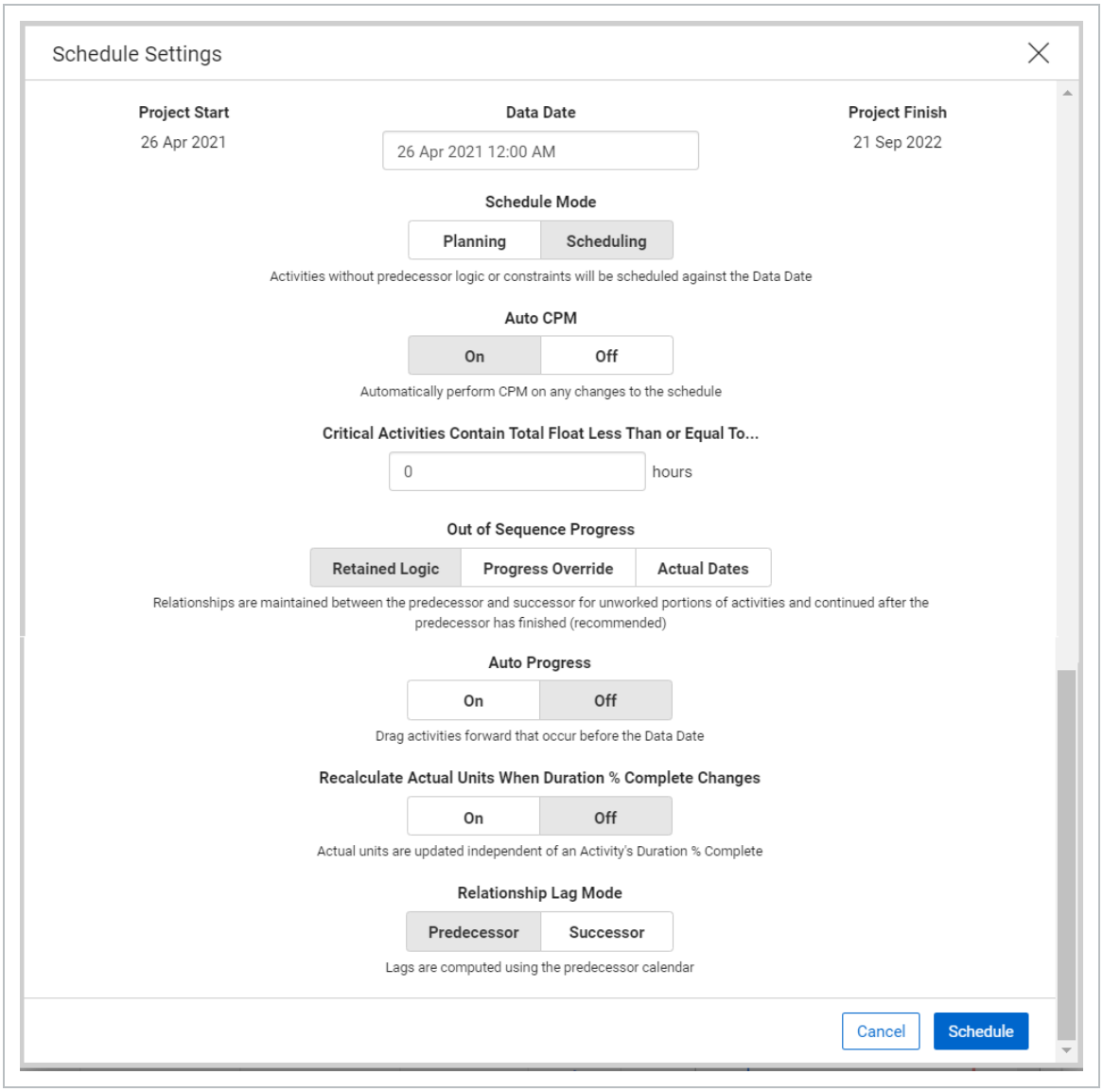
Setting Schedule Progress Attributes

1. Click the **Scheduling** icon in the Smart Planning tab.



2. Populate the following information:
    - **Data Date** - Sets the "current" or as-of date that you are looking at in the system.
    - **Auto CPM** - This should generally be set to *On*, so logic is automatically applied to items in your schedule.
    - **Out of Sequence Progress** - this should remain on retained logic, retains planned dependencies between unworked portions of activities.
    - **Auto Progress** - If set to *On*, Schedule assumes that work is proceeding as planned. Activities will be progressed to where they were planned to be on the data date. If set to *Off*, you manually progress activities. This should be done prior to advancing the data date of the project.
    - **Recalculate Actual Units When Duration % Complete Changes** - Actual units on assigned resources update per the duration % complete. For example, if a 10-day activity is progressed to 50% duration % complete then a resource assigned to that activity with 100 units planned would update to 50 actual units. Off - Duration % complete and Actual units are unlinked.
    - **Relationship Lag Mode** -Dictates which calendar between a predecessor and its successor

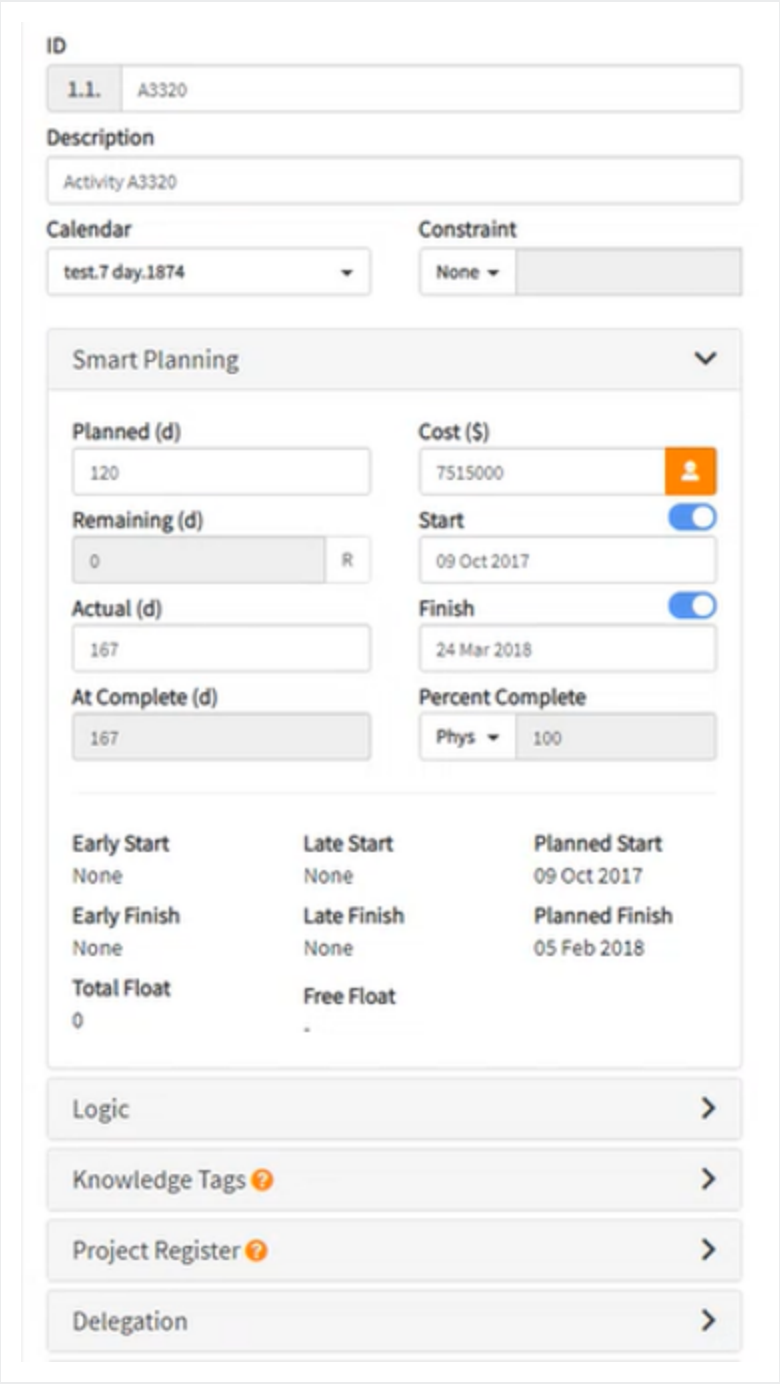
the lag of a relationship is used when establishing Finish and Start dates in CPM.



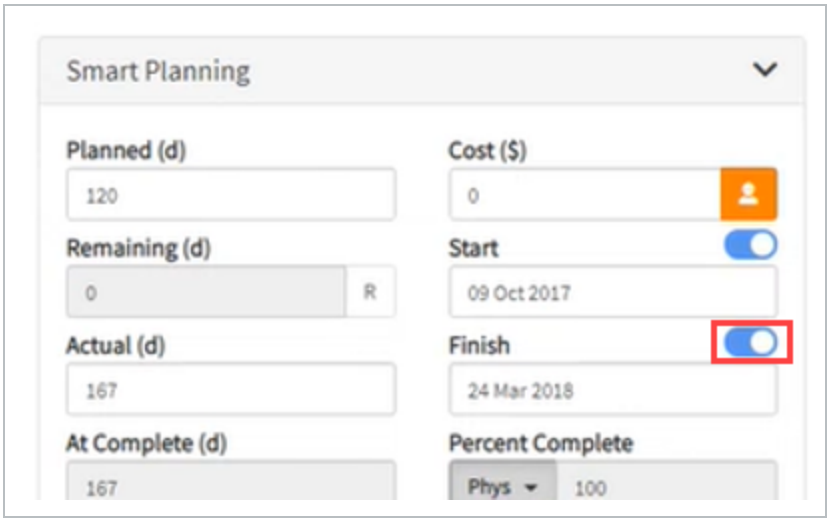
3. Clicking **Schedule** updates the data date and logic based on the settings selected.

Progressing

To begin Progressing, select the activity that you want to progress, and reference the smart planning panel.



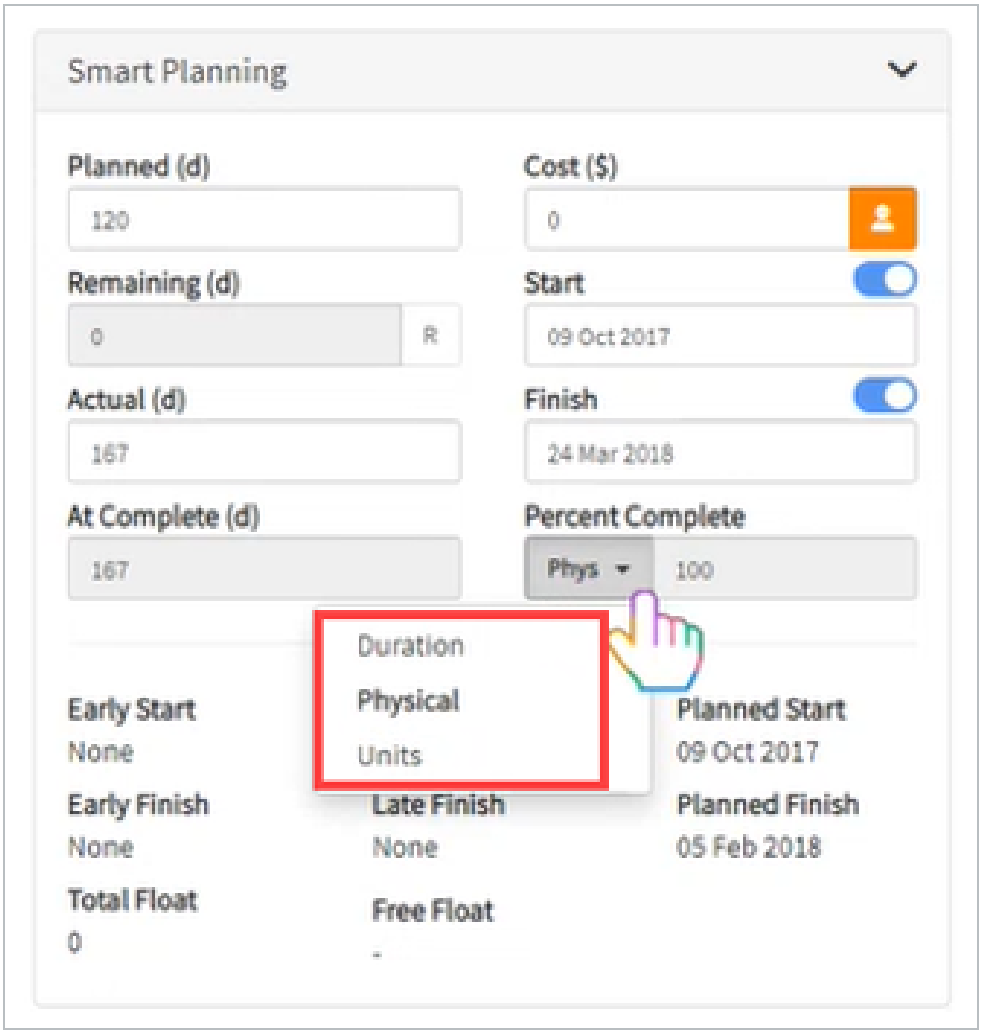
Activities can be marked as started by clicking the **Start** toggle. As activities progress, they can be updated by changing the remaining duration, the finish date, or the Percent Complete fields. When a task is finished, the Finish flag can be switched to *On* to indicate this in the system.



Percent Complete

Percent complete can be calculated in three different ways:

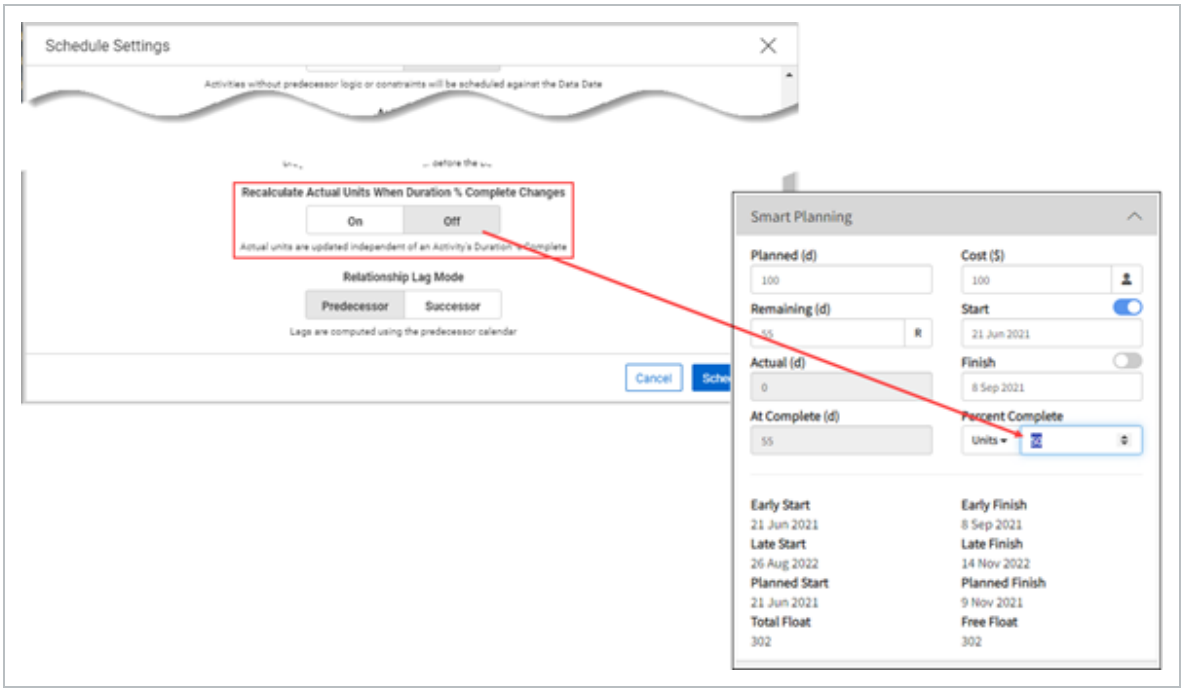
- Duration
- Units
- Physical



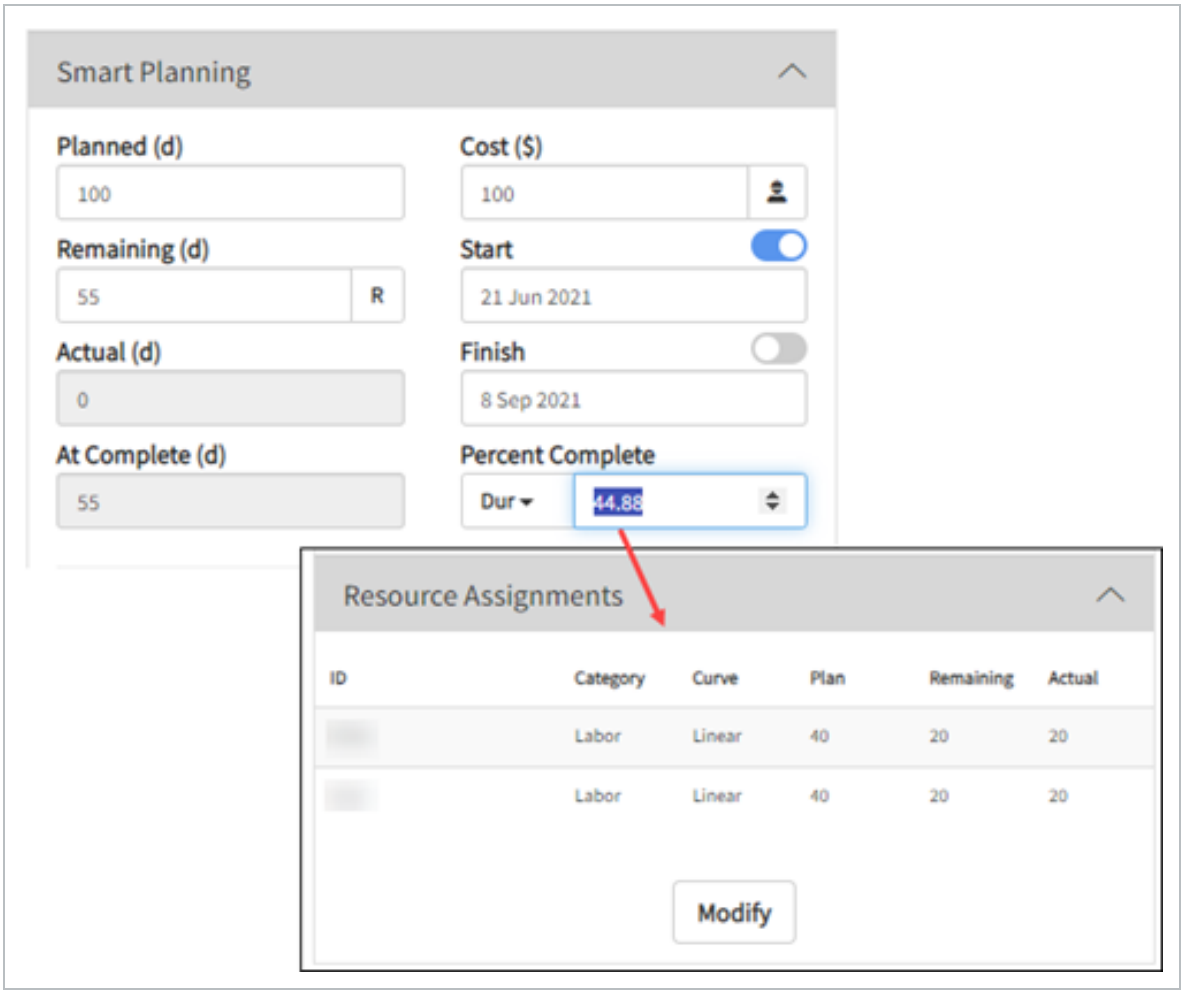
Duration percent complete uses the duration that was originally loaded onto the activity. For example, if the duration was set to ten days for completion and only five days have been completed, the system automatically sets duration to 50 percent complete.

Units percent complete uses the resource budgeted units. Schedule uses any units that have been budgeted to that activity to automatically calculate the percent complete. For example, if there are 100 man hours someone needs to work and they only worked 50 hours, the system would calculate it to 50% complete.

