SmartPM™ Technologies, Inc

# User Manual

**Client Service Protocol Package**

Release Version 3, Rev. 1 – Last Updated April 20, 2019

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*If you don't like reading manuals, this section is for you*

# Quick Start

- Introduction
- Logging In
- Setting up a new project
- Importing schedule updates
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- Generating The Pink Report

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# Introduction

This manual will help you get started using SmartPM™ by leading you through the steps for setting up and importing a project schedule, analyzing project schedules, understanding the analysis, and navigating through the project schedule.  We will cover the following:

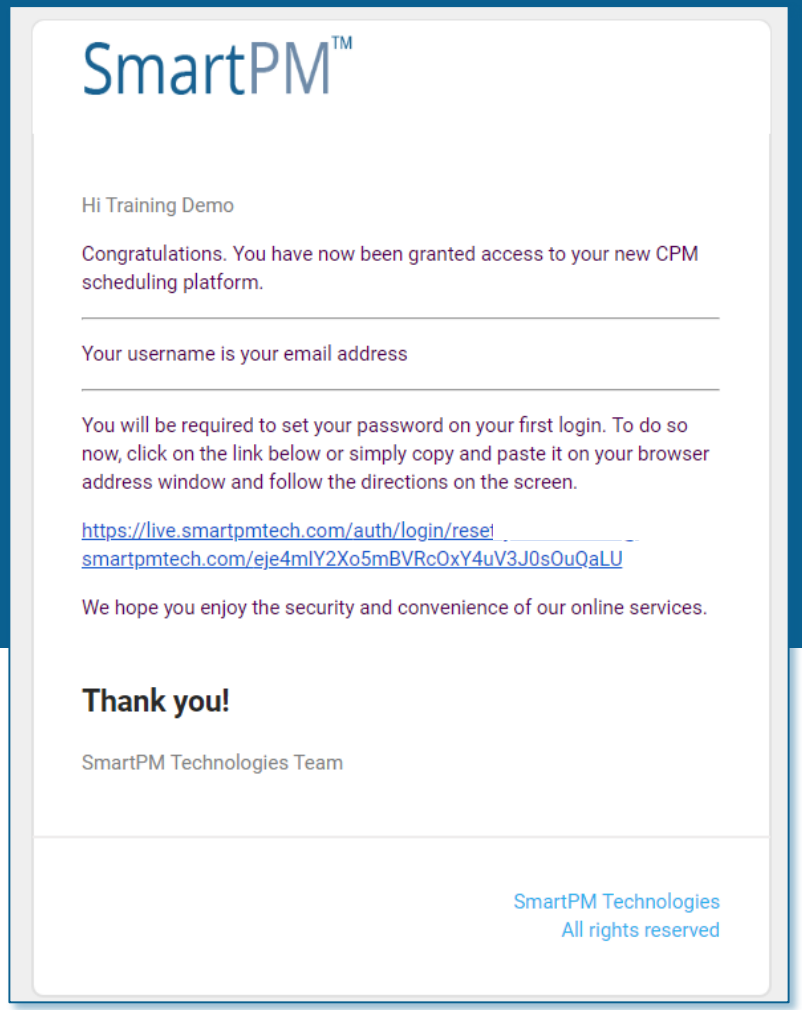
- Logging In
- Setting up a Project
- Loading all native schedule updates for the Project
- Running a delay analysis for insights into the Project
- Reviewing Schedule Quality Index for all schedules
- Reviewing and understanding the Delay Analysis
- Reviewing and understanding the Audit Log
- Navigating the application
- FAQs and Basic Troubleshooting

# Logging In

Welcome to SmartPM™ the only cloud-based automated project schedule analytics solution that helps users to quickly and easily access critical schedule information and assess performance of their capital projects.

Congratulations, you are joining the many others who have already been harnessing the power of automated schedule analytics to help save time in analyzing project schedules, identify potential delays, and enable stakeholders to have better conversations regarding project performance.

**Now, let's get started.**



SmartPM™

Hi Training Demo

Congratulations. You have now been granted access to your new CPM scheduling platform.

Your username is your email address

You will be required to set your password on your first login. To do so now, click on the link below or simply copy and paste it on your browser address window and follow the directions on the screen.

https://live.smartpmtech.com/auth/login/reset
smartpmtech.com/eje4mlY2Xo5mBVRcOxY4uV3J0sOuQaLU

We hope you enjoy the security and convenience of our online services.

**Thank you!**

SmartPM Technologies Team

SmartPM Technologies
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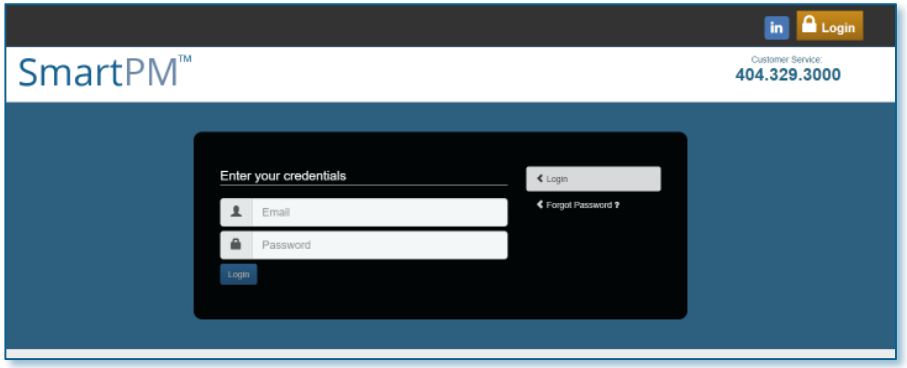
## Logging In

You should have received an email granting you access to the SmartPM™ platform. Simply click the link and you will be directed to the login homepage.




Note:
Your username is your email address. Upon logging in for the first time, you will be prompted to set your password.

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# Company Dashboard

1. If multiple companies are set up under one account, users are able to access specific companies from the drop-down.

2. Dashboard – click the Dashboard button to quickly access the Company Dashboard

3. Resources – click to access
   1. *Suggestion Box*
   2. *Customer Service Number Quick*
   3. *How-to Tutorial User Manual*