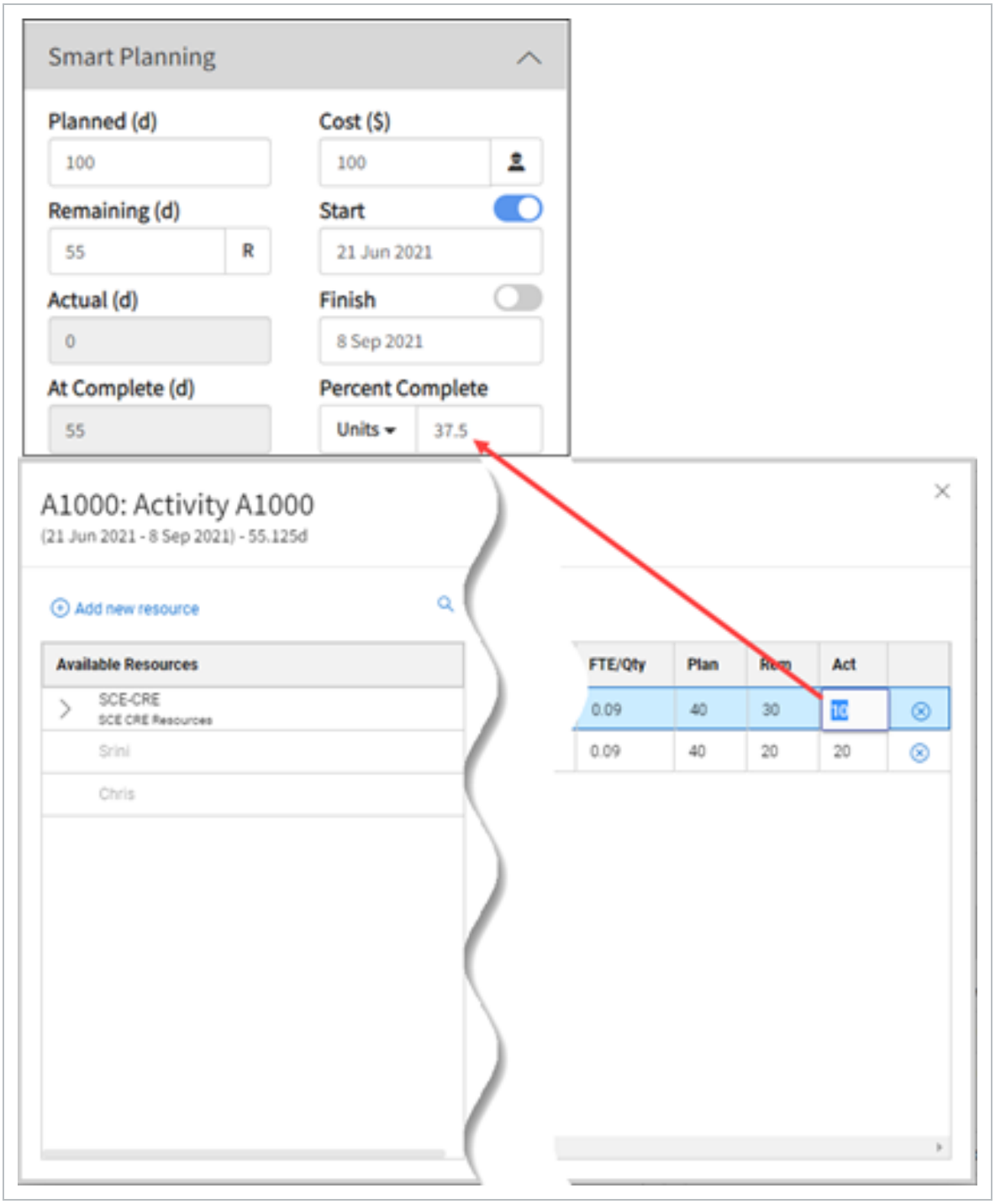
You can also update the Units Percent Complete at the activity level. When the Recalculate Actual Units When Duration % Complete Changes toggle in Schedule Settings is set to Off, you can manually edit the Unit Percent Complete field in Smart Planning.



Updating the Units Percent Complete at the activity level in Smart Planning also updates the actual and remaining for the associated resource assignments.



You can modify the resource assignment, which automatically recalculates and updates the Duration Percent Complete in Smart Planning.

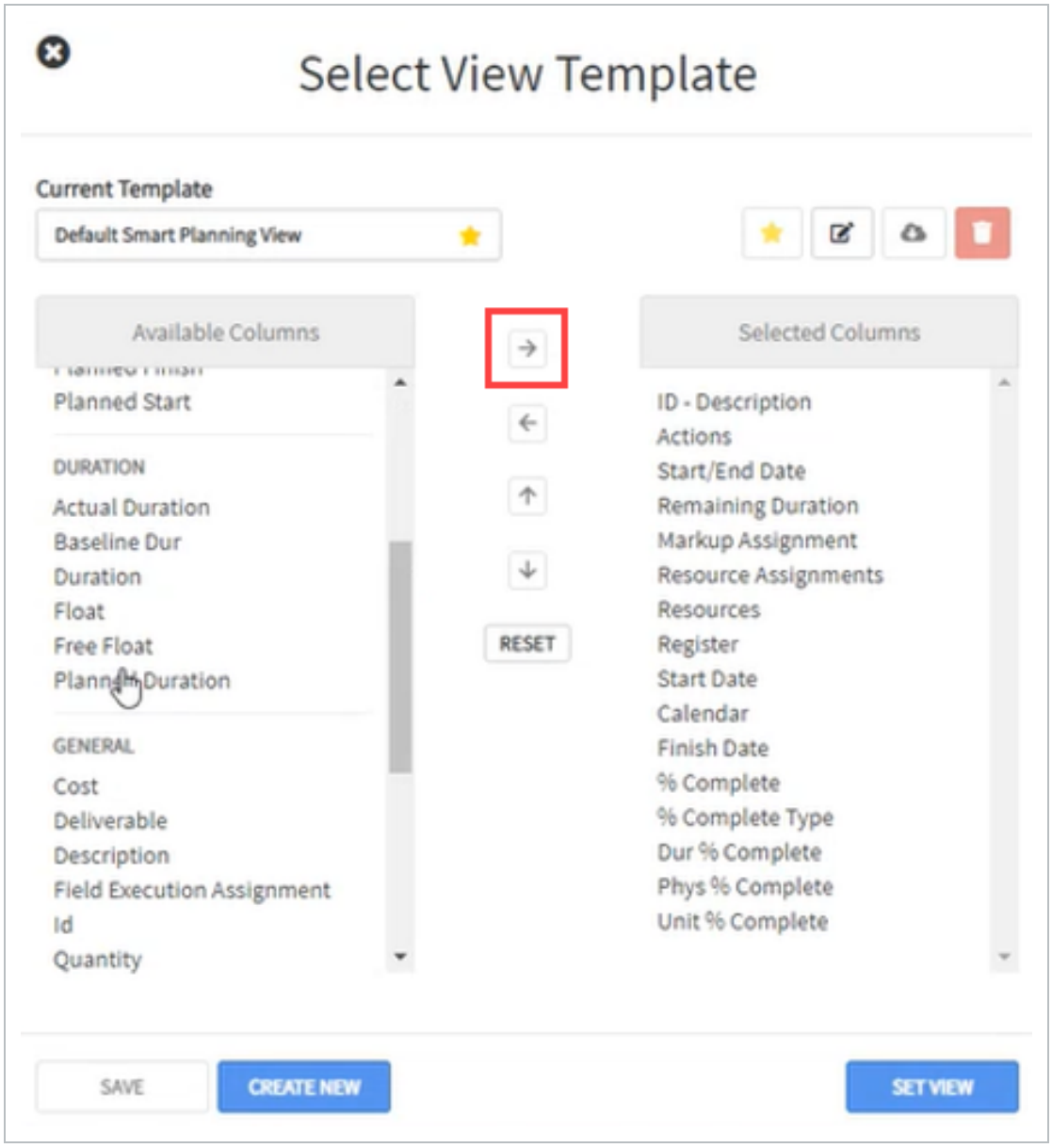


Physical percent complete uses the Phys % Complete column as a text field to type in the percent complete. This only applies to an activity that has started and is not completed. Physical percent complete interacts with earned value management. For example, if you have 20% physical complete and 5% duration complete, there are three ways of updating this. You can change the remaining duration, you can change the finish date, or you can change the duration percent complete. The system automatically adjusts the math.

Adding % Complete columns to the Gantt Chart

1. From the Gantt Chart, select the **Select View Template** icon.

2. In the Available Columns column, scroll to the Duration section. Then select the following columns for percent complete:
    - % Complete
    - % Complete Type
    - Dur % Complete
    - Phys % Complete
    - Unit % Complete
3. Use the arrows to move the columns to the Selected Columns column.



4. Select **Set View** to add the percent complete columns to the Gantt chart.

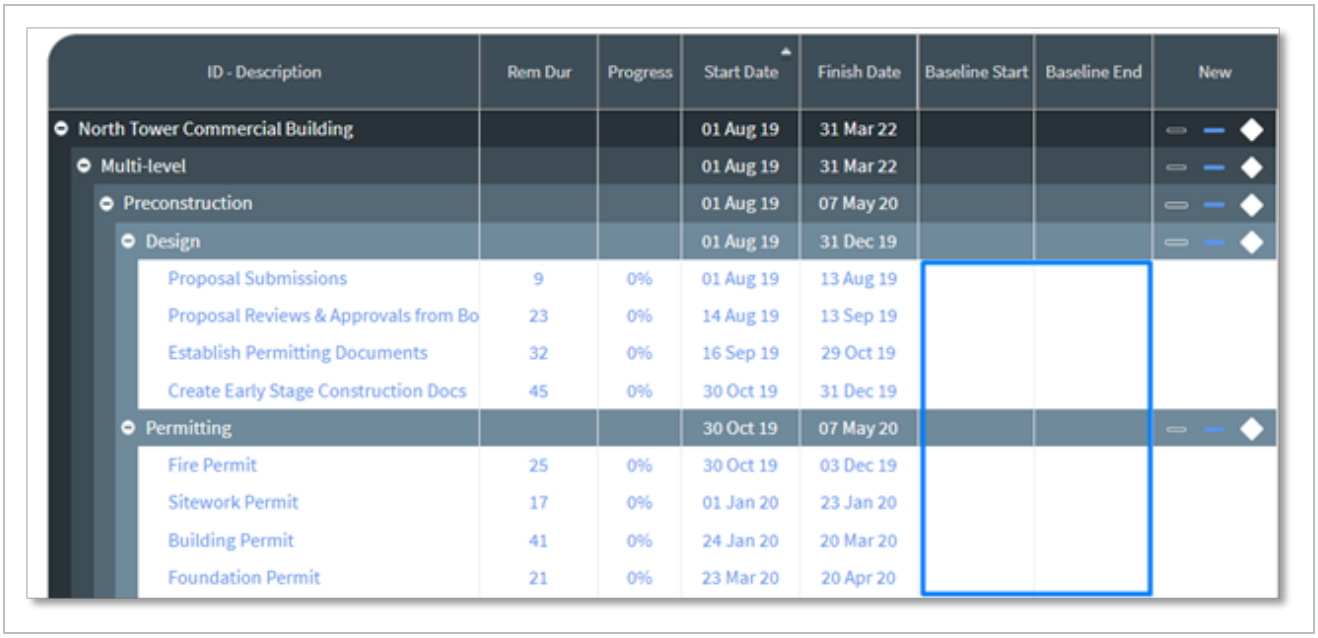
Snapshot And Schedule Settings

Set Snapshot

Setting the snapshot lets you compare any future changes that we make to the plan to our current plan.

It is important to set the snapshot before applying any progress to the schedule. This lets you compare the current progress against the snapshot plan.

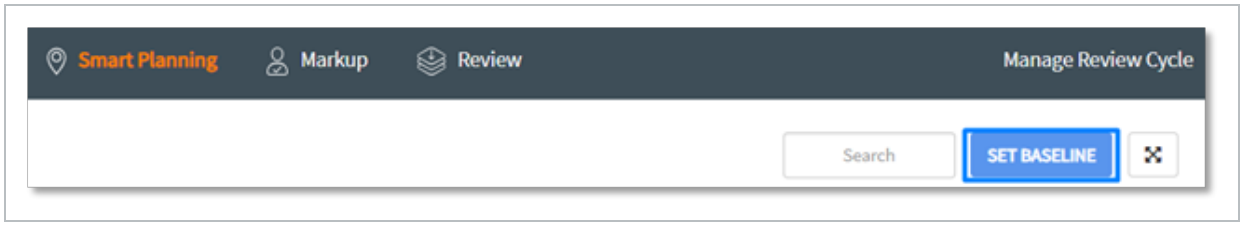
NOTE Before setting the snapshot, the SN1 Start and SN1 End dates columns show no values.



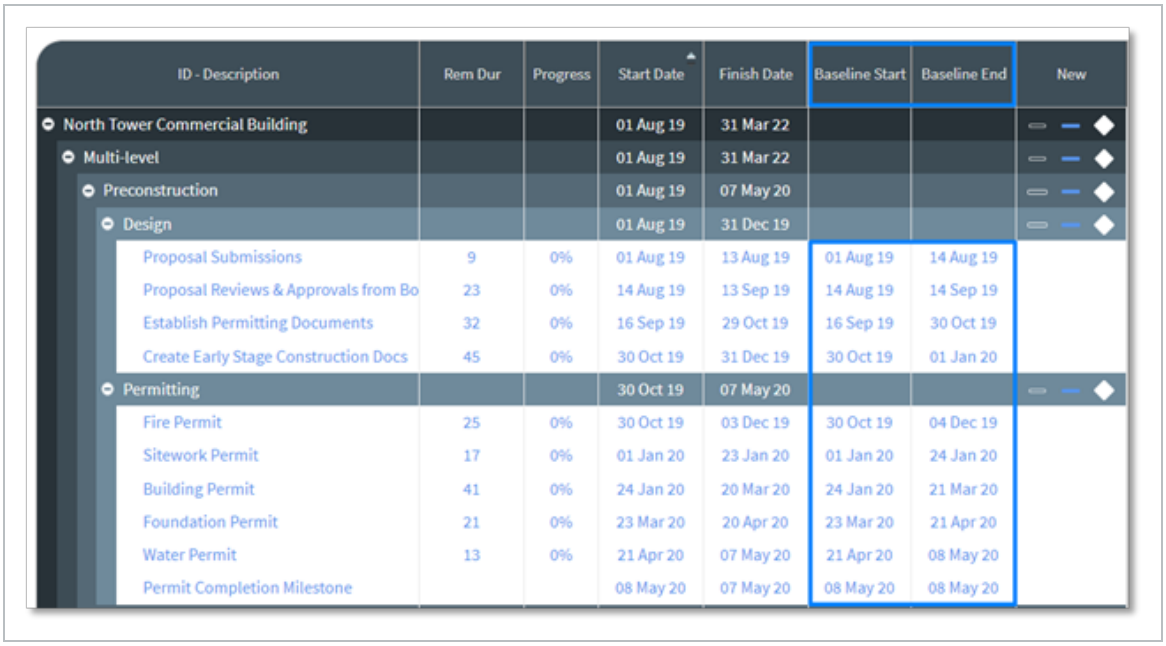
ID - Description	Rem Dur	Progress	Start Date	Finish Date	Baseline Start	Baseline End	New
North Tower Commercial Building			01 Aug 19	31 Mar 22			
Multi-level			01 Aug 19	31 Mar 22			
Preconstruction			01 Aug 19	07 May 20			
Design			01 Aug 19	31 Dec 19			
Proposal Submissions	9	0%	01 Aug 19	13 Aug 19			
Proposal Reviews & Approvals from Bo	23	0%	14 Aug 19	13 Sep 19			
Establish Permitting Documents	32	0%	16 Sep 19	29 Oct 19			
Create Early Stage Construction Docs	45	0%	30 Oct 19	31 Dec 19			
Permitting			30 Oct 19	07 May 20			
Fire Permit	25	0%	30 Oct 19	03 Dec 19			
Sitework Permit	17	0%	01 Jan 20	23 Jan 20			
Building Permit	41	0%	24 Jan 20	20 Mar 20			
Foundation Permit	21	0%	23 Mar 20	20 Apr 20			

Set the Snapshot

1. Click **Snapshot icon > Set Snapshot.**.



   - After the snapshot is set, you can view the SN1 Start and SN1 End dates shown in the column. The snapshot dates are now populated in Schedule.



ID - Description	Rem Dur	Progress	Start Date	Finish Date	Baseline Start	Baseline End	New
North Tower Commercial Building			01 Aug 19	31 Mar 22			
Multi-level			01 Aug 19	31 Mar 22			
Preconstruction			01 Aug 19	07 May 20			
Design			01 Aug 19	31 Dec 19			
Proposal Submissions	9	0%	01 Aug 19	13 Aug 19	01 Aug 19	14 Aug 19	
Proposal Reviews & Approvals from Bo	23	0%	14 Aug 19	13 Sep 19	14 Aug 19	14 Sep 19	
Establish Permitting Documents	32	0%	16 Sep 19	29 Oct 19	16 Sep 19	30 Oct 19	
Create Early Stage Construction Docs	45	0%	30 Oct 19	31 Dec 19	30 Oct 19	01 Jan 20	
Permitting			30 Oct 19	07 May 20			
Fire Permit	25	0%	30 Oct 19	03 Dec 19	30 Oct 19	04 Dec 19	
Sitework Permit	17	0%	01 Jan 20	23 Jan 20	01 Jan 20	24 Jan 20	
Building Permit	41	0%	24 Jan 20	20 Mar 20	24 Jan 20	21 Mar 20	
Foundation Permit	21	0%	23 Mar 20	20 Apr 20	23 Mar 20	21 Apr 20	
Water Permit	13	0%	21 Apr 20	07 May 20	21 Apr 20	08 May 20	
Permit Completion Milestone			08 May 20	07 May 20	08 May 20	08 May 20	

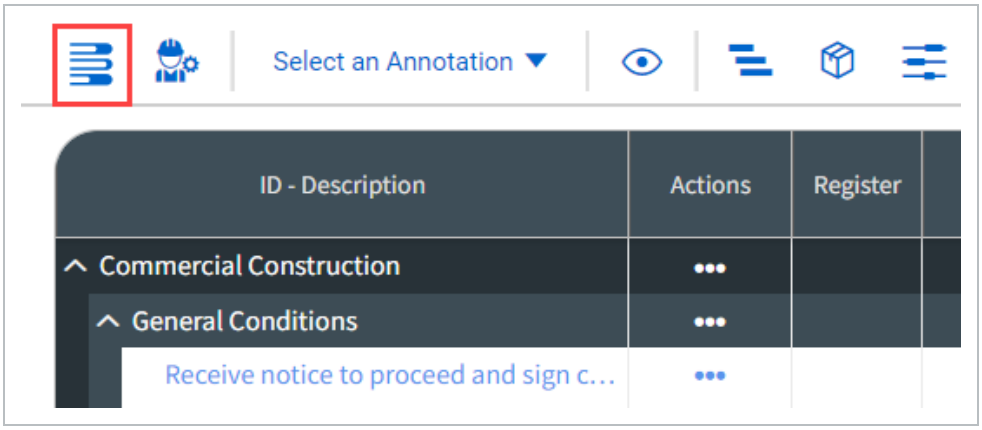
NOTE If the snapshot has not been set when a Markup Cycle is started, Schedule requests confirmation to establish the snapshot so any markups or changes to the schedule can be compared before and after review.