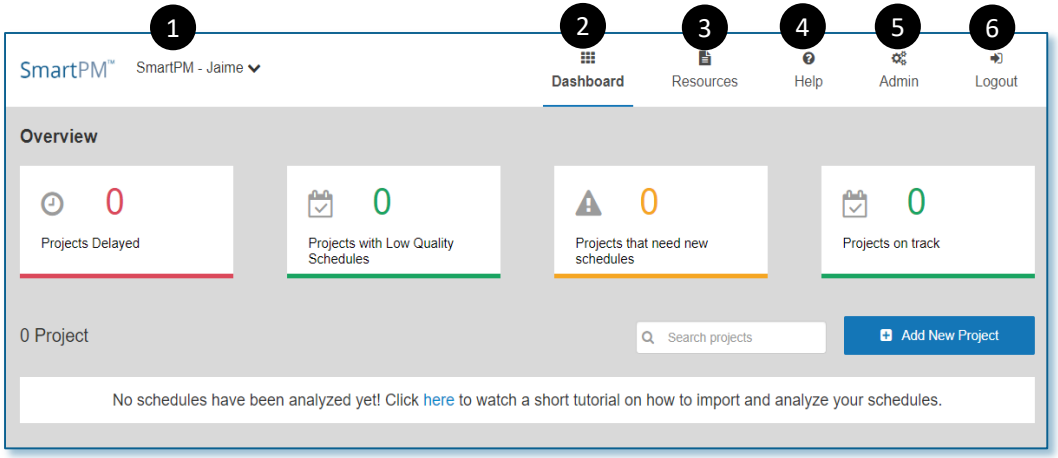
4. Help – click to access topics on SmartPM™ features and FAQs for navigating the application

5. Admin – click to access features such as:
   1. *Company account setup*
   2. *Control user functions*
   3. *Set roles and Privileges*
   4. *Adjust billing Information*

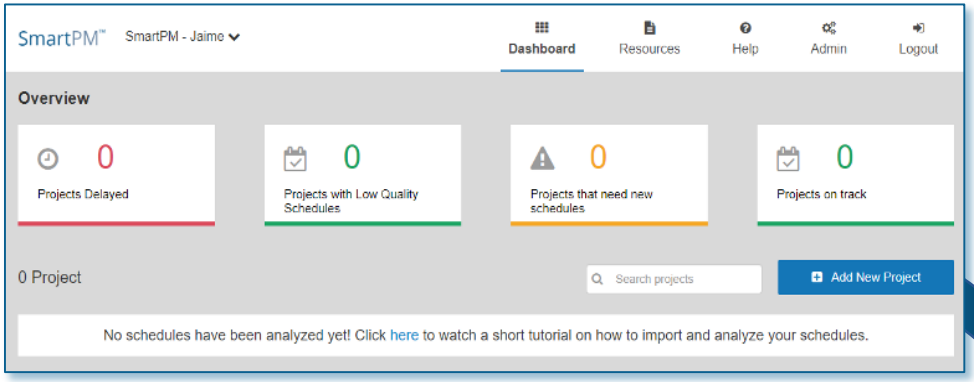
6. Add New Project – click to add a new project

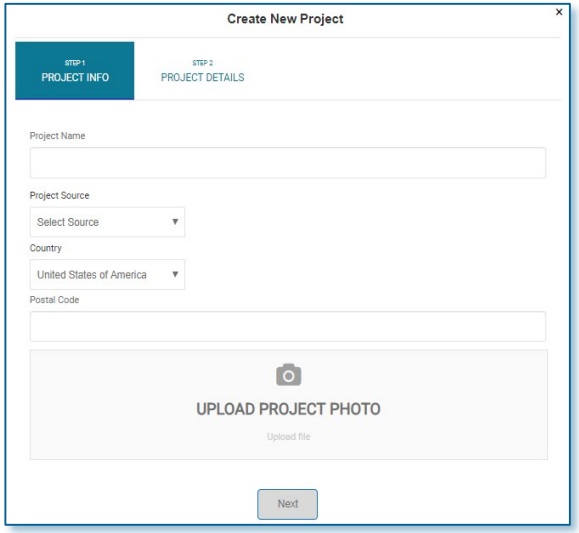
After logging into SmartPM™, users will be guided to the Company Dashboard. The Company Dashboard provides users with a complete listing of all projects loaded into the system.

**NOTE:** upon first set up, users may not see any projects until a project has been imported.



# Setting up a New Project




In order to get started, you will need to locate available official and final schedules and schedule updates for the Project you would like import into SmartPM™.

- **NOTE:** SmartPM™ only accepts native schedule files from Oracle Primavera (.xer files) and Microsoft Project (.mpp) files
- Once schedules are identified for upload, import the schedules into SmartPM™starting with the earliest data date to latest data date (e.g. chronological order).
  - ➢ **NOTE:** All Primavera schedules have a data date built in due to Primavera requirements. However, MS Project does not require a data date; therefore users will be prompted to identify the MS Project file's data date upon import.

**NOTE:** If for any reason and error occurs during an import, reach out to your SmartPM™Client Services Manager

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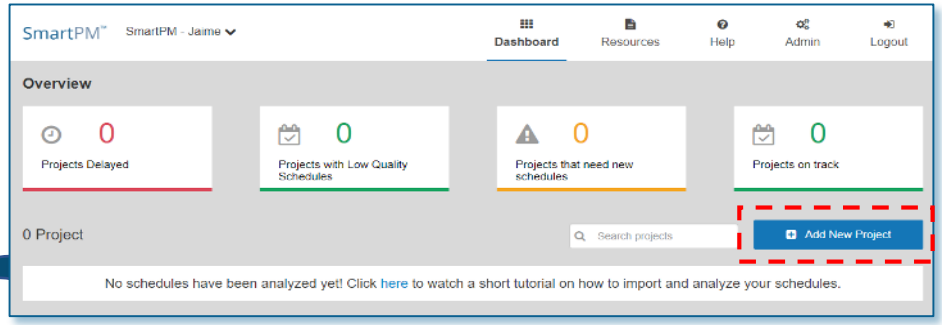
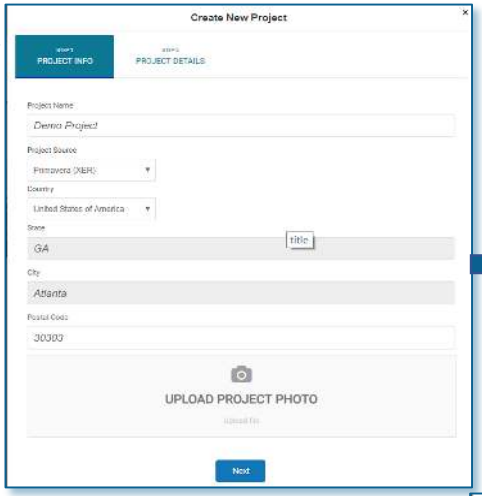
# Setting up a New Project (cont.)

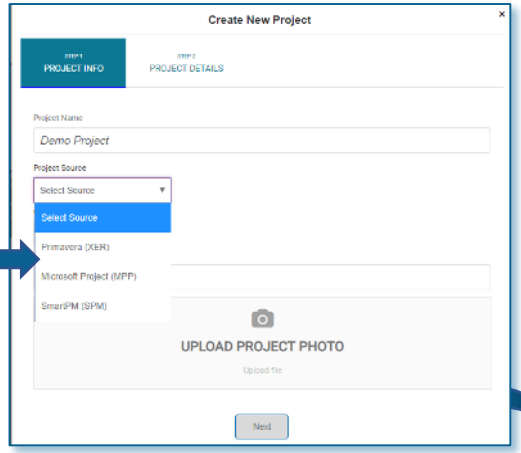
From the Company Dashboard Select “Add New Project” and select the type of schedule file you will be importing. You will then be prompted to import the Baseline schedule for the Project.




### *Step 1: Project Info Setup*

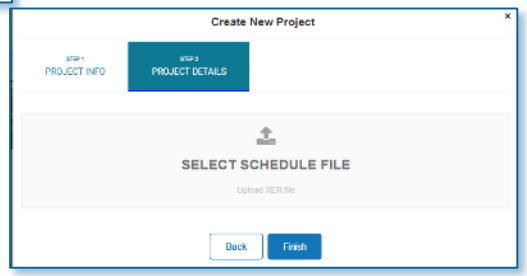
1. Give the Project a Name.
2. Select Project Source file Type (Primavera XER or Microsoft MPP).
3. Enter the Country and Zip Code where the Project is located.
4. Add an optional Project Photo by clicking on “Upload Project Photo” and locate the photo to be uploaded.
5. Click “Next” to move to Step 2.




### *Step 2: Project Details*

1. Click “Select Schedule File” and locate the schedule to be uploaded.
2. Note: If a Microsoft Project (MPP) is being imported, you will be prompted to enter the Data Date for the Baseline schedule.
3. Click “Finish”.




If an error messages appears while importing a file, see FAQs or contact a customer service representative.

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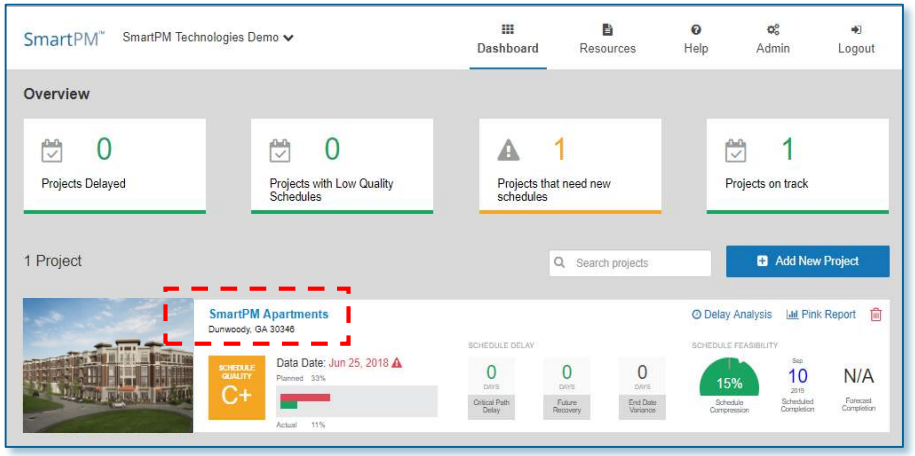
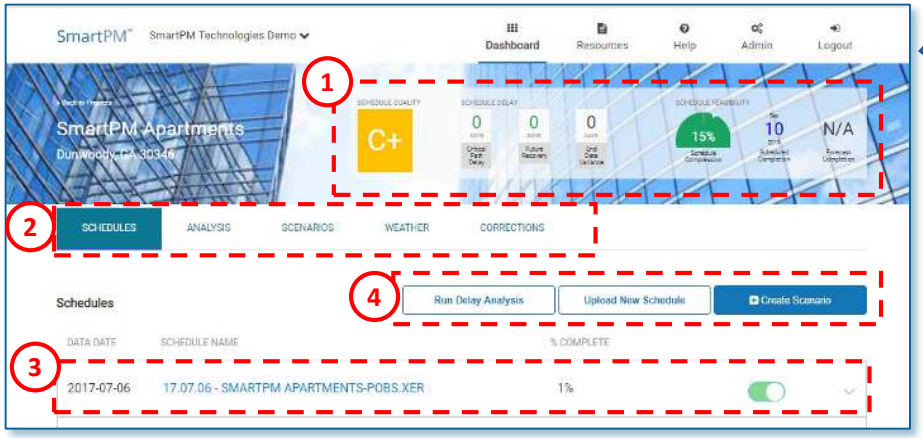
# Accessing the Project Dashboard

Company Dashboard




Project Dashboard




Once the Project is uploaded, the Company Dashboard and Project Dashboard will now show the Project.

In order to access the Project Dashboard, from the Company Dashboard, simply click on the name of the Project.

The Project Dashboard provides users with the following:

1. A snapshot summary of the Schedule Quality, Schedule Delay, Schedule Feasibility and Forecasted Completion Date.
2. Tabs to access the data Analysis, control and view Scenarios, access Weather, and view and implement Corrections.
3. A summary of the schedules that have been uploaded for a project. When Schedule updates are loaded, they will be shown here.
4. Function or action buttons to Run Delay Analysis, Upload New Schedule, or Create Scenarios.

**Note:** If only the baseline schedule is loaded, Running a Delay Analysis, and other actions may not yield any results as an analysis requires two schedules to be compared.

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# Importing Schedule Updates

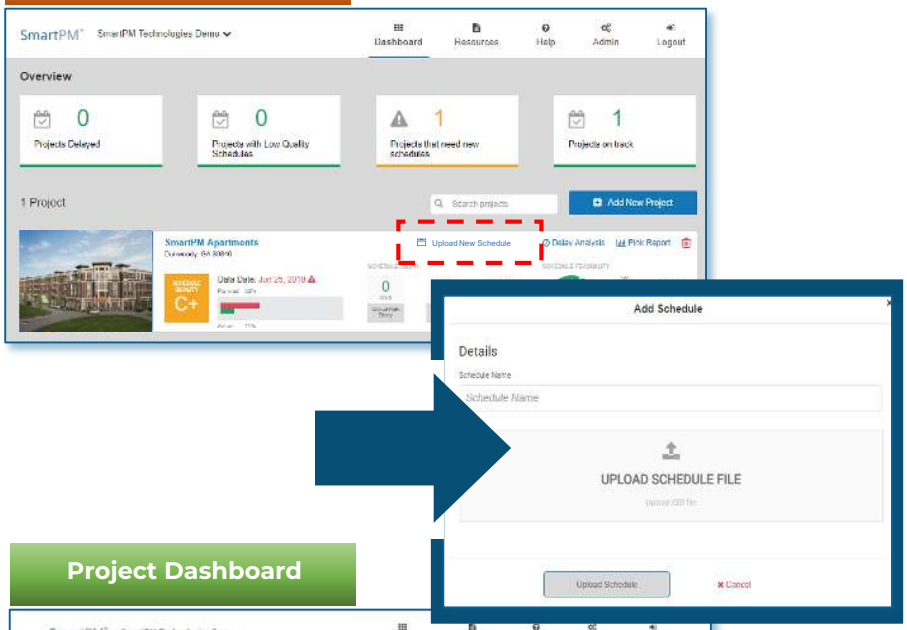
If the Project is just starting out and the Baseline is the only schedule you have for the Project, you are done with the importing process. However, if you have Schedule Updates, you will want to add them to the Project in chronological order.

Importing Schedule Updates can be performed via the Company Dashboard **or** the Project Dashboard.