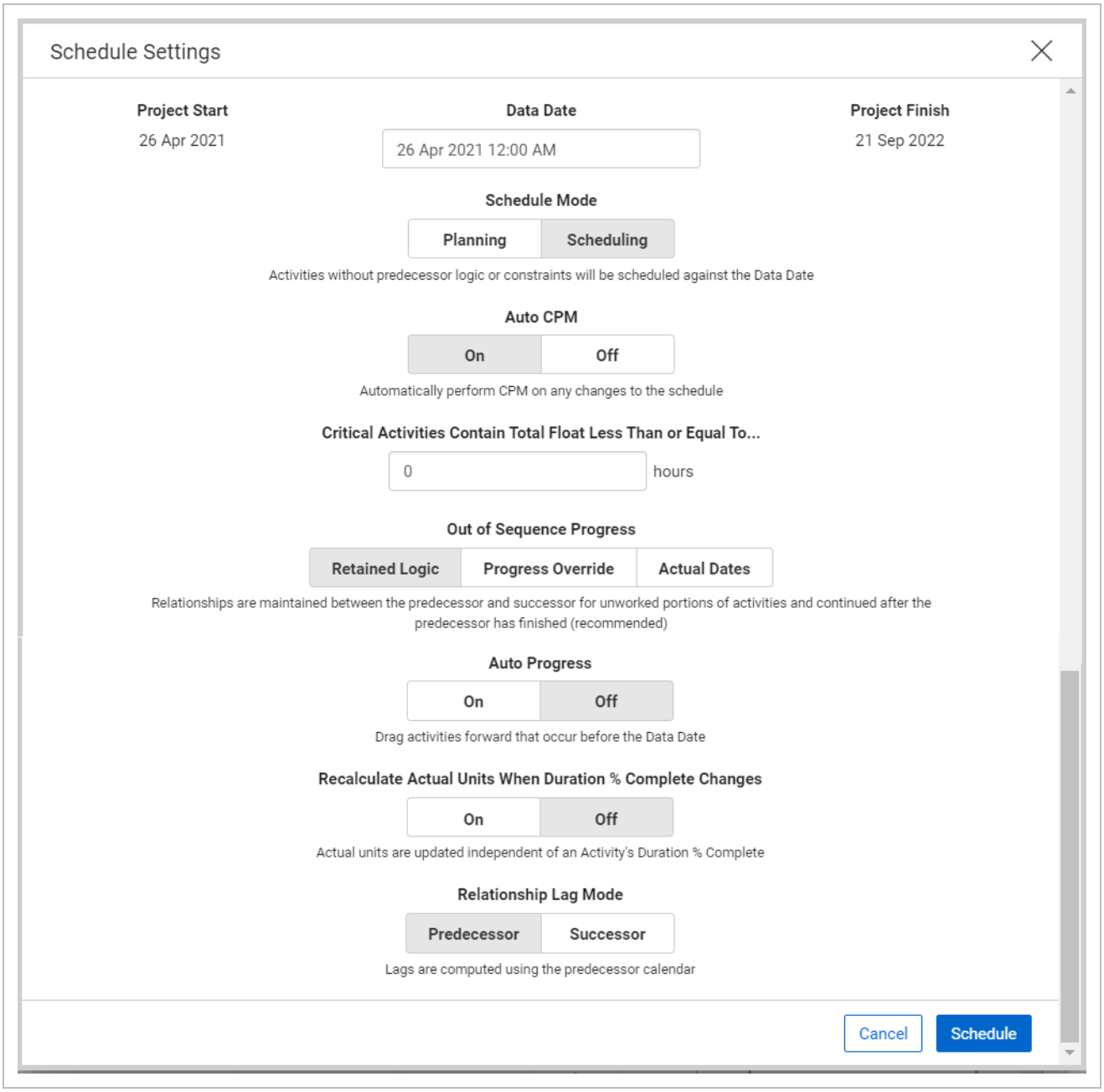
NOTE Gantt bars of up to 2 snapshots can be visualized against the current schedule Gantt bars for comparison. Gantt grid columns show variances between the current schedule and the snapshot columns.

Scheduling

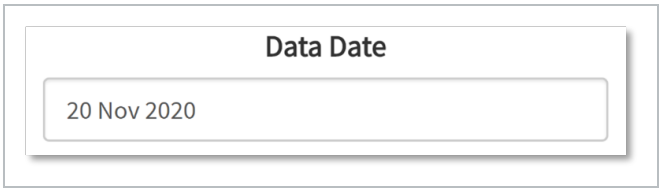
Schedule uses CPM for scheduling a set of activities. This method calculates the activity dates based on the durations and logic.

To schedule the project or review schedule options, click **Schedule**.

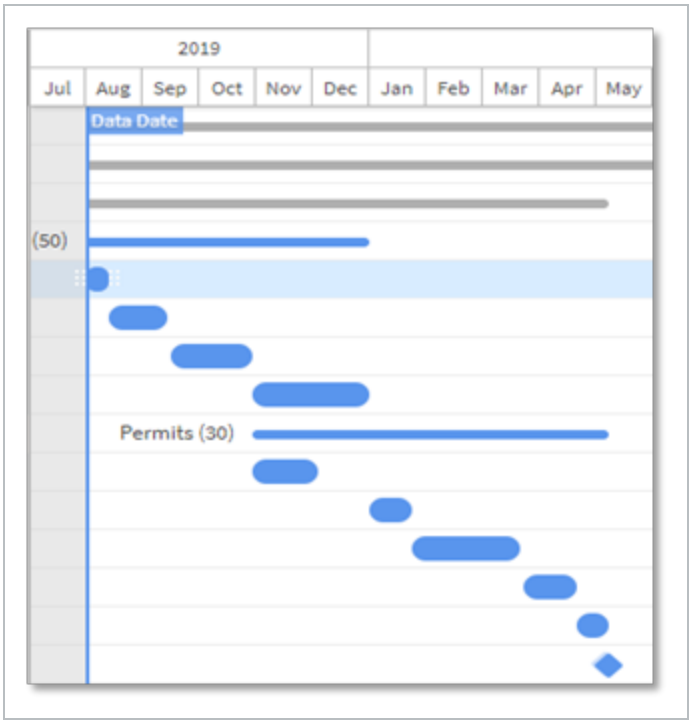

Select an Annotation
ID - Description
Actions
Register
Commercial Construction
General Conditions
Receive notice to proceed and sign c...


Schedule Settings
Project Start
26 Apr 2021
Data Date
26 Apr 2021 12:00 AM
Project Finish
21 Sep 2022
Schedule Mode
Planning
Scheduling
Activities without predecessor logic or constraints will be scheduled against the Data Date
Auto CPM
On
Off
Automatically perform CPM on any changes to the schedule
Critical Activities Contain Total Float Less Than or Equal To...
0
hours
Out of Sequence Progress
Retained Logic
Progress Override
Actual Dates
Relationships are maintained between the predecessor and successor for unworked portions of activities and continued after the predecessor has finished (recommended)
Auto Progress
On
Off
Drag activities forward that occur before the Data Date
Recalculate Actual Units When Duration % Complete Changes
On
Off
Actual units are updated independent of an Activity's Duration % Complete
Relationship Lag Mode
Predecessor
Successor
Lags are computed using the predecessor calendar
Cancel
Schedule

Data Date

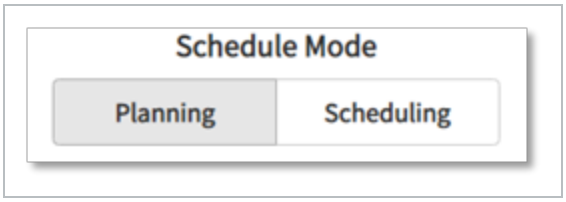

Data Date
20 Nov 2020

Set the Data Date to the day and hour you want to update the schedule to. The Data Date is used as the starting point to calculate the dates of all remaining activities. The Data Date is represented by the blue vertical line on the Gantt chart



Schedule Mode (Planning vs. Scheduling Mode)

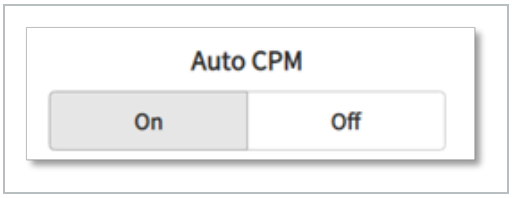
The Schedule Mode determines how activities without predecessor logic or constraints will respond to the updates being made to the schedule.



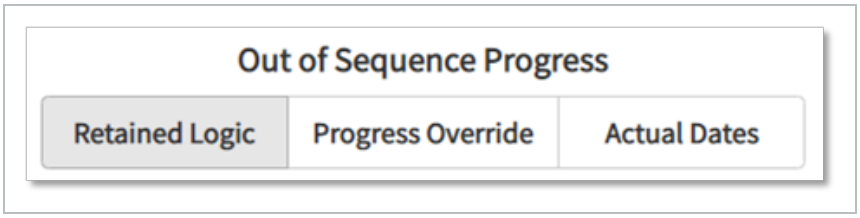
- In **Planning Mode**: Activities without predecessor logic or constraints do not snap back to the Data Date. This allows activities without predecessors to be scheduled throughout the project's timeline.
- In **Scheduling Mode**: Activities without predecessor logic or constraints are scheduled against the Data Date.

Auto CPM

Selecting the Auto CPM option *On* updates activity duration and sequence as actual progress is entered into Schedule. Switching this to *Off* prevents the schedule from automatically adjusting when activity is updated, and it must be adjusted manually. This is particularly useful if schedulers plan to update multiple activities in bulk, and then determine the CPM.



Out of Sequence Progress



- **Retained Logic**: Relationships are maintained between the predecessor and successor for unworked portions of activities and continued after the predecessor has finished.
- **Progress Override**: Relationships between the predecessor and successor are disregarded, and unworked portions of activities continue before the predecessor has finished.
- **Actual Dates**: When actual dates in the future occur, the remaining duration of in-progress activities are calculated after the conclusion of the future activity.

Auto Progress

Auto Progress determines if activities automatically start and progress when the Data Date has passed.

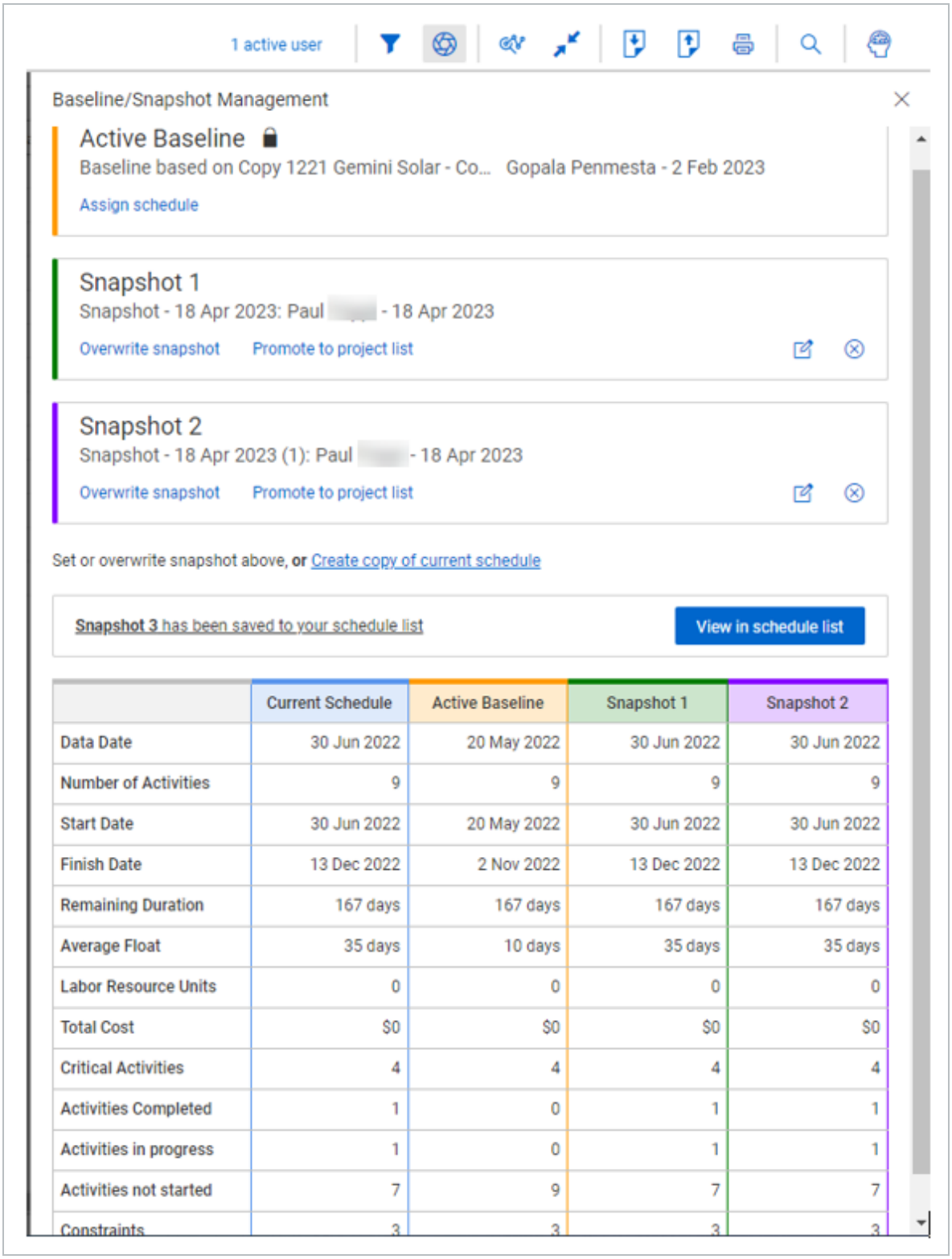
- If Auto Progress is *On*, activities that occur before the Data Date will automatically start progressing.
- If Auto Progress is *Off*, activities that occur before the Data Date will be pushed forward to the current Data Date without having started.

Baseline/Snapshot

Snapshots take all information from your current project file and saves it to the Snapshot Management menu. After a snapshot is saved, you can set another snapshot, overwrite a snapshot, delete a snapshot, save as a new schedule, or promote to a schedule.

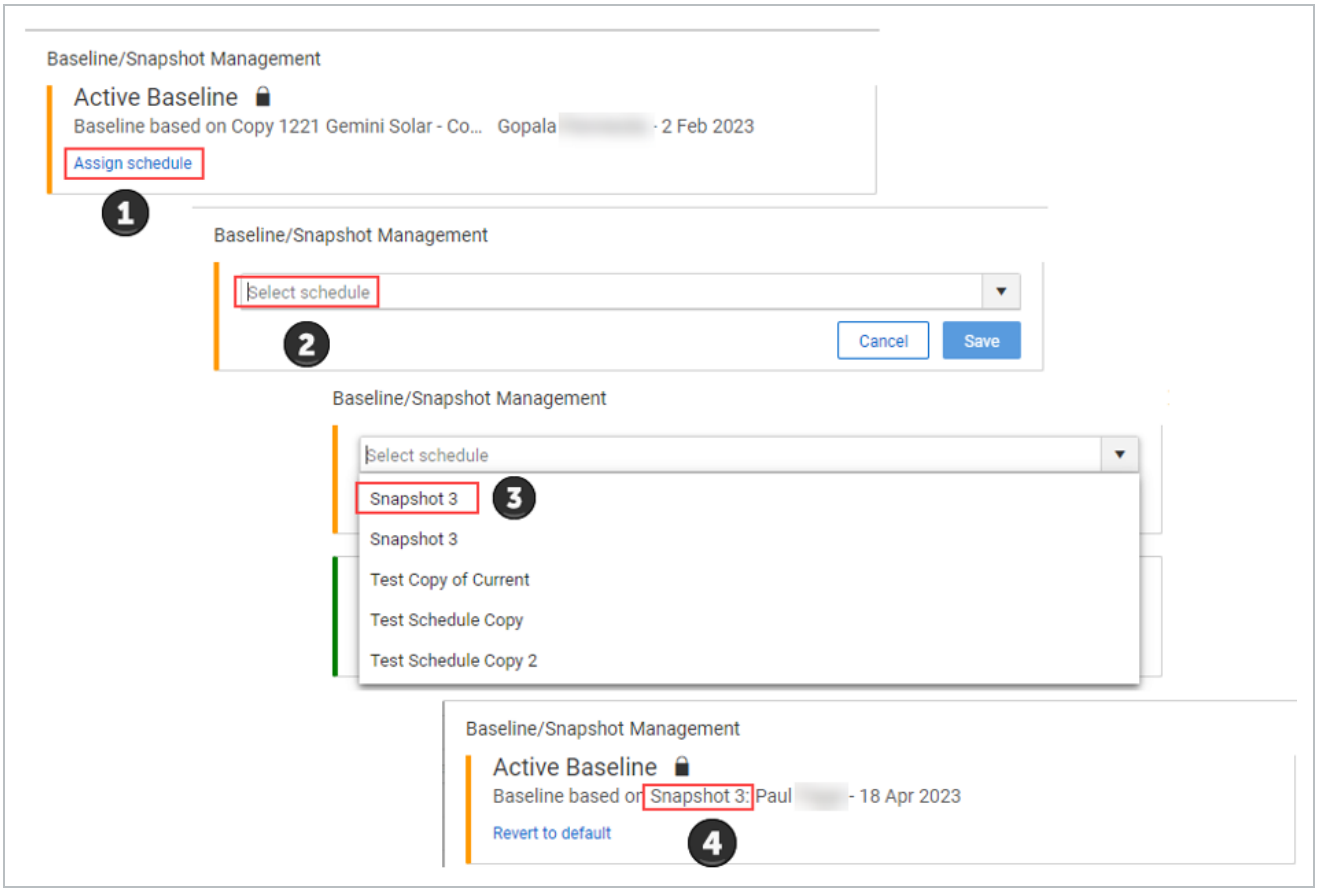
> **NOTE** There are only two snapshot slots available per project. The information on the snapshot cannot be edited after it has been created. Only the name of the snapshot can be changed.

The active baseline and any available snapshots are in a grid format, in addition to a color-coded metric table. This lets you see a comparison between the current schedule, active baseline, and available snapshots.

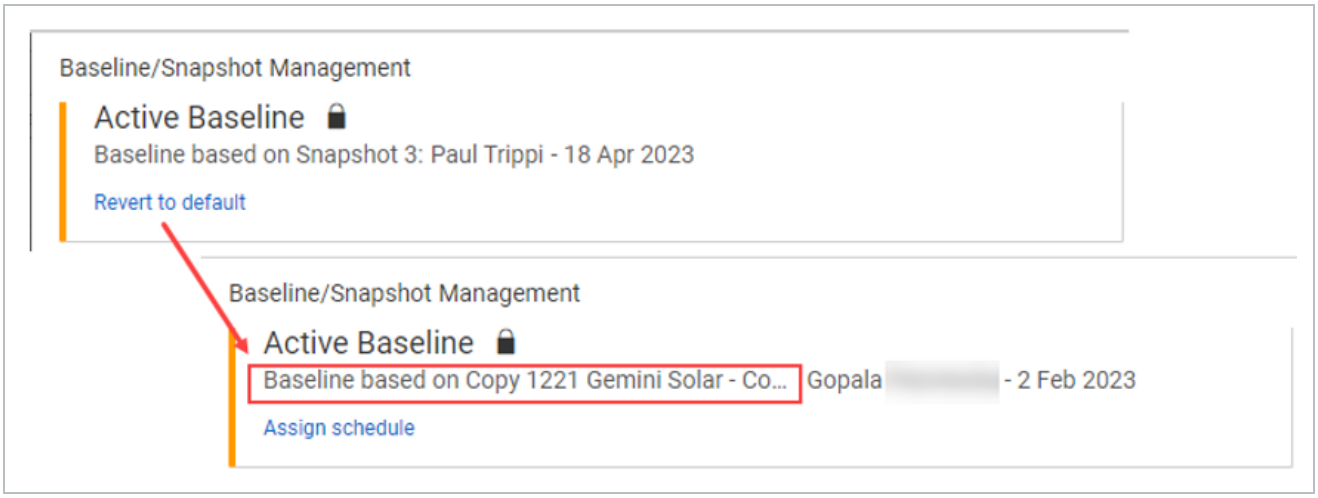


	Current Schedule	Active Baseline	Snapshot 1	Snapshot 2
Data Date	30 Jun 2022	20 May 2022	30 Jun 2022	30 Jun 2022
Number of Activities	9	9	9	9
Start Date	30 Jun 2022	20 May 2022	30 Jun 2022	30 Jun 2022
Finish Date	13 Dec 2022	2 Nov 2022	13 Dec 2022	13 Dec 2022
Remaining Duration	167 days	167 days	167 days	167 days
Average Float	35 days	10 days	35 days	35 days
Labor Resource Units	0	0	0	0
Total Cost	$0	$0	$0	$0
Critical Activities	4	4	4	4
Activities Completed	1	0	1	1
Activities in progress	1	0	1	1
Activities not started	7	9	7	7
Constraints	3	3	3	3

You can also assign other schedules that are part of the same project workspace as the current schedule to your active baseline and snapshots using the assign schedule function.