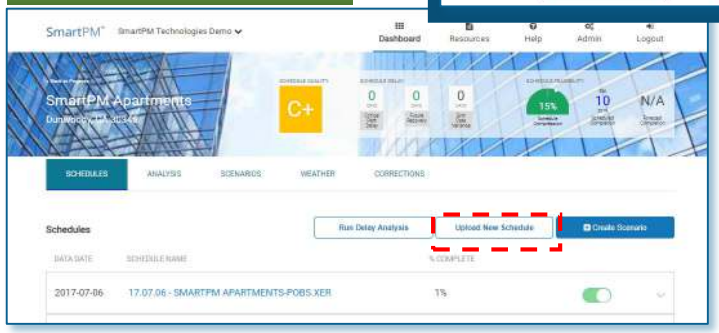
1. Click the “Upload New Schedule” link.
2. Give the Schedule Update a Name
3. Click the “Upload Schedule File” button and locate the file in your computer’s directory
4. If your Project is Microsoft Project based, you will need to enter a Data Date for the new Update
5. Click “Upload Schedule”
6. Repeat for all schedule updates in chronological order.

**Note**: All Schedule Updates must be the same file type. For instance, you cannot import a Microsoft Project Schedule Update on top of a Primavera Baseline.

**Company Dashboard**




**Project Dashboard**



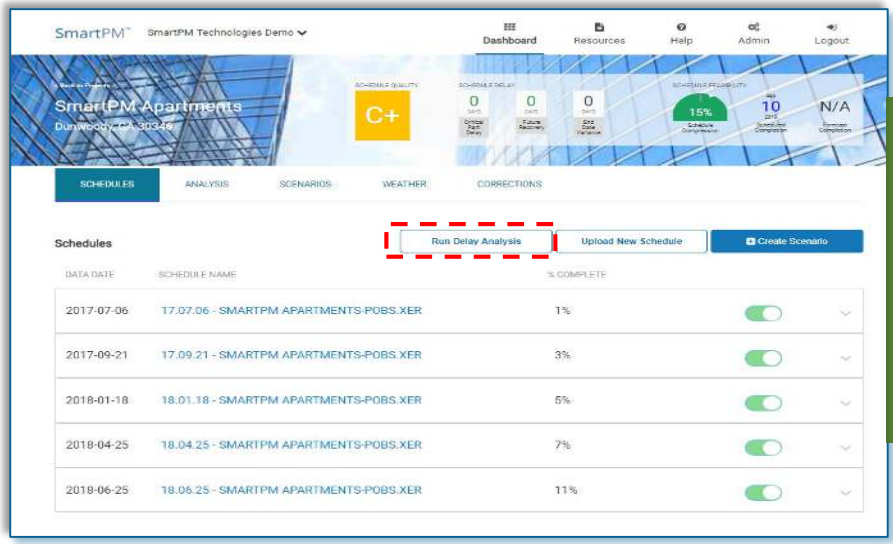
# Running a Delay Analysis

After importing Schedule Updates, the Project Dashboard will be populated with the schedules that have been uploaded.

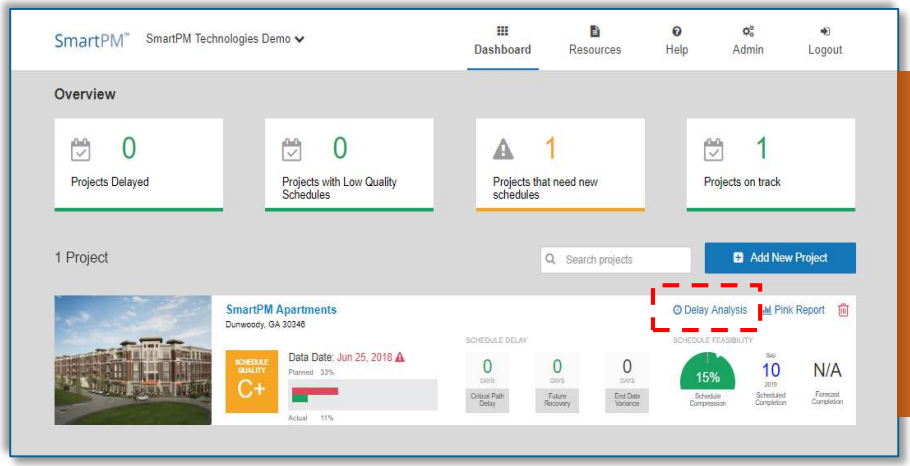
From here, the Project Dashboard tabs allow you to Run Analyses, create and control Scenarios, access Weather, and perform schedule Corrections.

Once all your schedules are imported you will notice that there are zeros across the Project's Schedule Delay section. In order to automatically calculate these figures, you will need to run a Delay Analysis.

- Running a Delay Analysis can be performed either via the Project Dashboard **or** the Company Dashboard. However, it is recommended to run the Delay Analysis from the Project Dashboard in order to confirm that all recent schedule updates have been imported.




Project Dashboard




Company Dashboard

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# Project Metrics

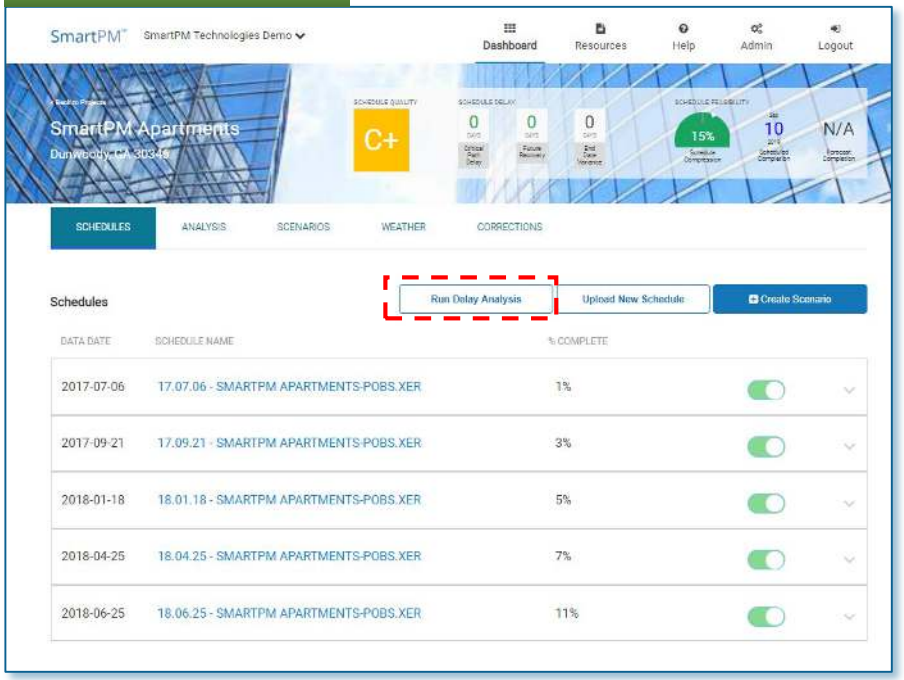
The Run Delay Analysis feature creates a schedule by schedule windows analysis based on the data from the imported project schedule updates.

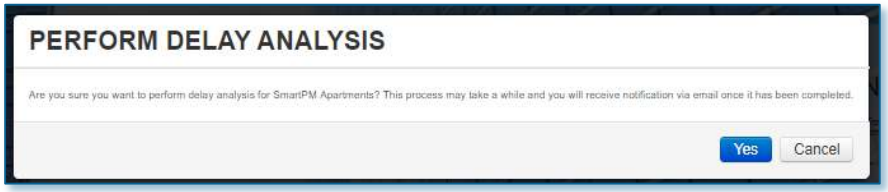
1. Once all schedules have been imported click the “Run Delay Analysis” option in the Project Window on the SmartPM™Project Dashboard
2. A confirmation window prompt will appear asking to confirm
3. an analysis to be completed.
4. You will receive an email once the delay analysis is complete
   - A delay analysis can take anywhere from 30 seconds to 45 minutes depending on the length and size of the schedule

Running a Delay Analysis can be performed either via the Project Dashboard **or** the Company Dashboard. However, it is recommended to run the Delay Analysis from the Project Dashboard in order to confirm that all recent schedule updates have been imported.

**NOTE:** If for any reason an error occurs during a delay analysis, reach out to your SmartPM™ Client Services Manager.

**Project Dashboard**

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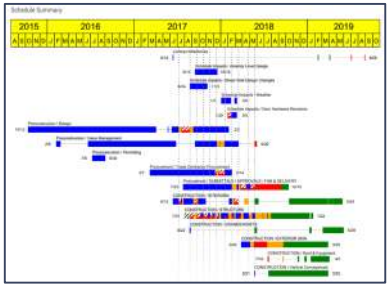
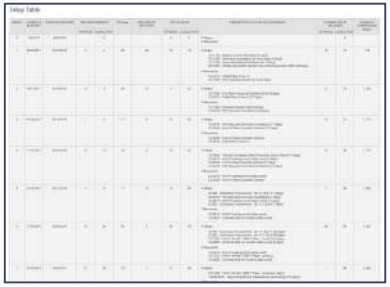
# The Pink Report

The Pink Report is an executive summary of the project to date that provides critical schedule information in order to have the conversations with stakeholders

The Pink Report includes:

1. All Schedule Quality Issues
2. A Summary Progress Graphic
3. A Copy of the Delay Table
4. All Critical Changes in the Audit Log

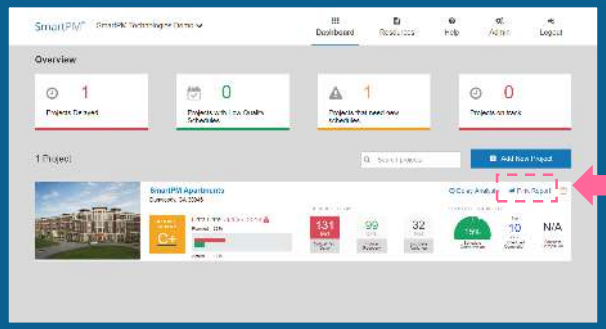


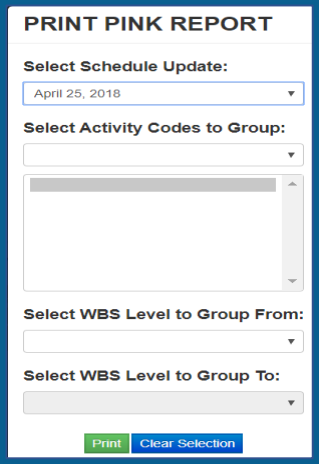


# Generate The Pink Report

Follow these steps to generate The Pink Report:

1. Click the Pink Report button on the dashboard to activate the Pink Report Creation menu
2. Select Schedule Update: Select from which schedule update the graphic will be based off of
3. Select WBS Level to Group From/To: Select the range of WBS Levels the summary bars in the summary graphic will be generated via. Note, the maximum selectable range is 1 level apart. Jump to Section 4 for more WBS info
4. Click “Print”

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# *Working in Dashboards*

# 2

- Understanding the Company Dashboard
- Understanding the Project Dashboards
- Project Dashboards Analytics

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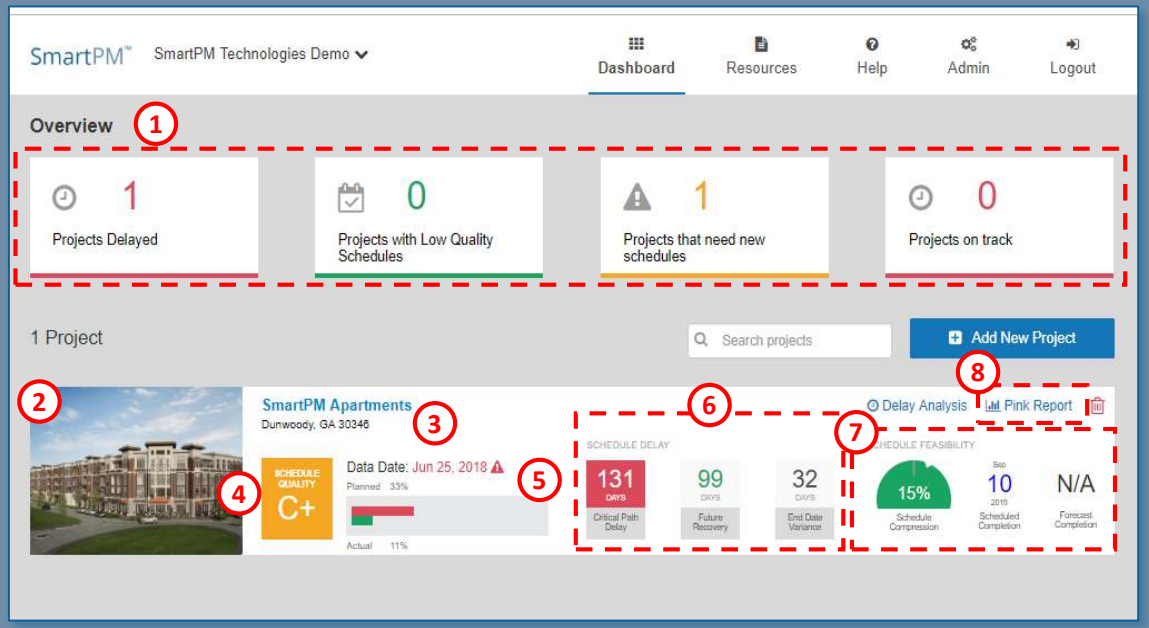
# The Company Dashboard




The Company Dashboard is your hub to view the key metrics across all of your Company's projects. From this view you can view:

1. An executive overview on the health & status of all of your projects
2. Uploaded image of the Project
3. Location of the Project for weather tracking purposes
4. Schedule Quality Grade of the latest schedule which you can click on for more information
5. The Data Date of the most recently imported Schedule and the Actual Percent complete in that schedule as compared to the Baseline
6. The Schedule Delay & Recovery figures for the Project
7. A look at the feasibility of the Project, as listed in the latest schedule update, and moving forward. ***Note: Forecasted completion dates won't populate until the project is greater than 25% complete***
8. The Pink Report creation button – this will create an executive report based on the most recent schedule update imported

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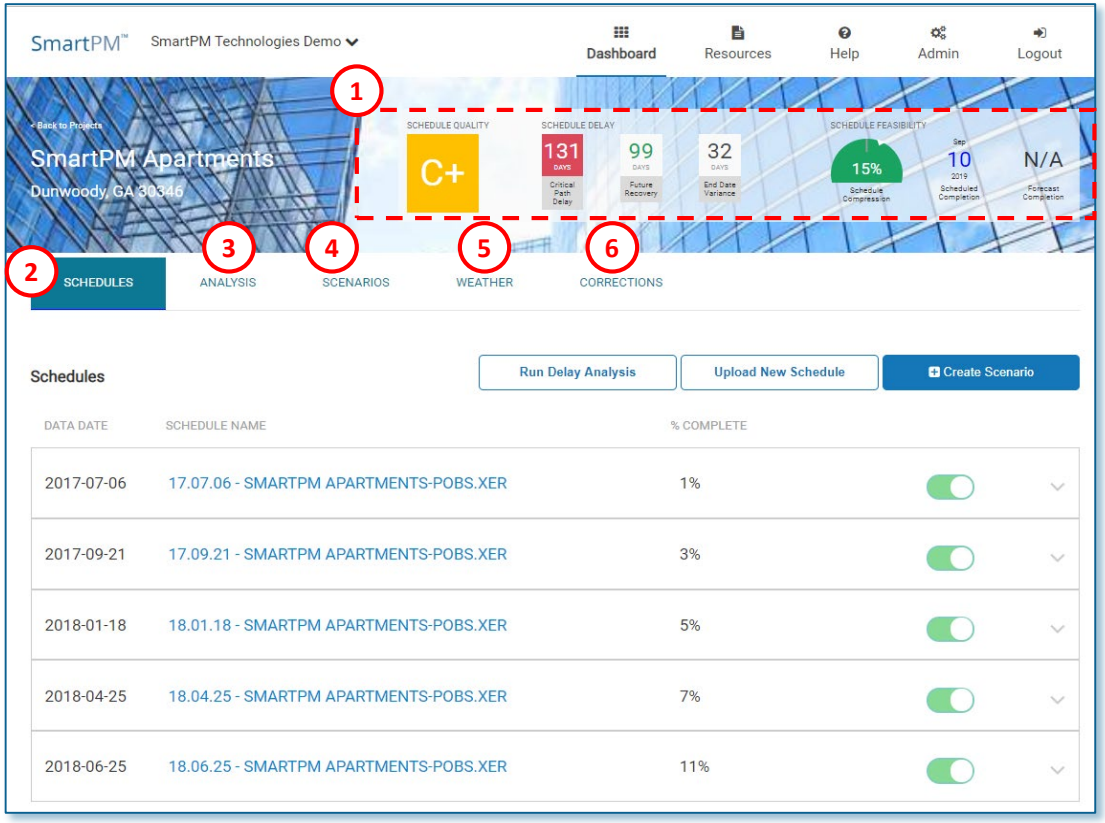
# The Project Dashboard

1. Similar to the Company Dashboard, the Project Dashboard allows you to view the key metrics for a given Project

The Project Dashboard also allows users to drill down into specific areas. From this view you can view:

2. Schedules - see all the schedules that have been uploaded
3. Analysis – Click here to access:
   - Schedule Quality analysis
   - Delay analysis
   - Audit logs
   - Executive Reports
4. Scenarios – see all scenarios that have been created and create new scenarios
5. Weather – access daily weather reports based on the Zip Code of the Project
6. Corrections – create corrections rules to apply to schedules and select which schedules to apply rules.

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# Quality

## The Project Dashboard

**Project Dashboard "Analysis" Tab**

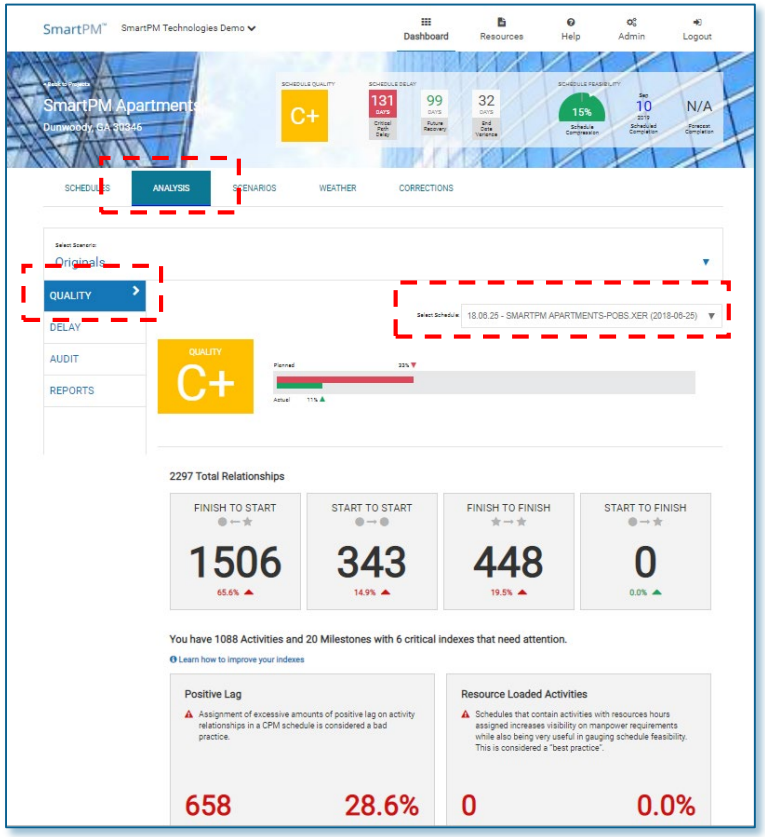
Click on "Analysis" tab at the top ribbon bar to access the Analysis Tab. The left menu includes 4 areas: Quality, Delay, Audit, and Reports.

"Quality" allows users to view critical information related to the quality and integrity of the schedule.

From the drop down "Select Schedule", choose the schedule to be analyzed.