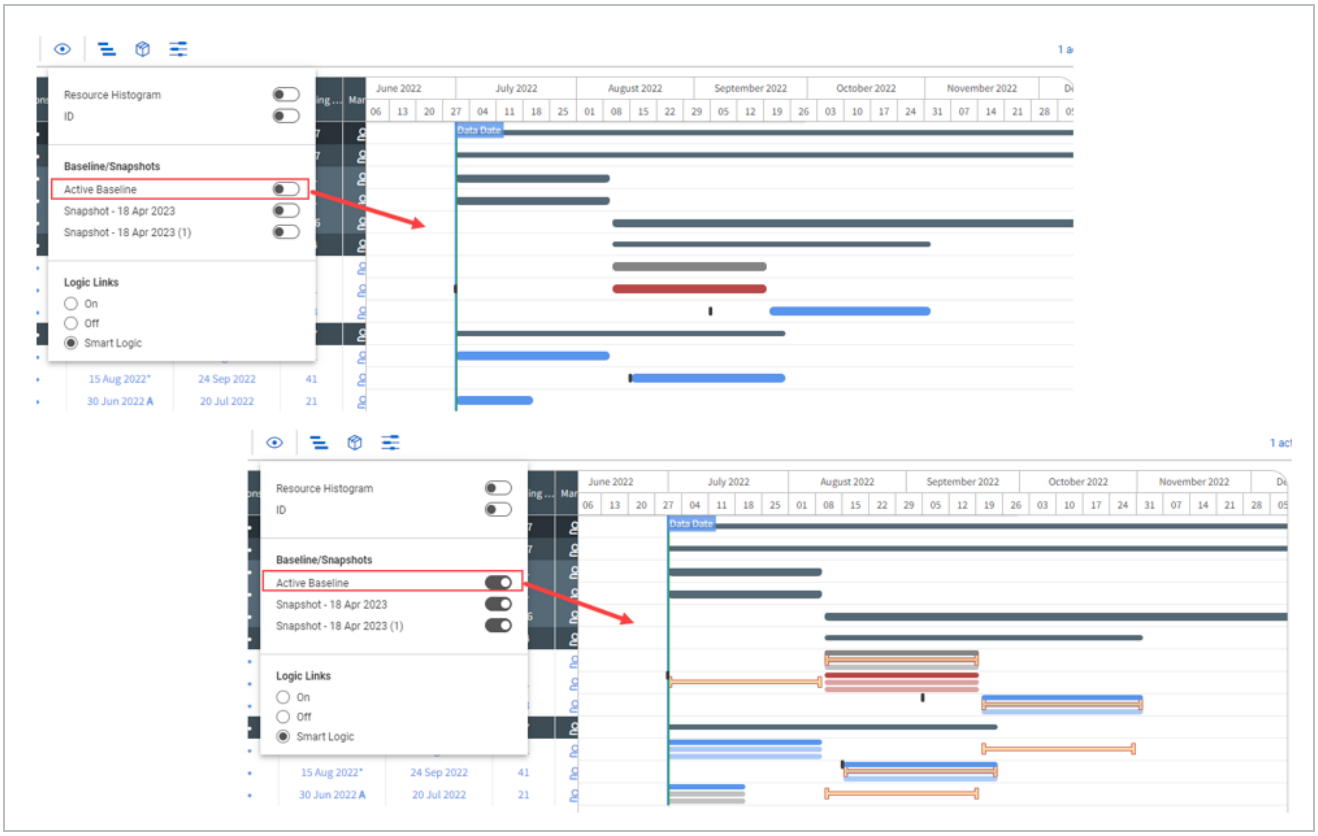


Select *Revert to default* to return to the previously assigned defaulted schedule.



Active baseline

The images below show what the Gantt chart illustrates when the active baseline is turned off and then on.



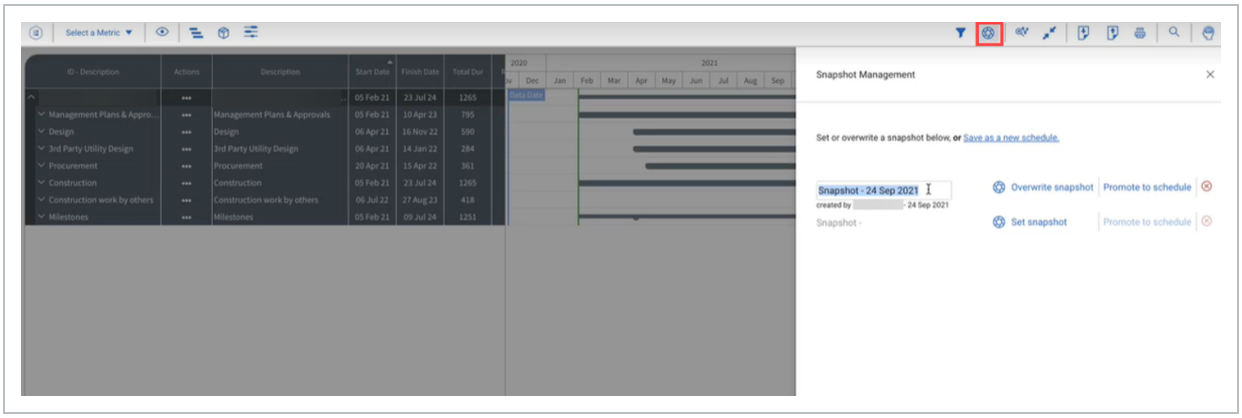
Create a snapshot

The following step-by-step walks you through how to create a snapshot.

> **NOTE** You can only create snapshots from the Plan view.

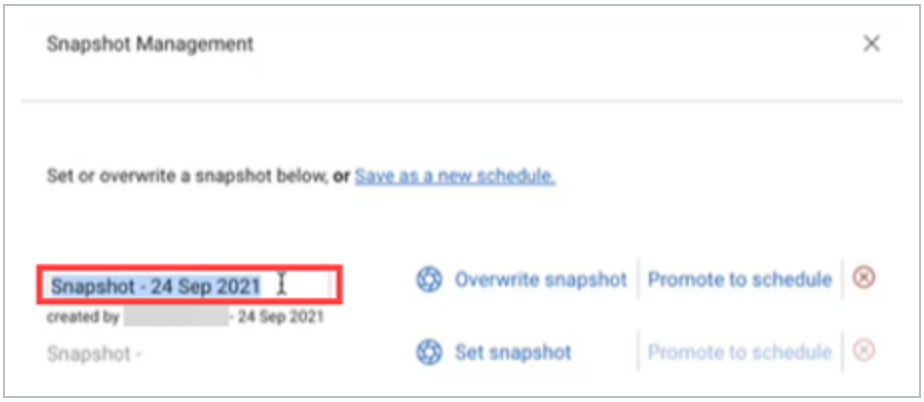
Create a snapshot

1. From the Plan view, select the **Snapshot** button in the toolbar. The Snapshot Management menu opens.



2. In the Snapshot Management menu, select **Set snapshot**. The snapshot automatically saves as Snapshot – [date].
3. Click the **Edit** icon next to the snapshot name to change the dialog box into an editable text box.

   You can now rename the snapshot to a name of your preference.



Overwrite a snapshot

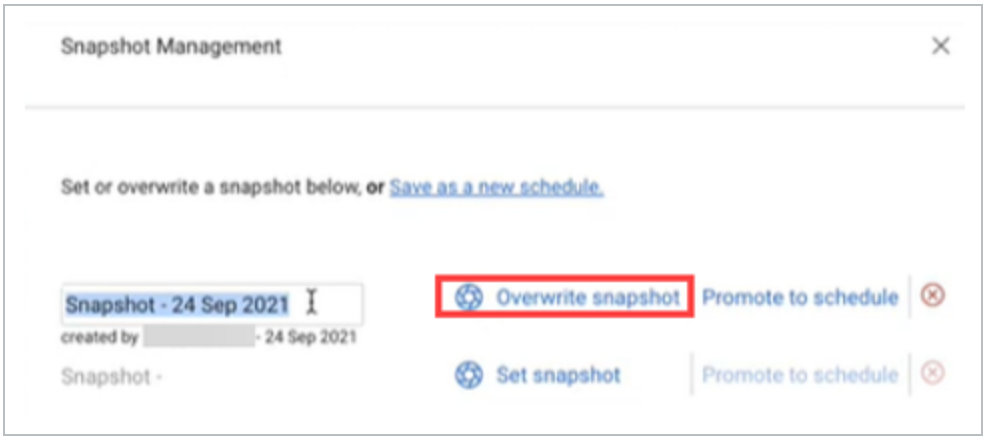
You can overwrite a previous snapshot if the information saved in the first snapshot does not have the most up-to-date information.

> **NOTE** If another user saved the snapshot you want to overwrite, confirm with that user that the information in the snapshot to be overwritten is no longer needed.

The following step-by-step walks you through how to overwrite an existing snapshot.

Overwrite a snapshot

1. From the snapshot Management menu, find the snapshot you want to overwrite.
2. Select **Overwrite snapshot**.



The old snapshot is overwritten and a new snapshot is saved in that snapshot slot.

Analysis View template

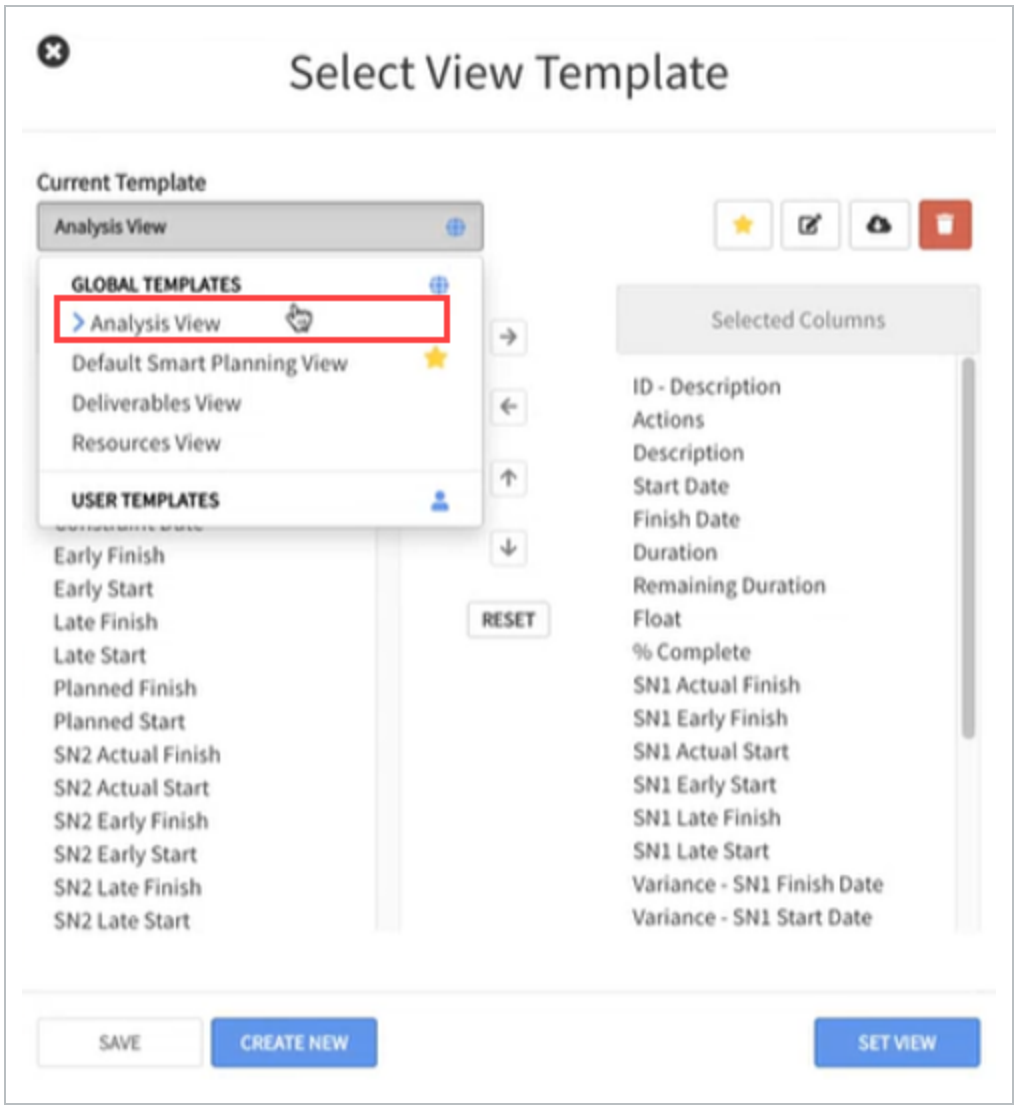
The Analysis View template works alongside the snapshots. This view lets you bring in new columns from SN1 Actual Finish to the additional variance columns. These columns are used in snapshots to compare information between snapshots and the current project. This template includes anything with a snapshot or a variance.

The following step-by-step walks you through how to select the Analysis View template.

Analysis View template

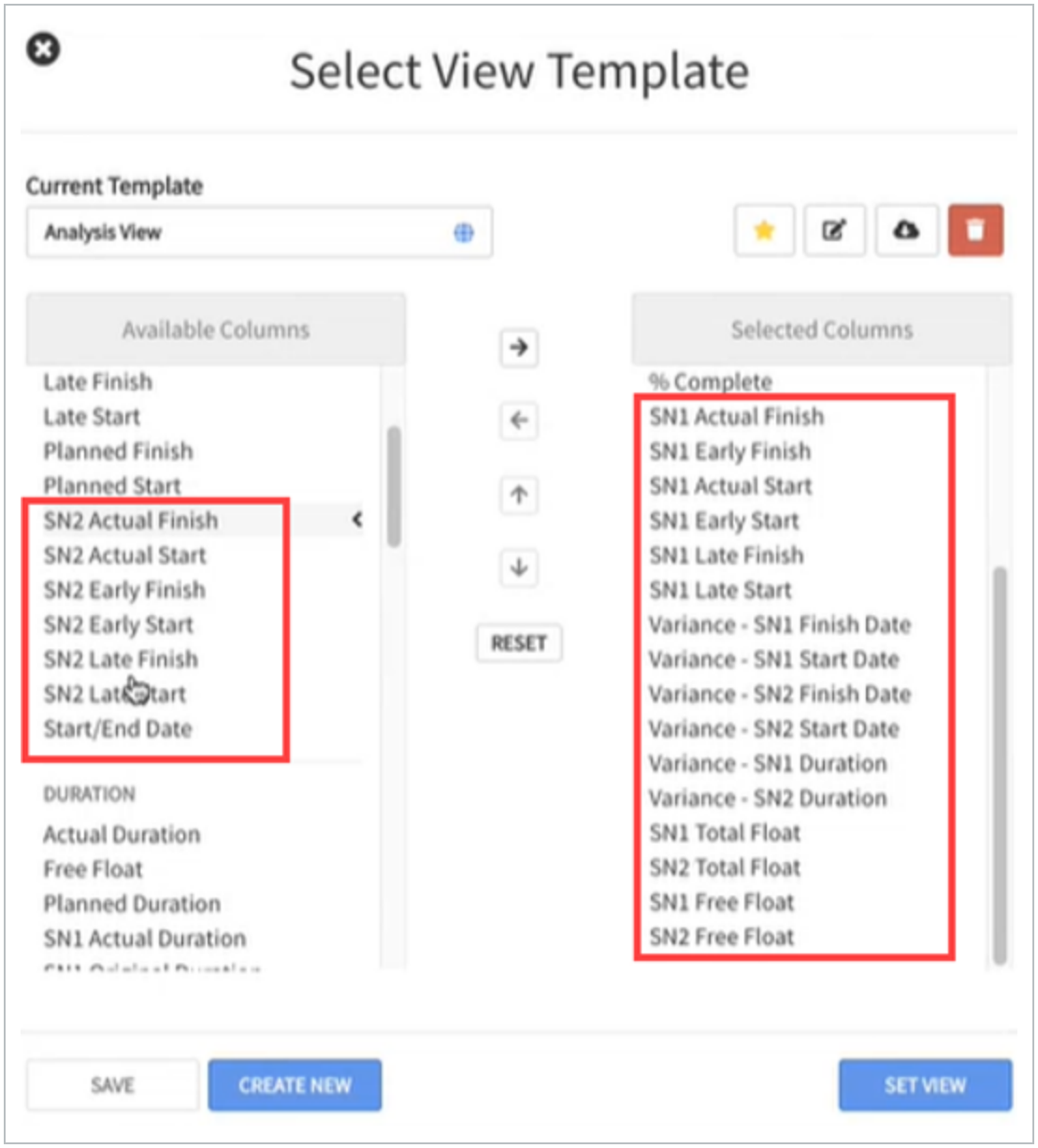
1. In the toolbar, select the **Select View Template** icon.

2. In the Current Template field, select the blue icon on the right. A drop-down menu opens.



3. Under Global Templates, select **Analysis View**.

   Columns that are available for viewing snapshot changes are available in this template. You can also add any available columns to the template as needed.

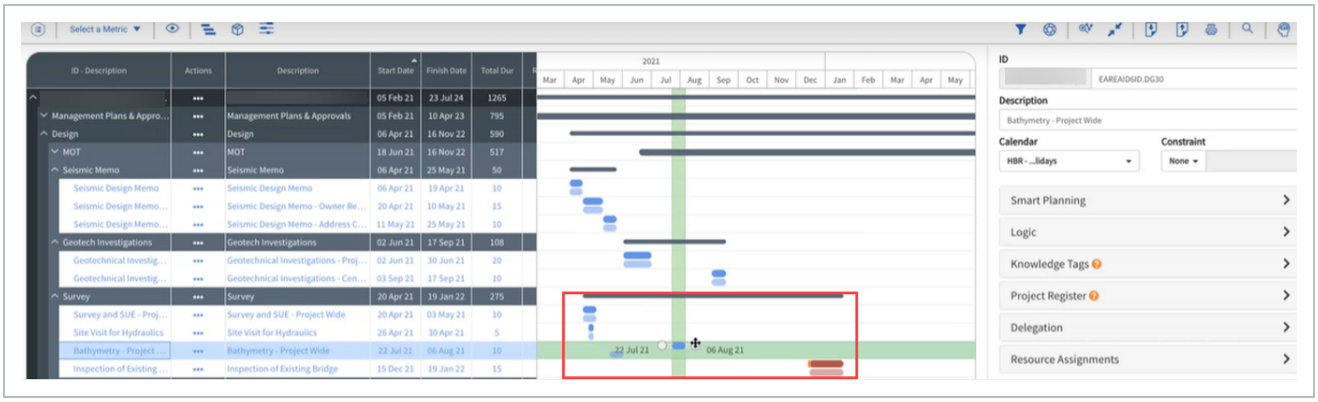


4. Use the arrows to move the columns over to the Selected Columns column as needed.
5. After the Analysis View template has been edited, select **Set View** to add the columns to the Gantt chart.

View snapshots in the Gantt Chart

After the snapshot has been created, your Gantt chart is updated with bars for the information that relates to the current schedule status and the snapshot status. The darker bars can be moved to

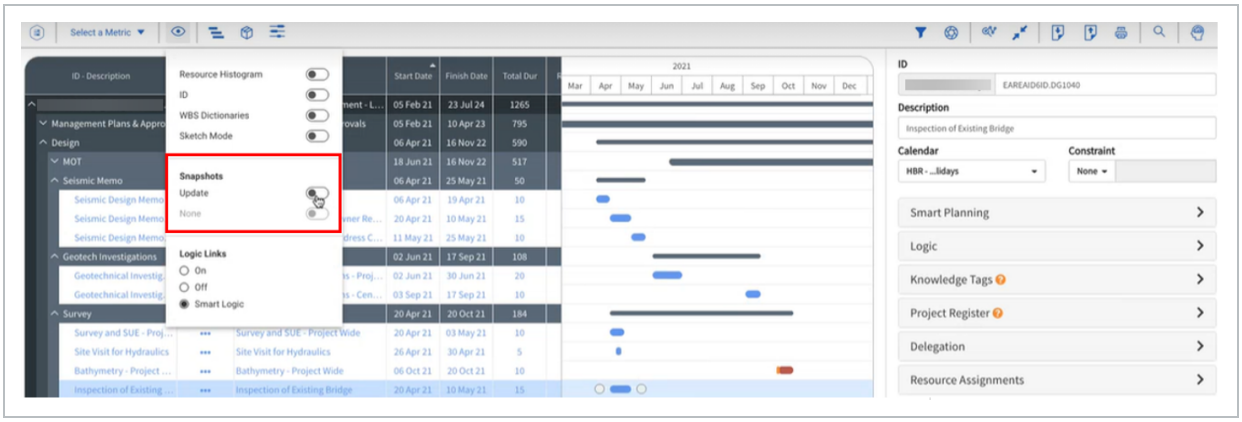
change the schedule on the Gantt Chart. The lighter bars represent the snapshot. The bars are blue when the schedule is not critical and red if they are critical.



The following step-by-step walks you through how to view existing snapshots on the Gantt Chart.

View snapshots

1. In the toolbar, select the **View options** icon.
2. Under the Snapshots section, select the slider for the snapshot you prefer to see in the Gantt chart. A drop-down menu opens.

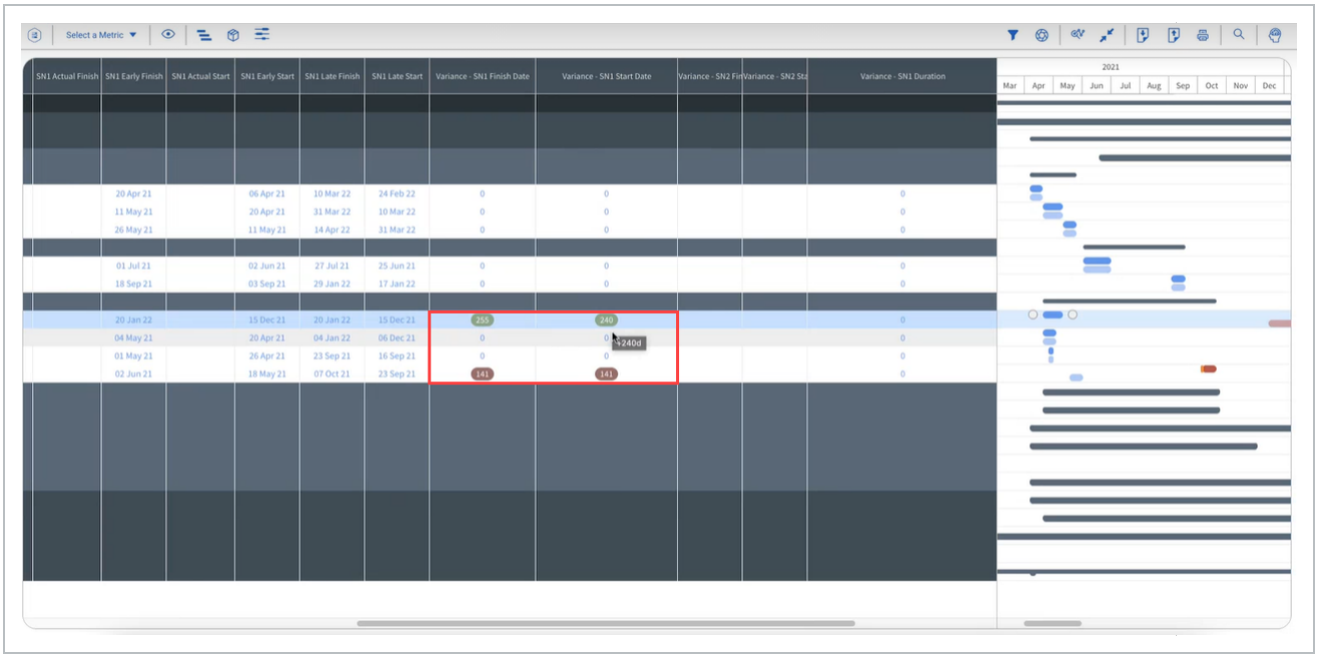


Two bars now show for items in the Gantt chart. You can move around the darker blue or darker red bars. The lighter bars represent the information saved in the snapshot and cannot be moved.

Variance Columns

Each variance column compares the snapshot to the current project.

The columns show a badge depending on how the information changed. If there is a net zero change, then no badge appears. For example, the variance columns might show a green badge number if there is a decrease in duration between the snapshot and the current project. The badge numbers could also show in red if the duration increased between the snapshot and the current project. If there is no change between the snapshot and project, the number shows as 0.



Promote to Schedule

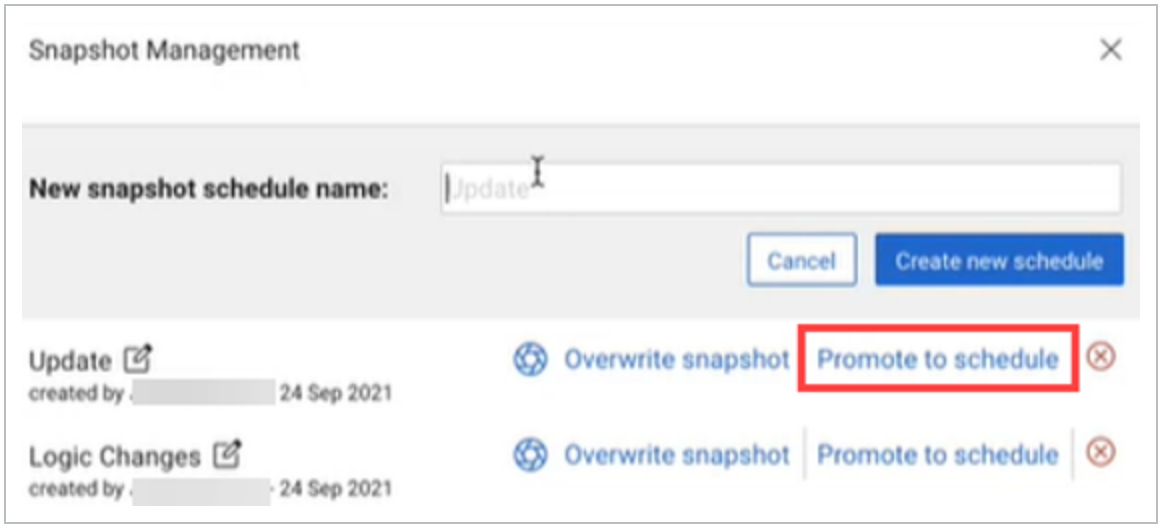
When you choose to promote a snapshot to schedule or to save a snapshot as a new schedule, the snapshot selected is then saved to the project list.

Promote to Schedule saves a snapshot to the project list. If you select **Save as a new schedule**, this option saves the current project as a copy onto the project list view as a new schedule.

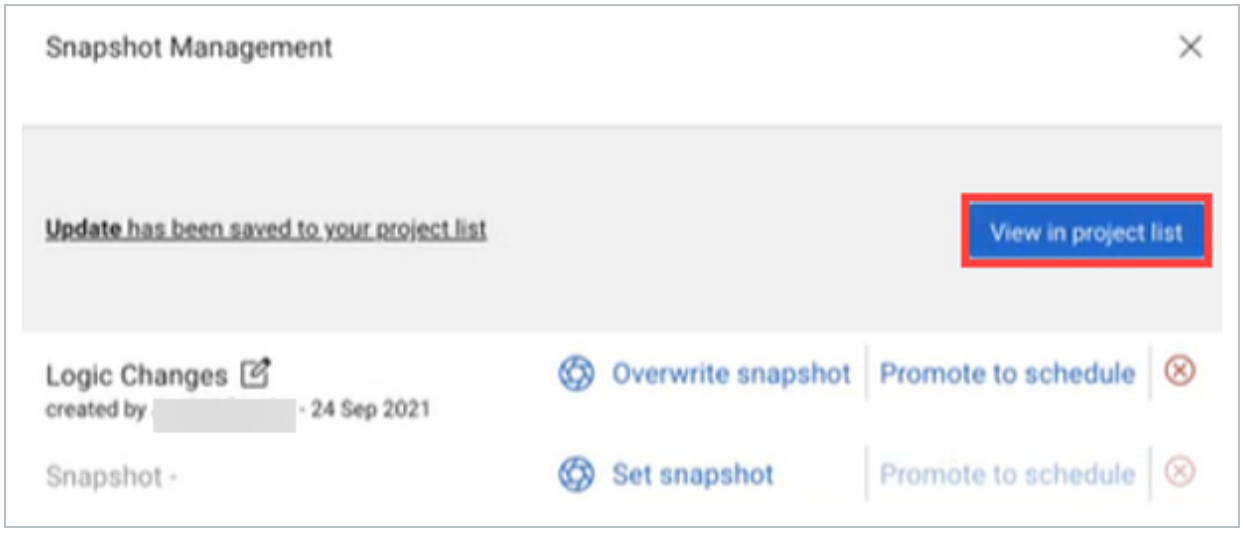
The following step-by-step walks you through how to save a snapshot to the project list.

Promote to Schedule

1. In the Snapshot Management menu, click the **Promote to Schedule** button.



2. If preferred, enter a new name for the snapshot in the New snapshot schedule name field.
3. Click **Create new schedule**. The new schedule has been saved to the project list.
4. Click **View in Project List** to view the new schedule.



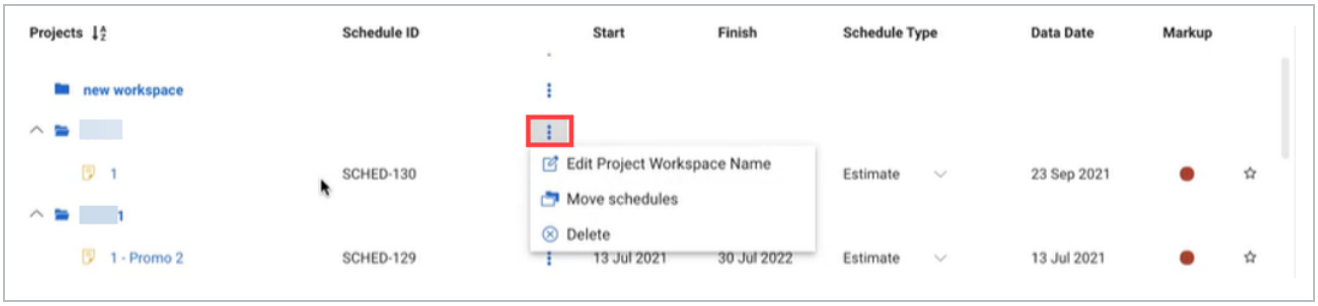
Project list view

You can organize your schedules in project folders. Project folders can be created in the project list to better organize schedules into a project hierarchy. You can list as many schedules as needed under

each project workspace.

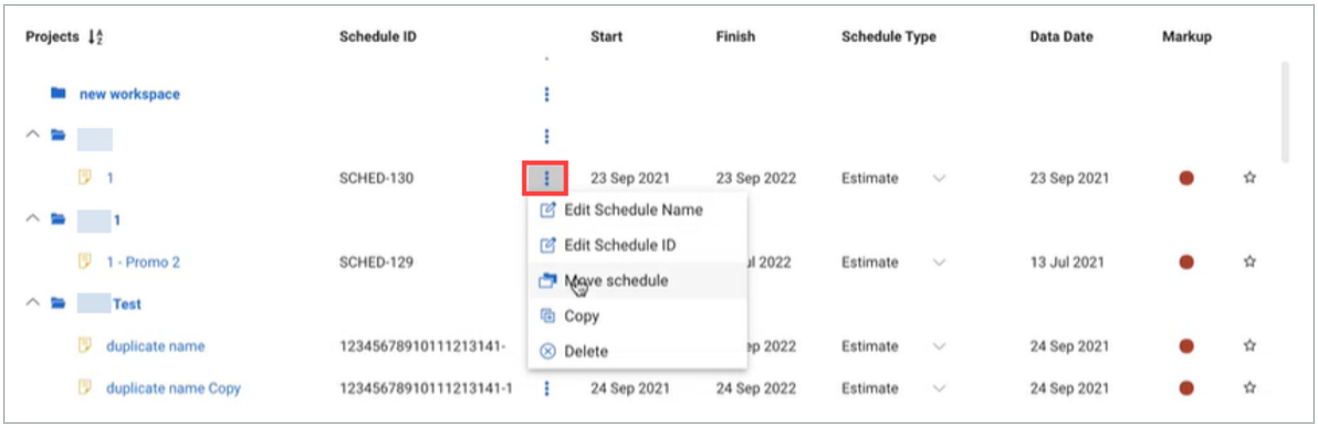
The projects can be organized alphabetically using the column header sort function. Use the options from the Action menu on folders to perfom the following:

- Edit Project Workspace Name
- Move schedules
- Delete



Use the options from the Action menu on individual schedules to perform the following:

- Edit Schedule Name
- Edit Schedule ID
- Move schedule
- Copy
- Delete



You can also edit the Schedule Type for each schedule. By default, the Schedule Type field is set to **Estimate**.

NOTE If you do not organize your schedules into specific project folders, then the schedule is placed under the None folder by default.

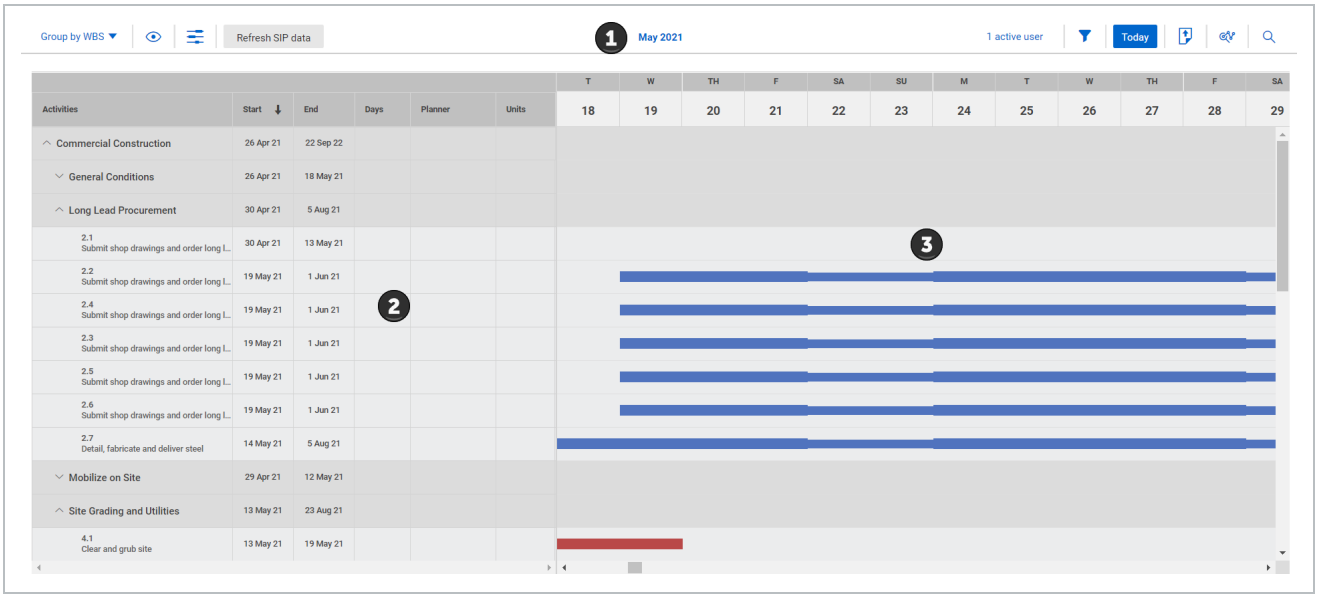
If you import a project file into Schedule, you must include the Schedule ID, Schedule Name, and a Project Workspace.

LESSON 10 – SHORT INTERVAL PLANNING

SIP Overview

Process Overview

Activities from the CPM Schedule show in the Short Interval Planning (SIP) view that are grouped, based on how the Plan view WBS is organized. Each activity can be planned daily by adding the specific steps, or tasks, to be completed. Red and blue bars represent the CPM planned duration. The green colored boxes represent the days that tasks for the step will be conducted.

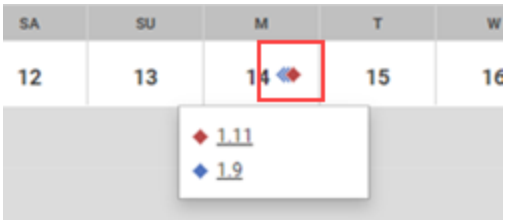


Planning Steps/Tasks

Steps are created by selecting the Add icon on the row of the activity being planned out. After steps are added, you can then select the step to fill in information (description, dates, duration, and planner) for the task to be completed.

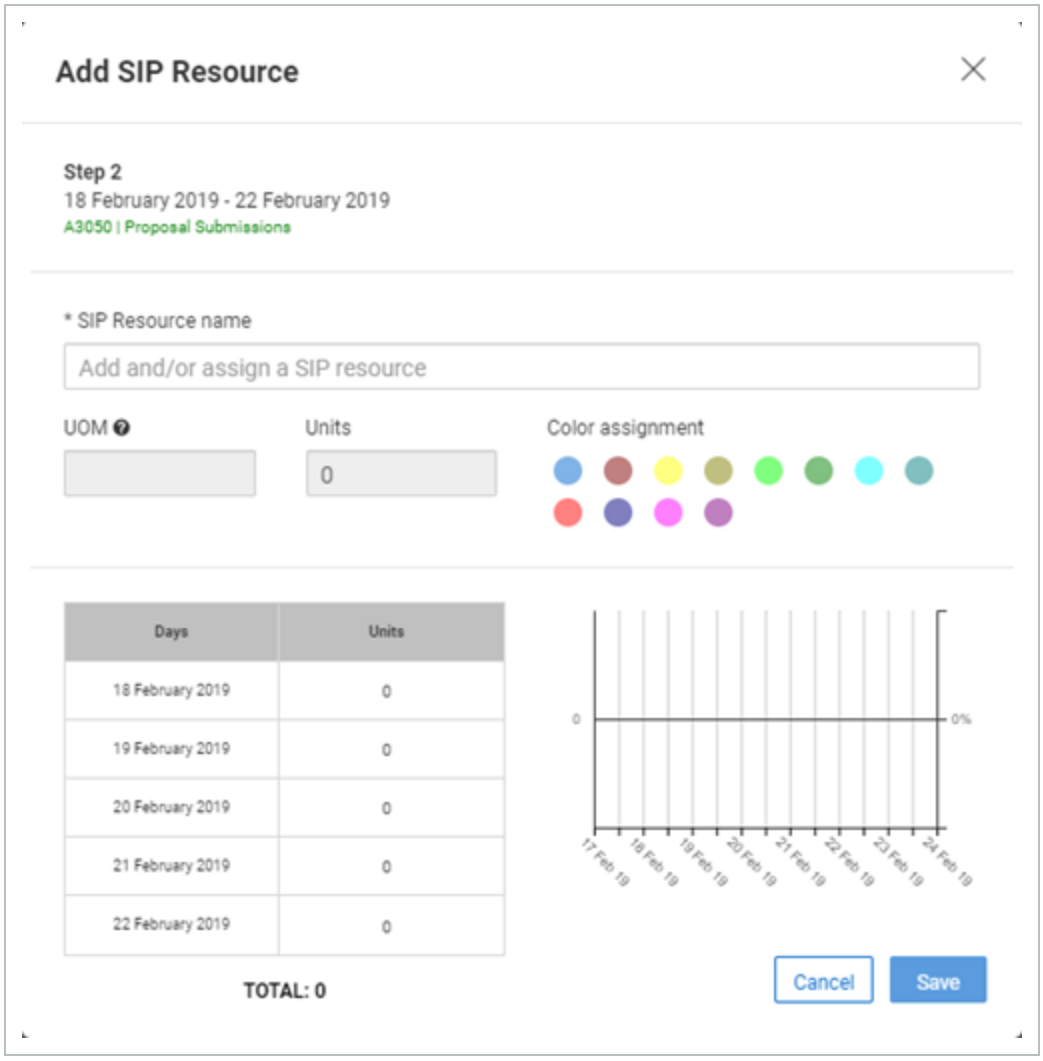
Milestones

Milestones are visually indicated on the SIP timeline and in the SIP activities. This provides clarity and reference to important dates when updating the short term plan on a project. When a blue milestone icon (◆) or a red critical milestone icon (◆) shows in the date timeline, you can click the icon to open a link and jump to the milestone in the step task chart.



Resources

When adding steps, you can assign predefined SIP resources to complete the steps or create and assign them in real time. If the resource does not exist in the schedule, enter a UoM and units, save the resource, and then apply it to steps while planning.

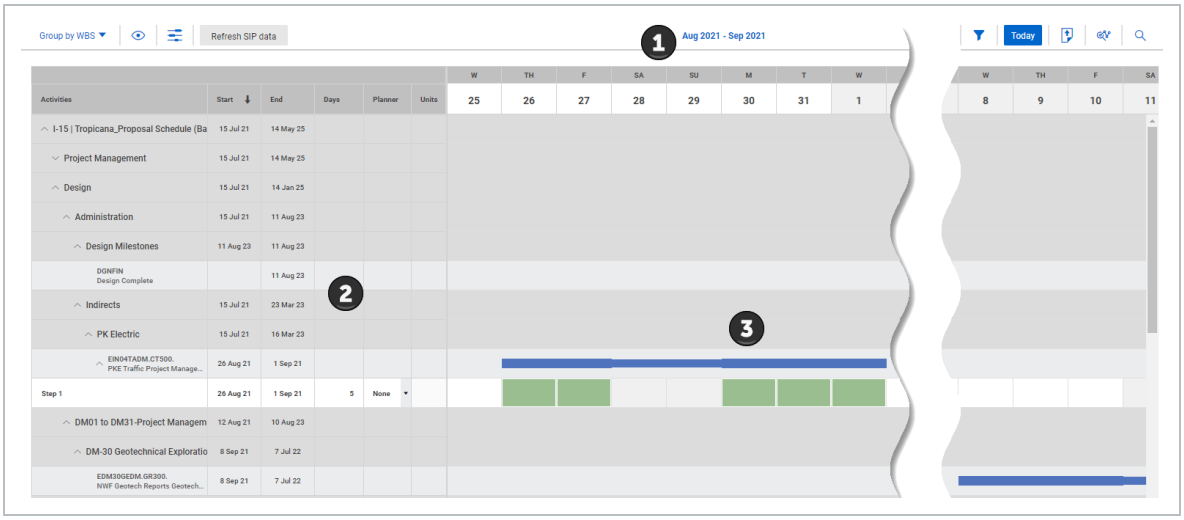


SIP General Navigation

Short Interval Planning View

When a schedule is ready for production, schedulers can move to the Short Interval Planning (SIP) view to begin planning out the day-to-day tasks involved with completing scheduled activities. This type of planning can be done in intervals of 17, 25, and 50 days based on a selected interval.