From the left menu, select the analysis areas to view:

- "Quality" Index Analysis including:
  - Schedule Quality Grade
  - Planned vs. Actual % Complete
  - Relationship summaries
  - Schedule Indicators including:
    - Positive Lag
    - Resources Loaded Activities
    - Critical Path % - percent of activities on the critical path
    - Avg. Activity Total Float
    - Total Relationships
    - Missing Logic
    - Negative Lag
    - Constraints
    - High Float Activities
    - High Duration Activities



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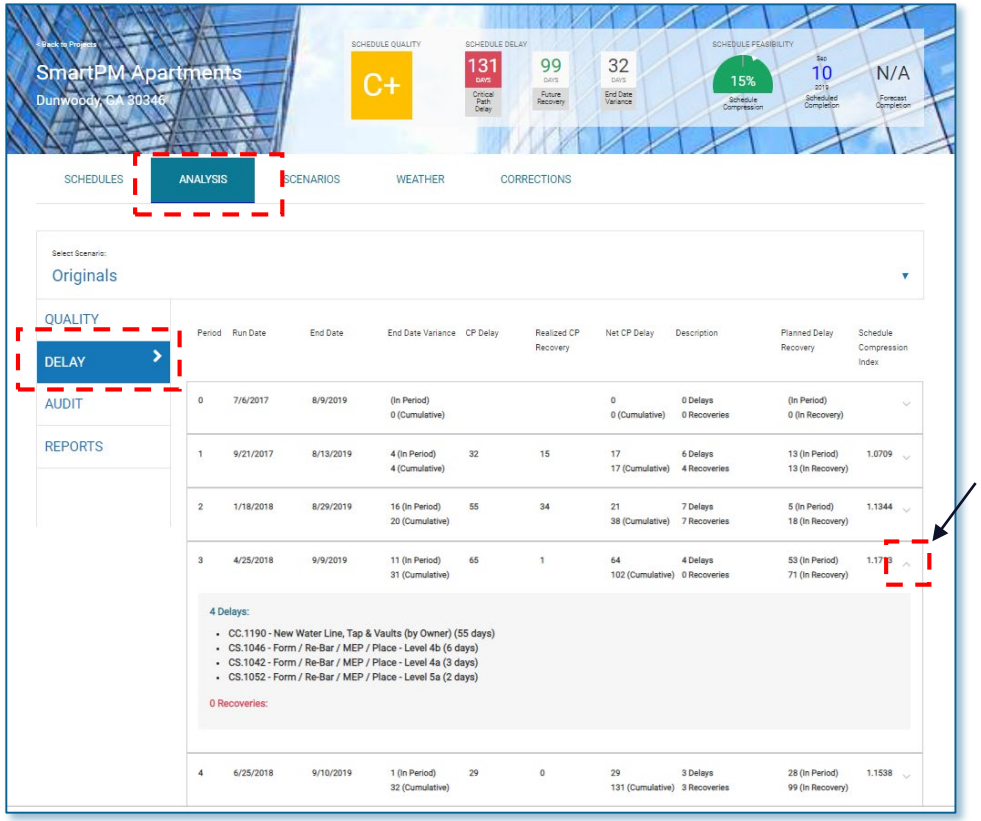
# Delay The Project Dashboard




**Project Dashboard "Analysis" Tab**

Click on "Analysis" tab at the top ribbon bar to access the Analysis Tab.

"Delay" allows users to view the delays for a given schedule update.

- Delays are listed by schedule and indicate the following for each schedule update:
  - Run Date
  - End Date
  - End Date Variance both in the period of analysis and cumulative
  - Critical Path "CP" Delay
  - Realized CP Recovery
  - Net CP Delay both in period and cumulative
  - Description of delays
  - Planned delay recovery
  - Schedule Compression Index
- To drill down into details on the specific activities that were delayed or recovered in a given schedule update, click on the filter button on the right hand side. Use this filter to understand specific activities that may have been causing delays or experienced recovery.

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# Audit

## The Project Dashboard

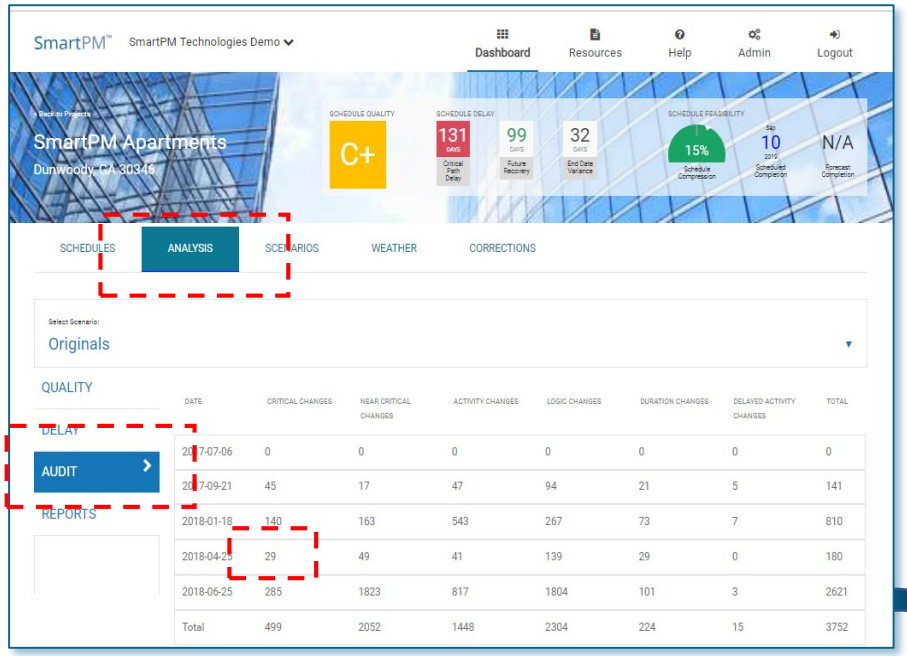
Project Dashboard “Analysis” Tab

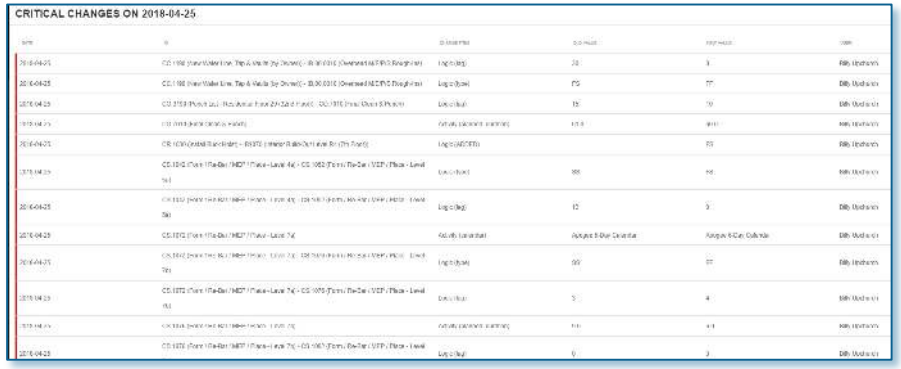
Click on “Analysis” tab at the top ribbon bar to access the Analysis Tab.

“Audit” allow users to see the changes made from one schedule to a subsequent schedule.