To open the Short Interval Planning view, in the project navigation menu click **Short Interval Planning**.



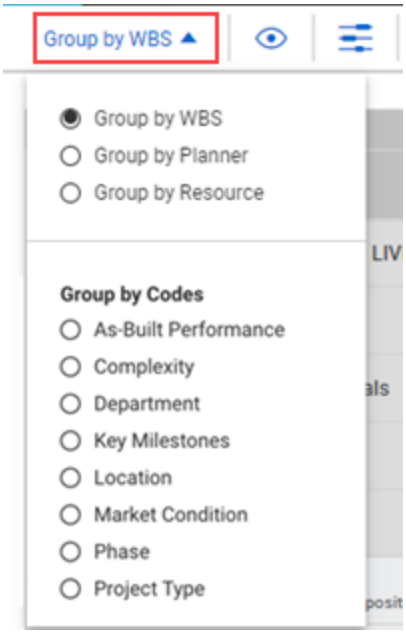
In the SIP view there are three primary sections:

1	Toolbar	Contains view adjustment settings such as, filtering, grouping, annotations, and date range.
2	Activities	Work package and activity structure are brought in from the Plan view. Tasks are further broken out in the SIP view.
3	Calendar	Shows a segment, or interval, of the schedule based on settings in the toolbar.

Toolbar – Icons, Functions, Settings

Group By

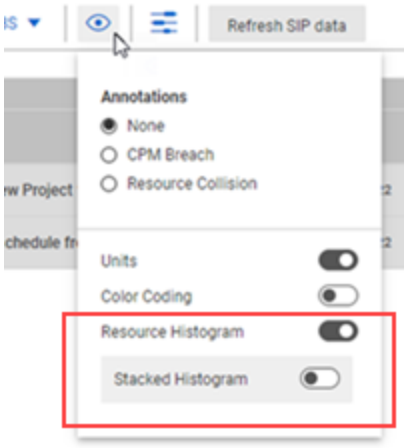
The Group by drop-down menu lets you see activities grouped together based on the option selected. This functionality provides flexibility to schedulers and execution planners in how they want to organize and assess tasks, resource utilization, and activity progress. You can also group activities and task by codes when knowledge tags are used on the project.



SIP Functions

Description	Function
View options	Select metrics, annotations, color coding for the view, and resource histrogram.
Detail level	Select the level of detail shown in the Activities section.
Filter	Opens the filter function to set parameters for the activities and tasks that show in the view.
Export	Export the current view to an Excel spreadsheet.
Zoom level	Sets the date range interval shown in the calendar.
Search	Search and find a specific task or step.

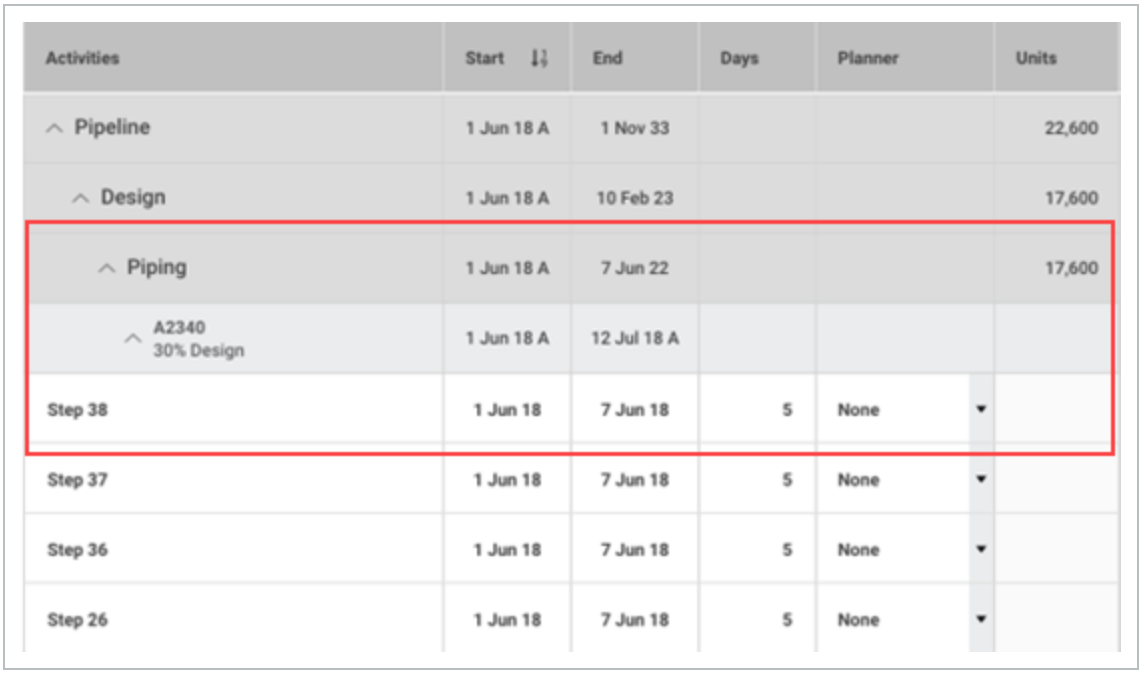
The SIP resource histogram lets you perform resource management at a short-term plan level that gives you another level of granularity when analyzing resources. The SIP resource histogram shows the assigned SIP resources for the project with functionality like the Plan view resource histogram. In the SIP view, click the **View options** icon, and then select **Resource histogram**.



You can choose to view a single resource or select **Stacked Histogram** to show all SIP resources assigned to the specific date. You can also resize the grid and histogram areas to show more or less of the date time line.

Activities – Steps, Icons, Functions

In the Activities section, Schedule activities from the CPM are shown. Each of these activities can be broken into steps or tasks for more detail when planning field execution.



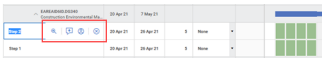
Activities	Start	End	Days	Planner	Units
Pipeline	1 Jun 18 A	1 Nov 33			22,600
Design	1 Jun 18 A	10 Feb 23			17,600
Piping	1 Jun 18 A	7 Jun 22			17,600
A2340 30% Design	1 Jun 18 A	12 Jul 18 A			
Step 38	1 Jun 18	7 Jun 18	5	None	
Step 37	1 Jun 18	7 Jun 18	5	None	
Step 36	1 Jun 18	7 Jun 18	5	None	
Step 26	1 Jun 18	7 Jun 18	5	None	

Planning packages and activities are shown in a hierarchy. Planning packages group activities the same way as in the CPM schedule. Each activity line shows a planned start date, end date, activity ID, and the activity description.

When steps are defined, they show as a subordinate of the activity. An overview of the step details are noted that includes, start date, end date, duration, planner, and quantity.

To create a new step, click the **Add** icon. A step is created to input task details.

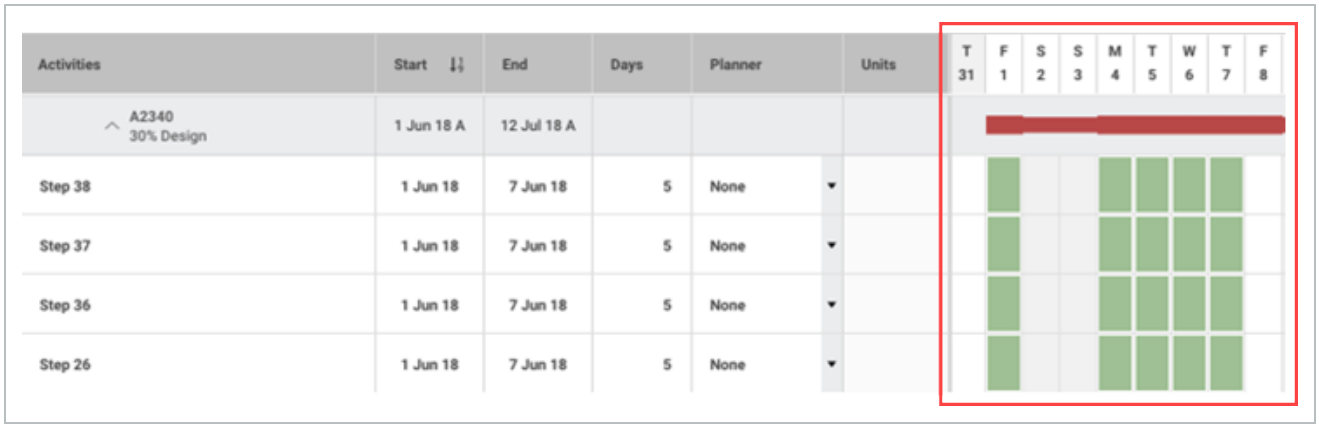
Hover over the step to show the available Action icons.



- **Zoom to start** moves the Gantt chart to one day prior to the step start date.
- **Add comment** opens a text box where you can type text and save a comment.
- **Add SIP resource** opens a SIP resource window that lets a planner assign an existing SIP resource or create a new SIP resource that can have units assigned to it.
- **Remove step** that when selected, deletes the step.

Calendar – Views, icons, functions

The Calendar date range is adjusted in the header of the SIP view by selecting the Zoom level icon. In the calendar, there are two primary indicators, the blue and red CPM schedule activity bars, and the colored step bars.



The blue and red CPM schedule activity bars represent working days and non-working days. The thicker segments indicate working days in the activity's calendar and thinner segments are non-working days.

The colored step bars are the days that step is being worked. As a Planner you have the ability to click and drag the bars along the timeline to adjust the start date and end date of the step, and add or delete days for the step.

Weather Settings

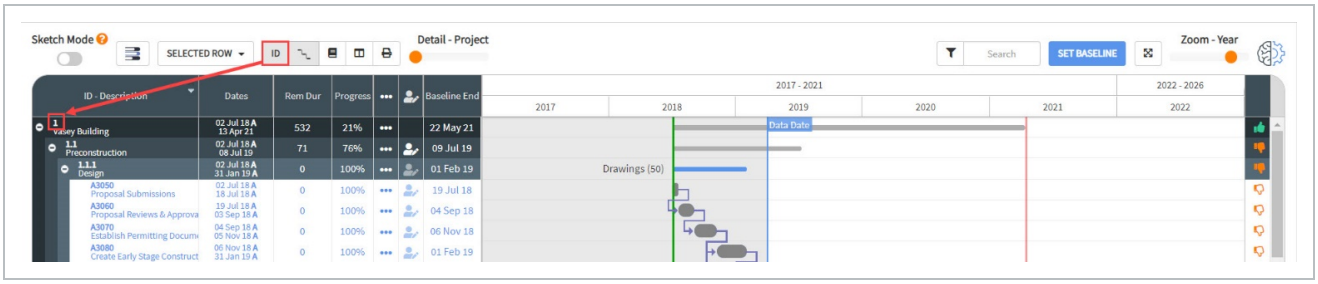
InEight Schedule has built in functionality to pull in weather data when a project location has been set up in Project Settings > **Project configuration**. When this function is setup, the weather shows in the date column header for the current day and a forecast for the next seven days.

You can click the weather icon to open the selected day's weather forecast. This data is powered by Open Weather.

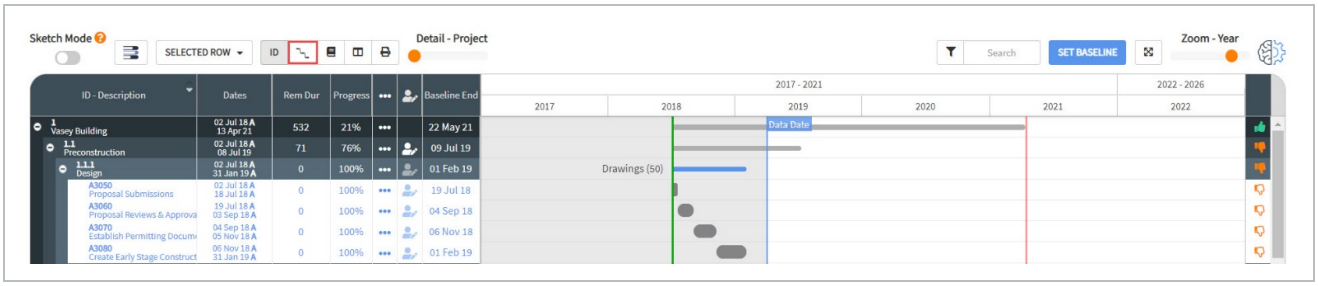
LESSON 11 – USER INTERFACE

Show/Hide Logic, WBS

From the plan project view from the 1st level drop-down menu within a project, click on the **ID** icon to show or hide WBS Codes.

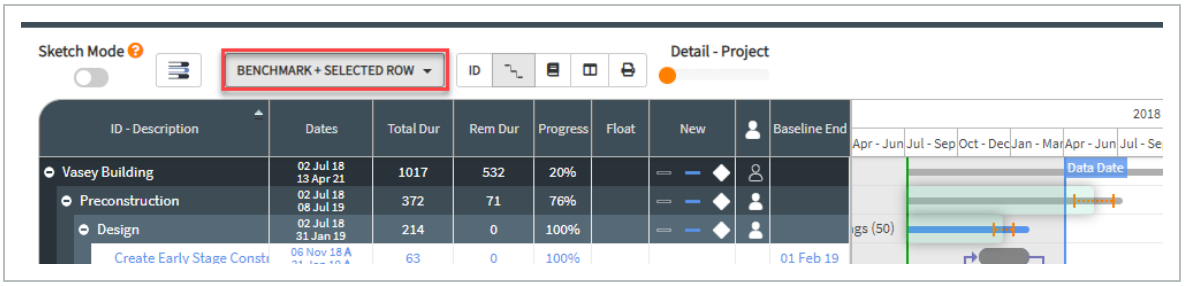


Click on the **Logic** icon to show or hide logic relationships.

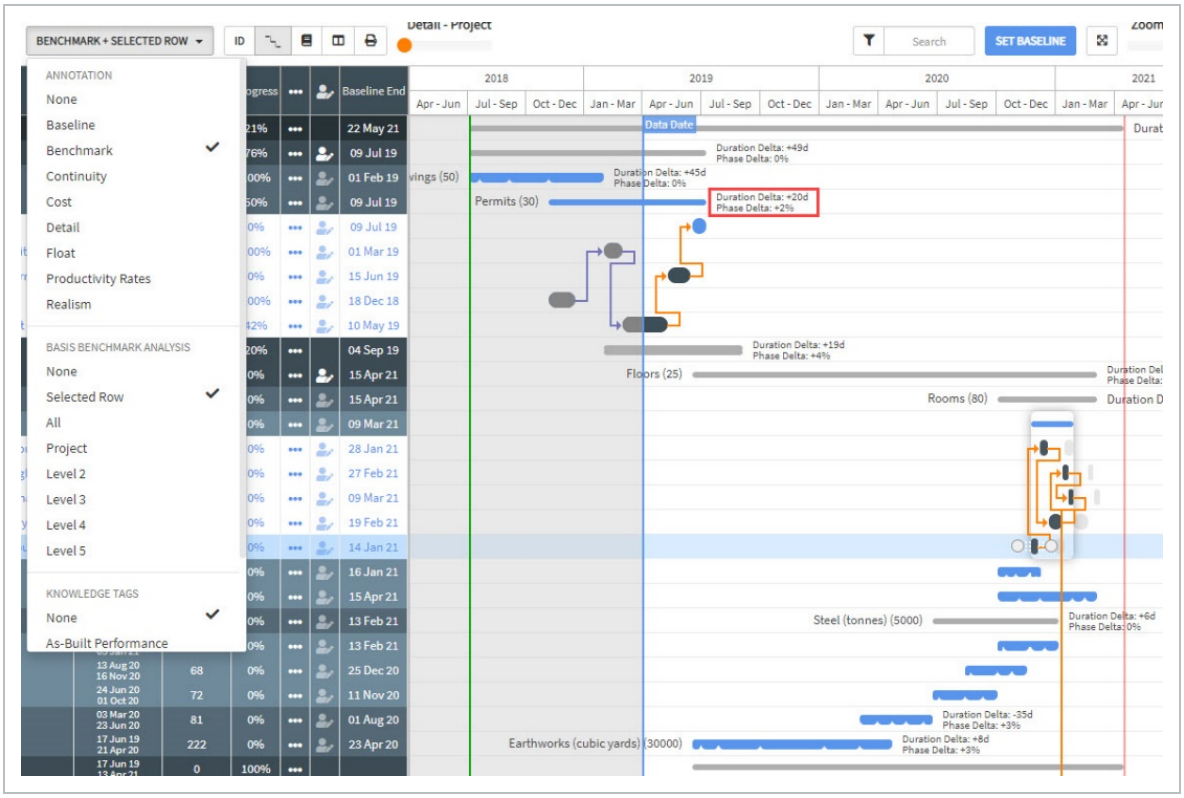


Annotations

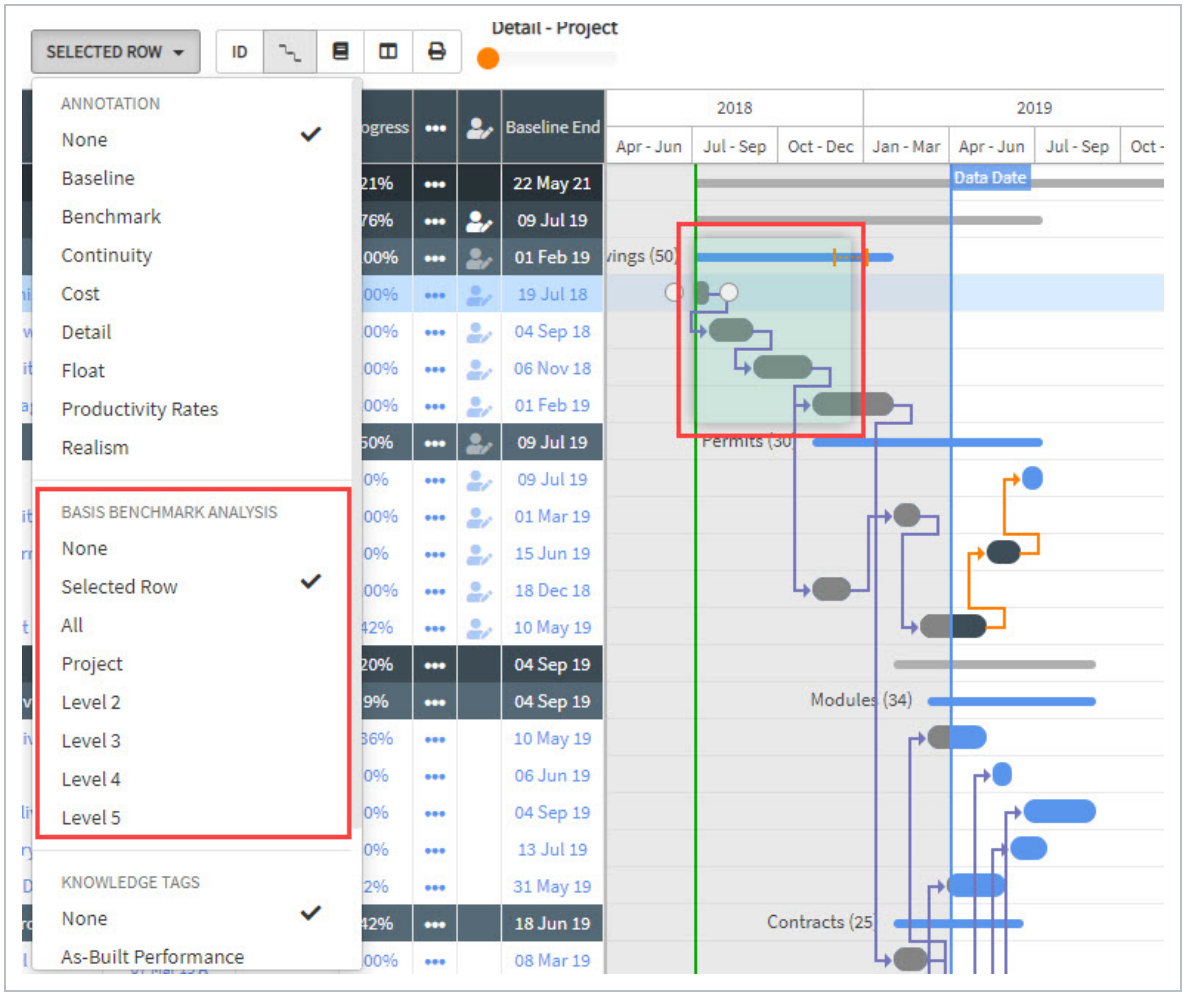
From the plan project view from the first level drop-down menu in a project, click the **Annotations** drop-down menu.



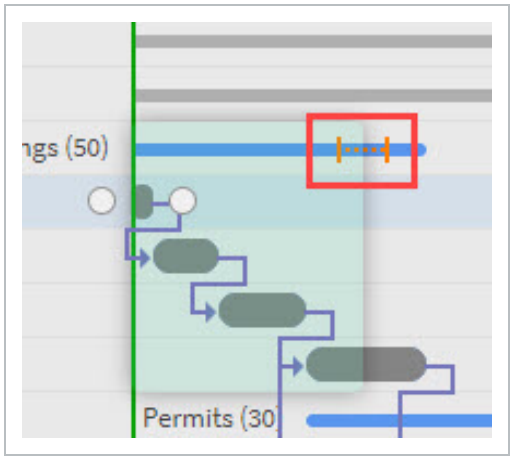
From here, Annotations can be changed by clicking the various options, which will update the information displayed on the Gantt Chart.



The Benchmark Analysis options can also be used to change what level or WBS elements the phase windows appear.



The phase window indicates the time period that the benchmark falls within in the Knowledge Library project, conformed to the current project using the current project's start date and knowledge tags normalizers. For items that have the phase window showing, there is also a set of brackets indicating a range that the complete date of a summary WBS element is expected to fall within.



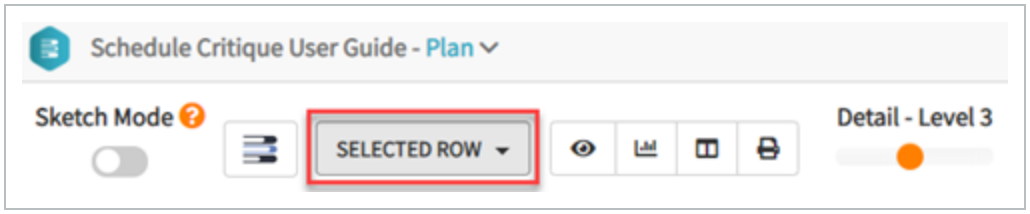
This is based on the % of tolerance defined in the project settings, the start date of the summary WBS in the current project, and the duration of the benchmark from the Knowledge Library.

Schedule Critique Overview

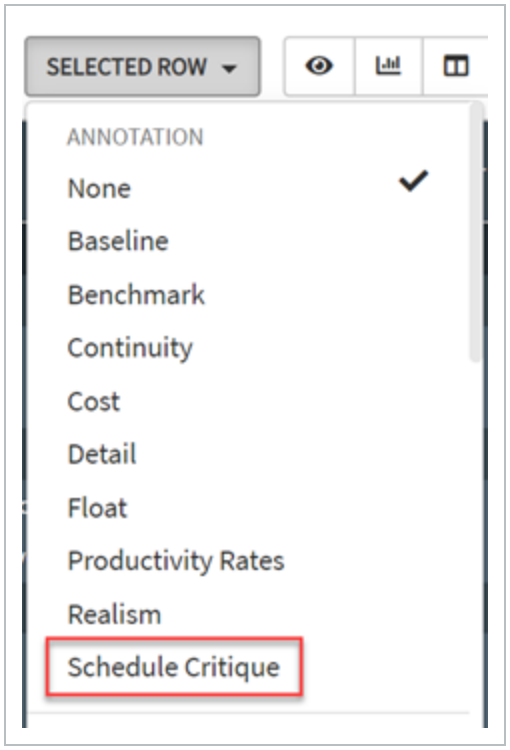
The **Schedule Critique** annotations and filters are available in the Plan view in Schedule. These functions aid schedulers in quickly identifying and isolating potential concerns with the current schedule logic.

Toggle Schedule Critique Annotations On / Off:

1. Start from the plan view of a project and select the 1st level drop-down menu.



2. Under the Annotation section select **Schedule Critique**.



3. Once selected, the following icons will populate in the Gantt chart, representing potential logic and schedule concerns. These icons are detailed in the table below:

Icon	Description	Definition
	Missing Predecessor	The activity does not have any predecessor logic links and is not at the start of the project.
	Missing Successor	The activity does not have any successor logic links and is not at the end of the project.
	Lead or Lag	Predecessor and / or successor logic links contain lag.
	Insufficient Detail	The activity spans more than 10 % of the overall project duration.
	Incoming Bottleneck	The activity has 3 or more predecessor logic links.
	Logic Complexity	The activity has 3 or more predecessor logic links and 3 or more successor logic links.
	Hard Constraint	The activity uses a Must Start On / Must Finish On constraint.
	Negative Float	Total float is less than zero.

NOTE The color of each icon represents the criticality of a critique. Blue icons are typically not desired as they often impede the flow of a schedule. Orange icons are considered with more caution, as these have a higher potential for schedule delay. Red icons identify activities of serious concern.

Missing Predecessor or Successor

A **Missing Predecessor or Missing Successor** indicator appears when an activity does not have a predecessor or successor activity associated. Adding a predecessor or successor activity resolves this critique.

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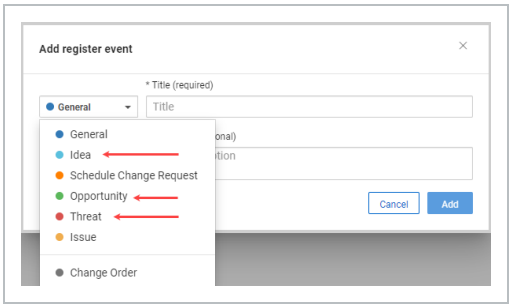
LESSON 12 – REGISTER ITEMS

Project Register Events

The Project Register houses all events pertaining to the project. These events are used to notify schedulers of potential project ideas, changes, opportunities, threats, and issues.

Event Types

There are several Event types available in the Project Register. Of the available events, the following three are focused on: Idea, Opportunity, and Threat.



Idea

Ideas are events that do not necessarily yield a positive or negative schedule impact. Often, ideas are schedule notes regarding an activity. They might have a favorable or unfavorable outcome in the schedule and can be replaced with a Threat or Opportunity event if circumstance dictates it.

Opportunity

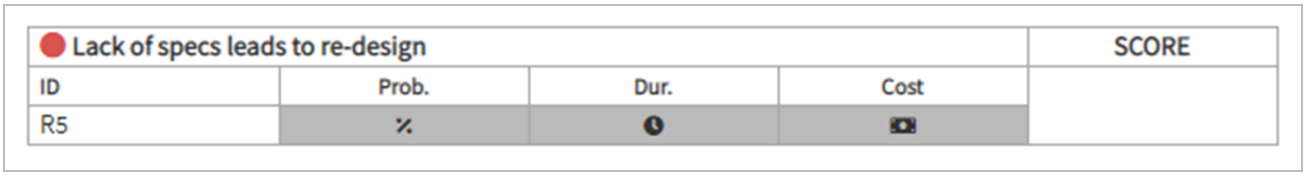
Opportunities are events with the potential to yield a favorable schedule outcome such as time savings or cost reduction.

Threat

Threats are events that may occur, posing possible schedule delays or increased cost on the project.

Event Values

When assigning an event to an activity, there are three additional fields to be populated depending on the type of event: Probability, Duration and Cost. These fields vary from event type to event type and not always need to be filled out. However, it is in the best interest of the team input as much information as possible for the Risk Analysis to be conducted.



- **Probability**: Likeliness of the listed event to occur and impact the schedule.
- **Duration**: Estimated days increased or decreased due to the event
- **Cost**: Estimated cost associated with the event
- **Score**: System generated value based on the Probability, Duration, and Cost Factors involved

Events Library

In the Project Register Events Library, all events on the project and from the Knowledge Library are listed. These events can be selected and assigned to activities.

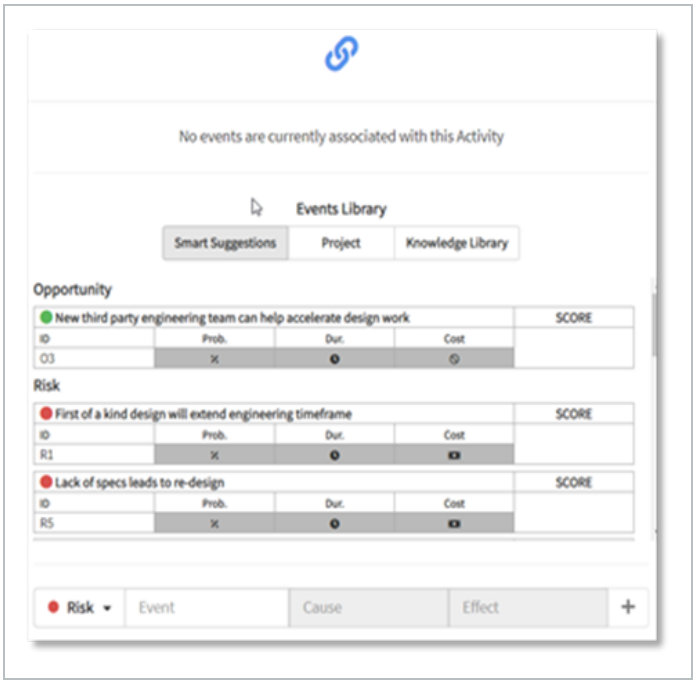
If a new event is to be created, the Project Register has an input field for new events.

Create an Event

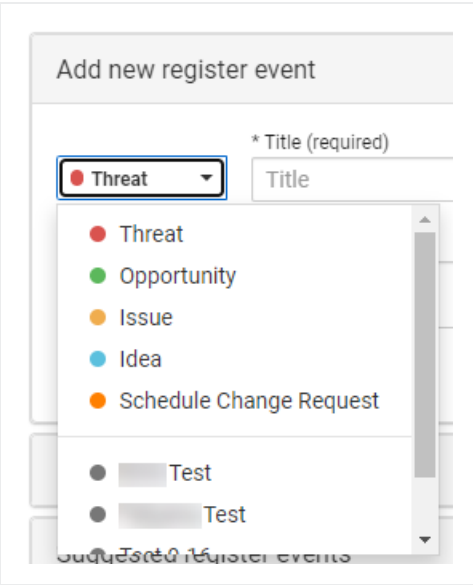
1. To open the Project Register Events Library from the Markup Screen, click on the **Sticky note** icon of the activity or planning package the event will be associated to.

   NOTE This icon might be red or yellow depending on the markup provided.

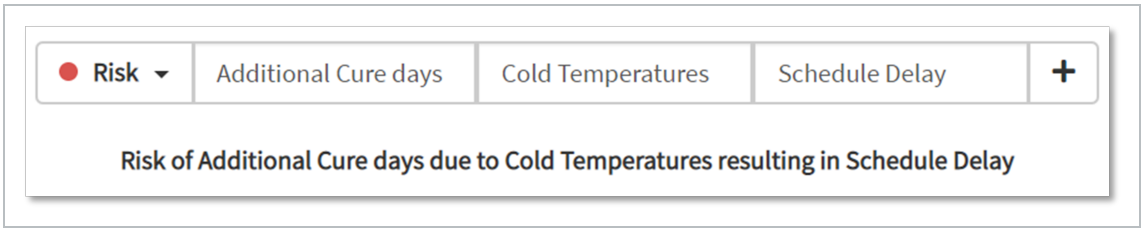
2. A new window opens with the Events Library.



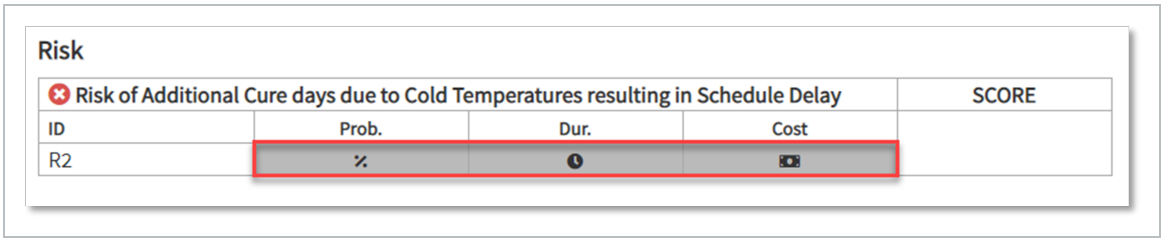
3. At the bottom of the Events Library is the **Event Creation** function.
4. Click the **Event Type** drop-down menu to select from Risk, Opportunity, Issue, Idea and Schedule Change Request.

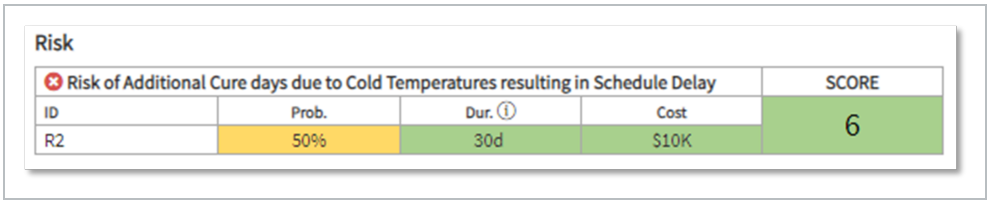


5. Fill out the Event, Cause, and Effect fields. As these fields are populated, a summary of the event is shown below.



6. Click the **Add** icon.
7. Your selection now appears at the top of the window. Fill out the remaining fields (i.e. Risk - Probability, Duration, and Cost).





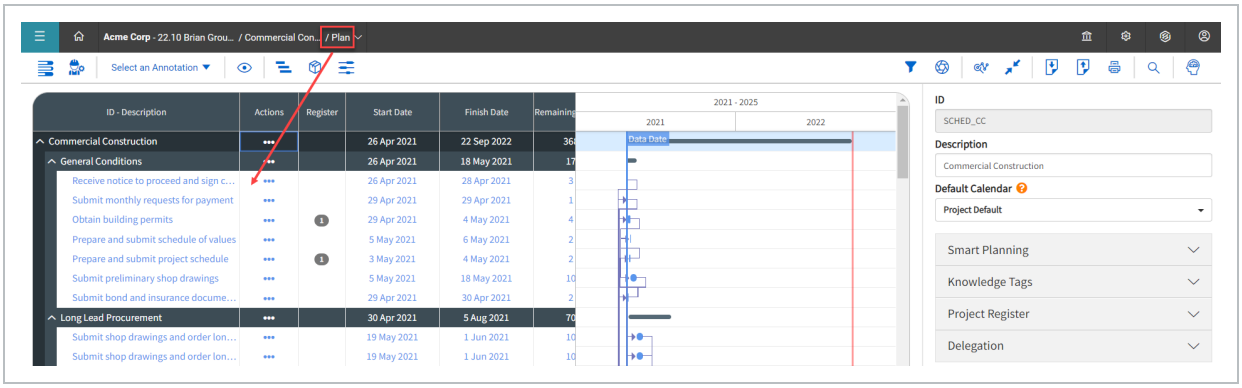
8. Close when finished.

Assign Register Items

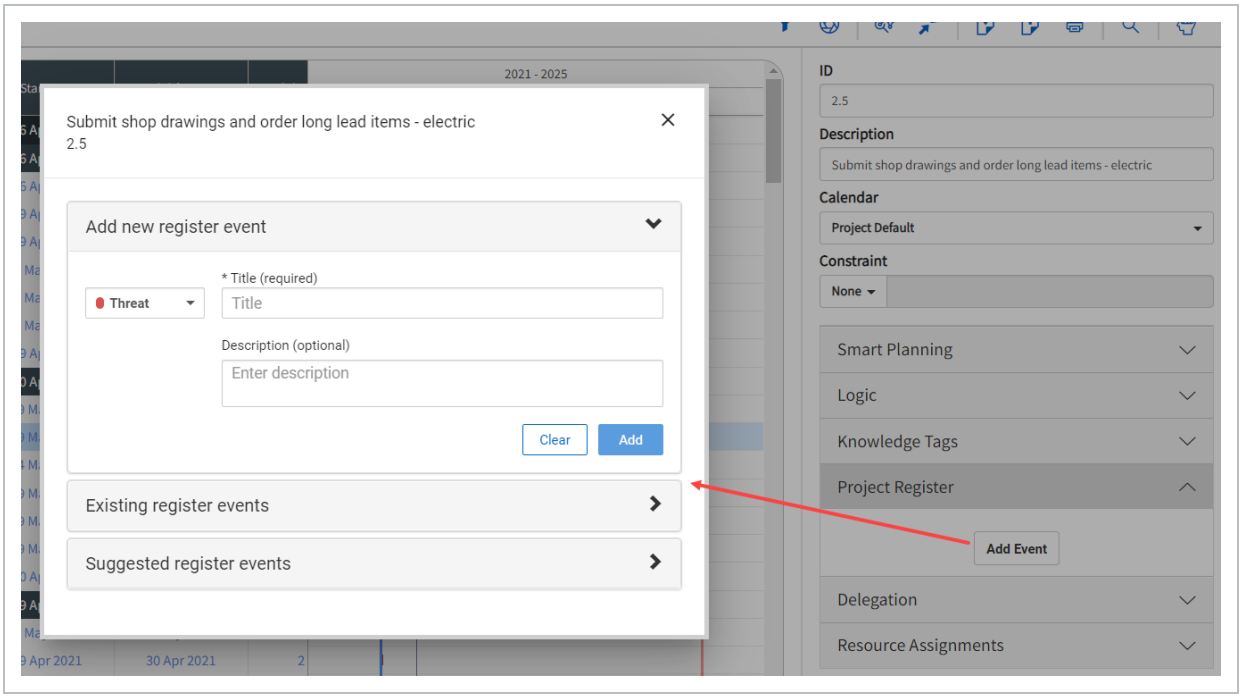
Register items consist of risks, opportunities, change orders, and any other qualifiers that your organization has defined.

Assign a Register Item

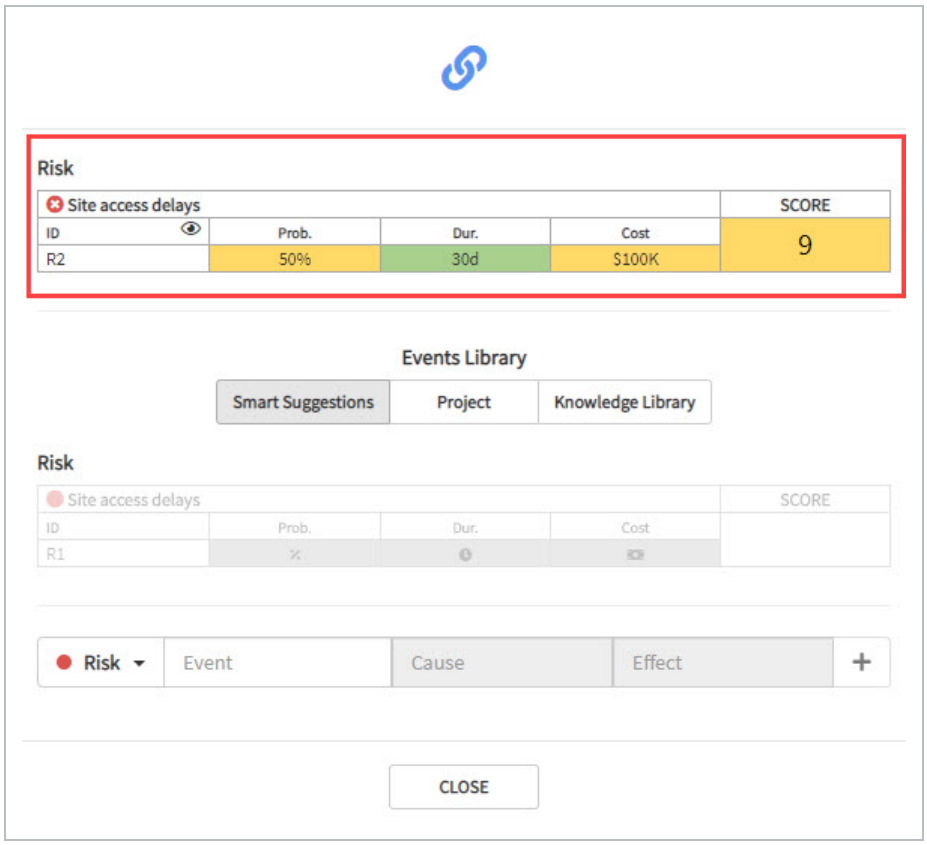
1. Go to the plan project view from the first level drop-down menu in a project, and then select a WBS element.



2. In the rightmost panel, expand project register, and click **Add event**. This causes a dialog box to pop up, showing any currently existing register items. New items can be added by selecting the item type, and typing in the event, cause, and effect.

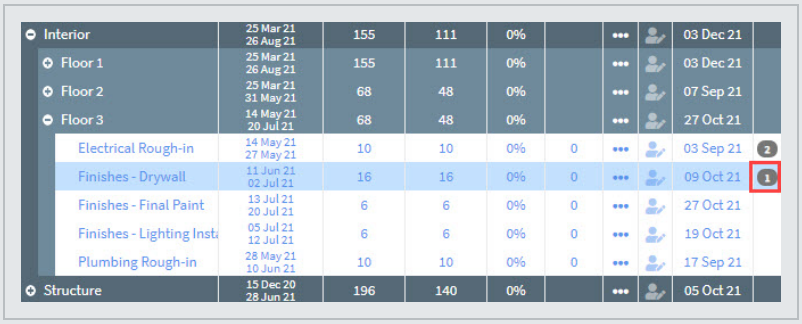


3. Press the icon to add the register item to the WBS element. Enter a probability, schedule impact, and cost impact to quantify the event. The available quantifiers are set up by your administrator based on the register item type.



- An item has now been added to this WBS element.

NOTE When the Register column is in the gantt view there is an indicator on the line, telling other users that the WBS element has register items associated with it.

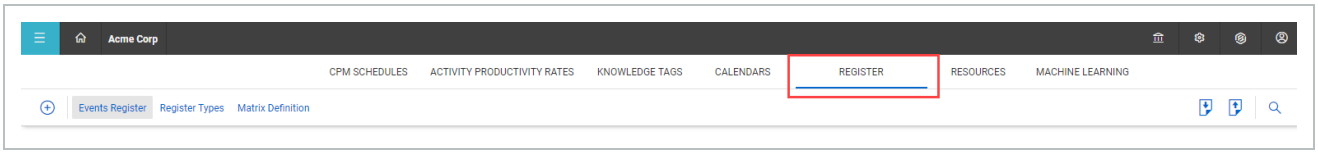


LESSON 13 – KNOWLEDGE LIBRARY

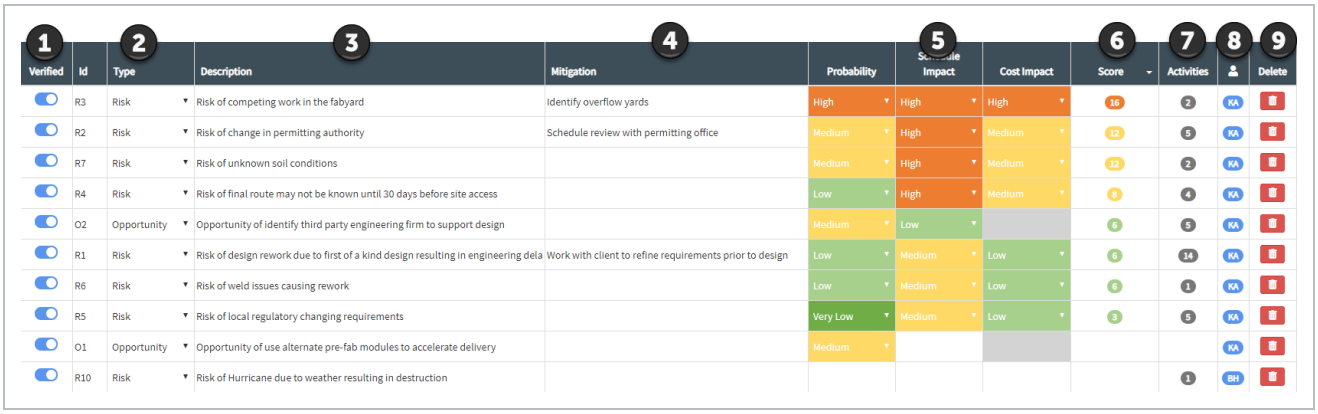
Knowledge Library Register Items

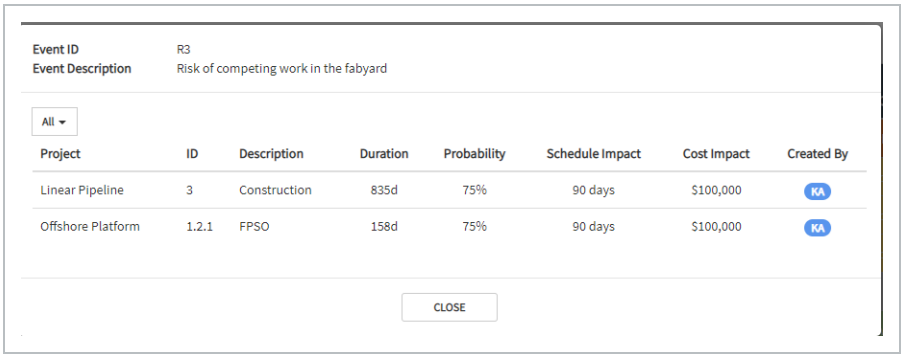
Events Register

Knowledge Library Register Items can be viewed by accessing the Knowledge Library, and clicking on the **Register** tab



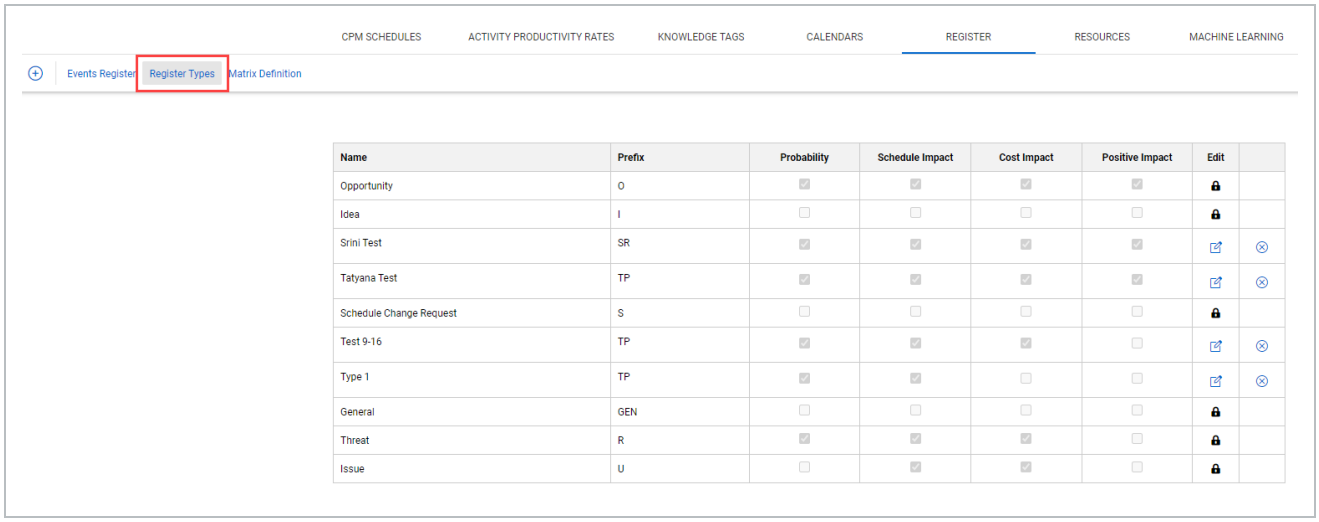
From the Knowledge Library, items can quickly be edited using the following fields:



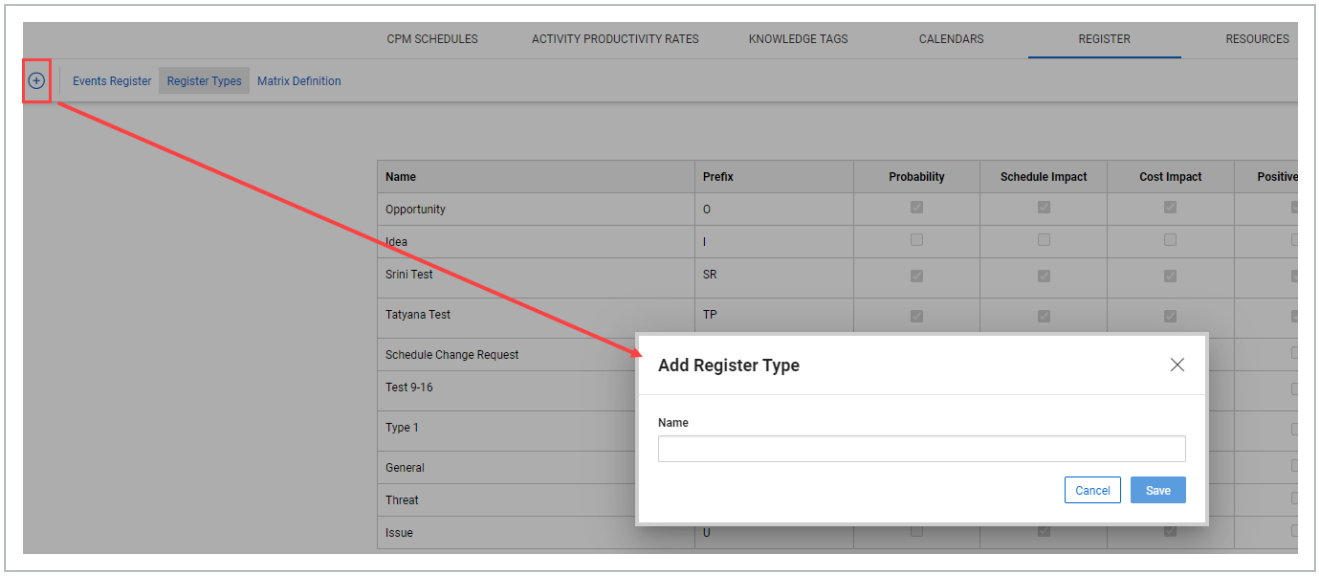
Name	Description
Verified	Items can be either created directly in the Knolwedge Library, or pushed from individual projects. Items pushed from projects shows here as unverified, and are not used as Smart Suggestion options in other projects until verified.
Type	This describes the type of register item, such as Risk, Opportunity, and Action Item.
Description	Items descriptions can be edited at any time.
Mitigation	Mitigation strategies can be captured here.
Probability/Schedule Impact/Cost Impact	Probability and impact can be reviewed and edited in a centralized view. The scoring here becomes the default score when the risk is applied to a project.
Score	Based on the probability and impact of items, a score is automatically generated.
Activities	The number of times the register item appears schedules are shown here. Specific Project and WBS element appearances can be reviewed by clicking on the number. You can select the All drop-down to filter the list by project. 
Created By	The name of the user that raised the register item.
Delete	Deletes the item.

Register Types

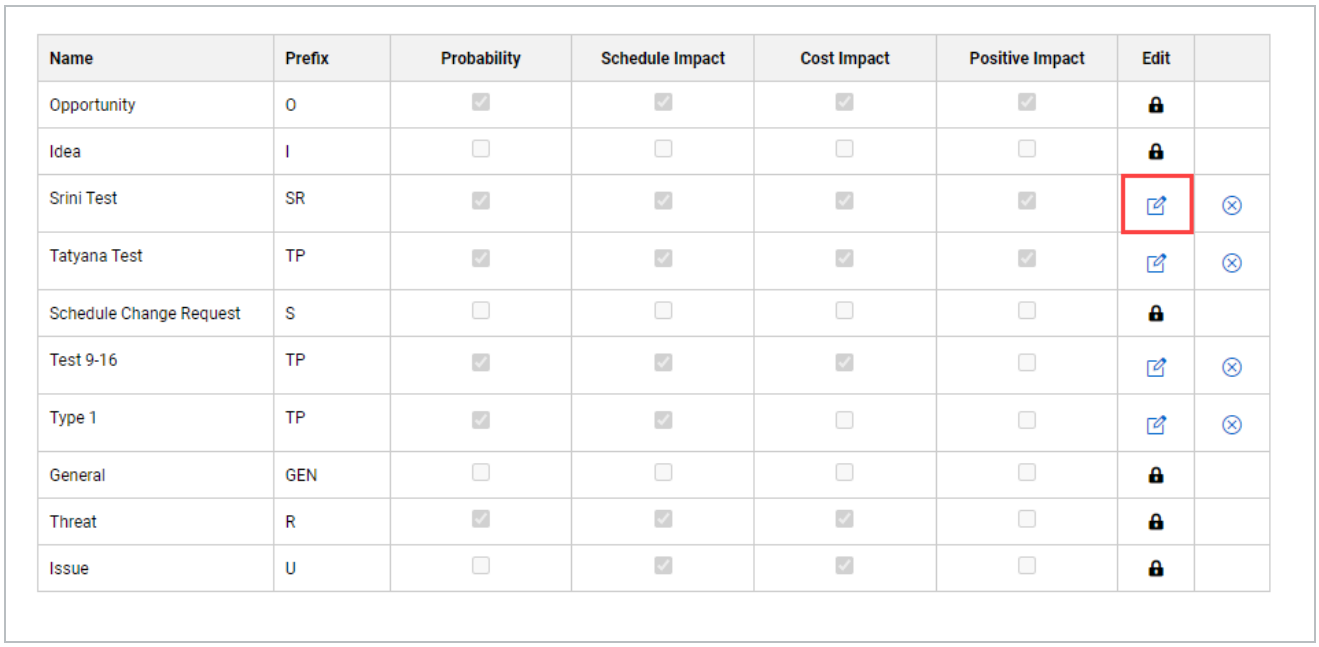
Additional Register Types can be defined by selecting the **Register type** tab.



Click **Add Register Item** to create a new register item with a custom defined caption and code prefix.



Click the **Edit** icon to define which qualifiers apply to that particular item.



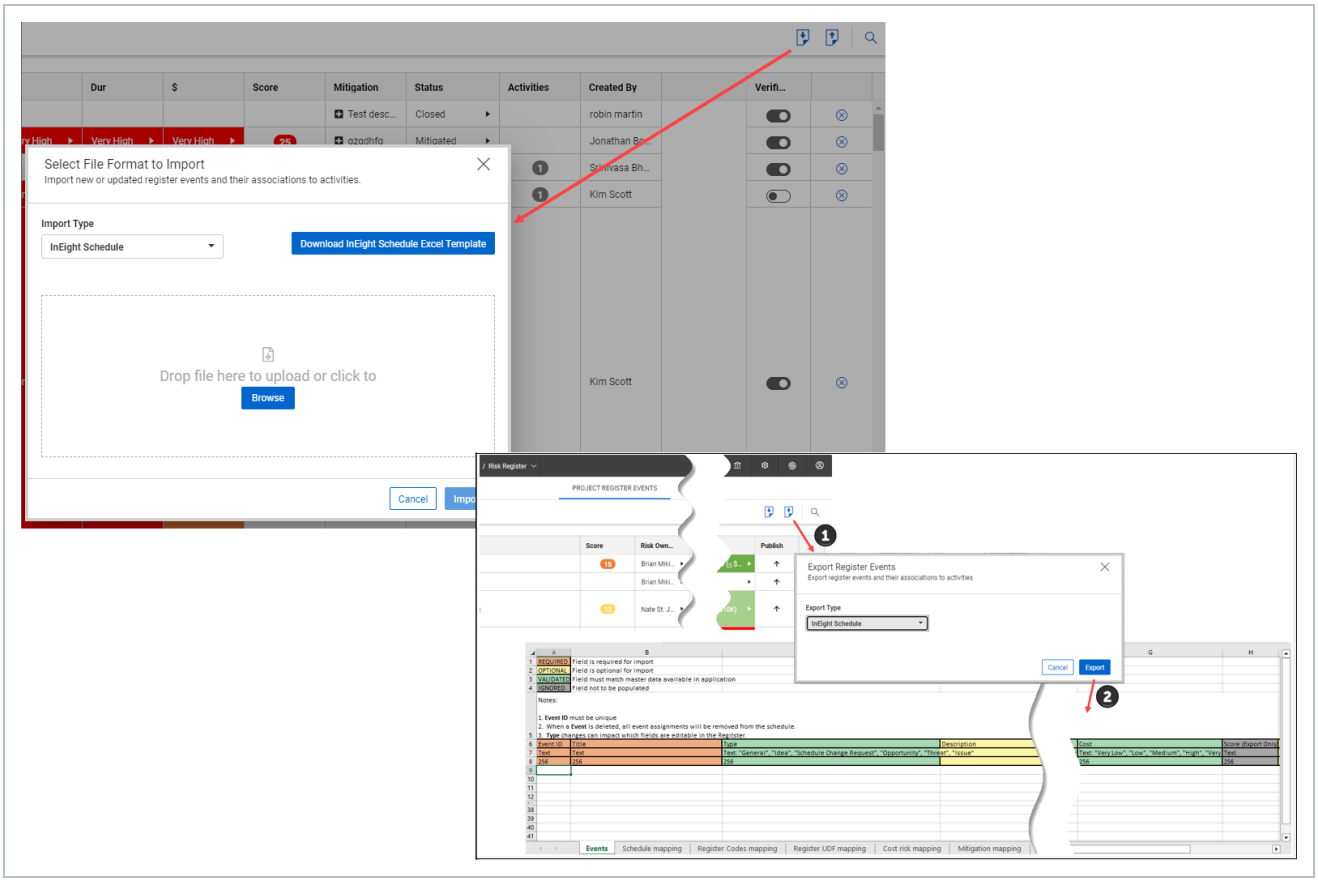
Name	Prefix	Probability	Schedule Impact	Cost Impact	Positive Impact	Edit	
Opportunity	O	☑	☑	☑	☑	🔒	
Idea	I	☐	☐	☐	☐	🔒	
Srini Test	SR	☑	☑	☑	☑	✎	⊗
Tatyana Test	TP	☑	☑	☑	☑	✎	⊗
Schedule Change Request	S	☐	☐	☐	☐	🔒	
Test 9-16	TP	☑	☑	☑	☐	✎	⊗
Type 1	TP	☑	☑	☐	☐	✎	⊗
General	GEN	☐	☐	☐	☐	🔒	
Threat	R	☑	☑	☑	☐	🔒	
Issue	U	☐	☑	☑	☐	🔒	

Import and Export

You can import and export risks in the project register.

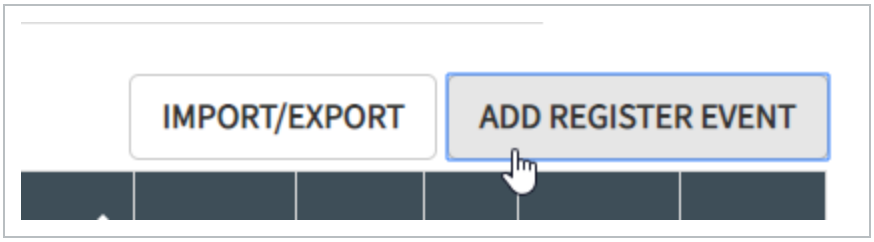
There are options for Oracle PRA – Pertmaster as well as Deltek Acumen. These are Excel formats that can also be generated outside of any tool and used for importing into Schedule.

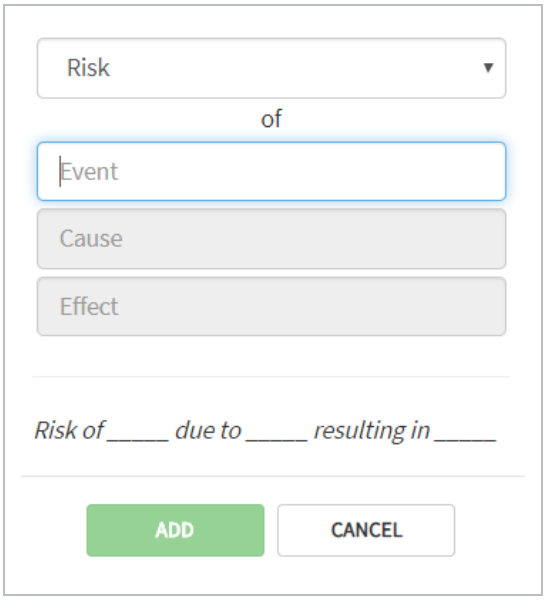
The export file closely reflects what is exported from the Schedule plan view. A color-coded key has been added in the upper left corner in the export file that shows you the required, optional, validated, and ignored records. Additional mapping tabs are also included at the bottom of the Microsoft Excel file.



Add Register Event

You can manually add a register event to the project register. Select **Add Register Event** and define the event type and description.





Filter

Select the **Filter** icon to enable filtering for the register view.

Matrix Definition

Qualifiers applied to register items can have the Probability percentage, schedule impact, and cost impact updated to reflect your organization's preferred values. This becomes the default matrix when creating a new project.