- The Audit menu illustrates the following:
  - Schedule Date
  - Critical Changes
  - Near Critical Changes
  - Activity Changes
  - Logic Changes
  - Duration Changes
  - Delayed Activity Changes
  - Total Changes

- To drill down into details on specific metrics, simply hover over the metric and the click on the metric. A window will be displayed with the details for all the changes related to the selected metric. Use this to understand the changes in specific activities in a given schedule update. Critical activities are indicated with a red highlight on the left. Likewise, Near Critical activities have a amber indicator.

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# Reports The Project Dashboard

Project Dashboard “Analysis” Tab
Click on “Analysis” tab at the top ribbon bar to access the Analysis Tab.

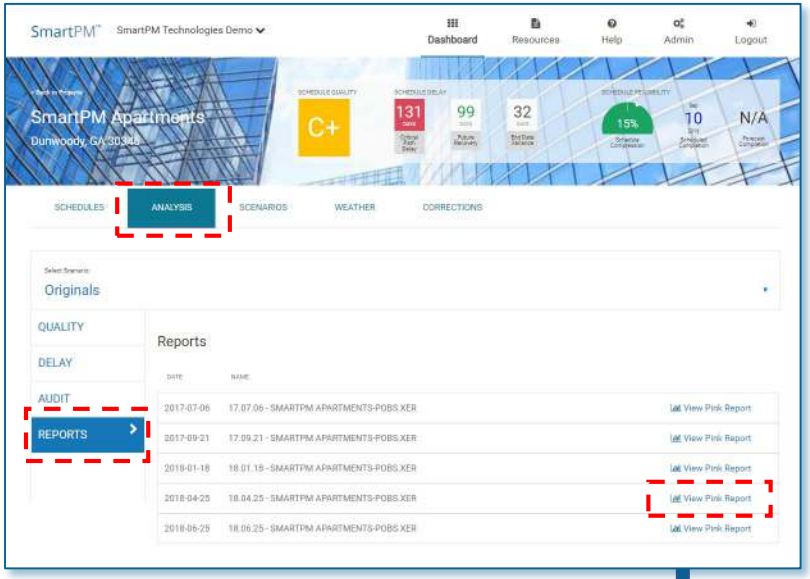
“Reports” allows users to generate executive level reports, “Pink Reports”, for a given schedule update.

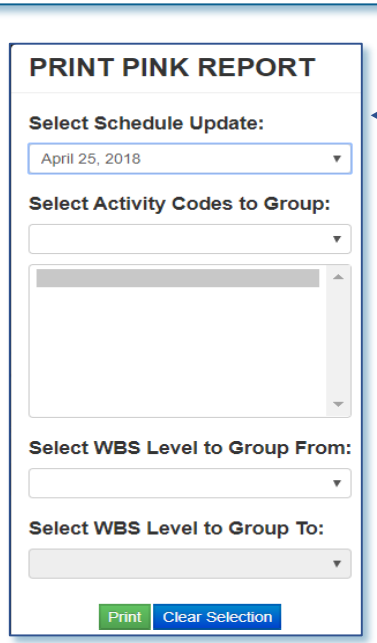
The Pink Report includes:

1. All Schedule Quality Issues
2. A Summary Progress Graphic
3. A Copy of the Delay Table
4. All Critical Changes in the Audit Log

To generate the Pink Report:

- Select “View Pink Report” to open the Pink Report Creation menu.
- Select the “Schedule Update” from which the report will be generated.
- Select the manner in which the report is to be formatted:
  - ➢ Select “Activity Codes to Group” from the Drop Down or select “WBS Level to Group From” and then “WBS Level Group To”: range of WBS Levels the summary bars in the summary graphic will be generated via. Note, the maximum selectable range is 1 level apart. Jump to P. XX for more WBS info
- Click “Print” and the report will generate




NOTE: Pink Reports may also be generated from the Company Dashboard. For more information on the Pink Report, see Section 1 of this manual.

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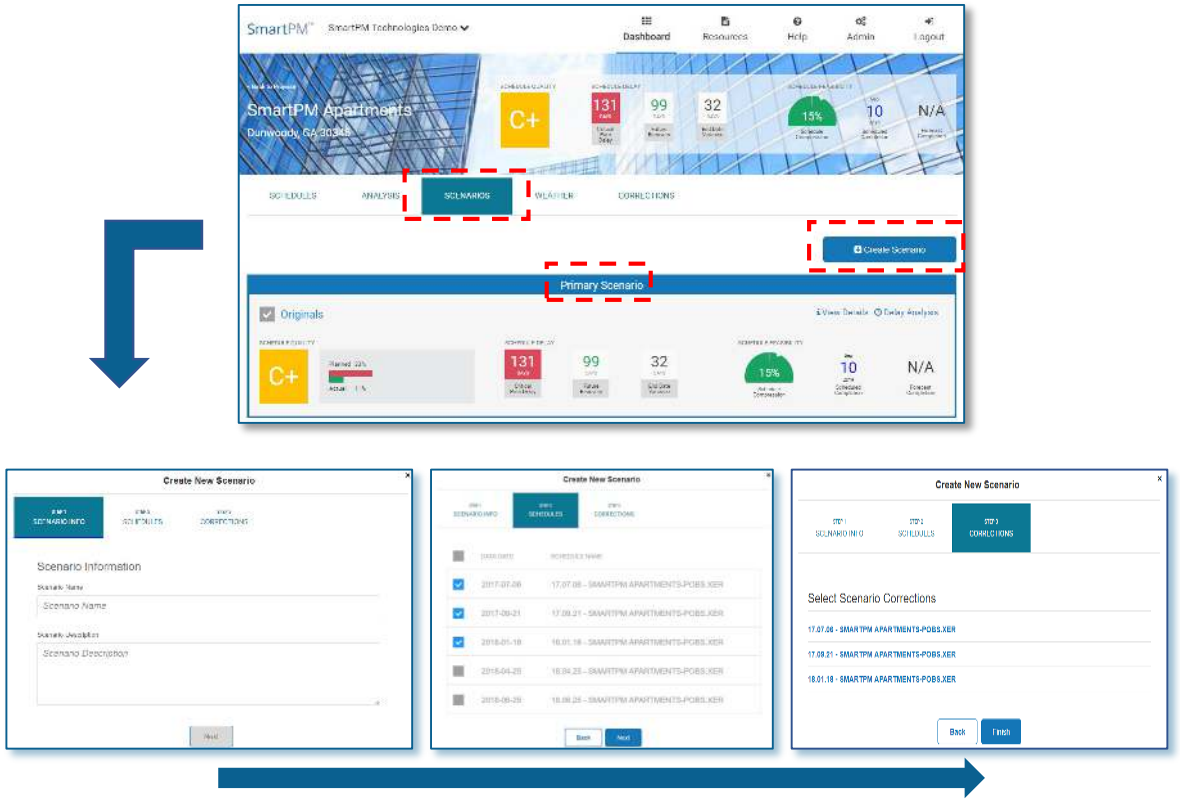
# Scenarios The Project Dashboard




Project Dashboard “Scenarios” Tab

Click on “Scenarios” tab at the top ribbon bar to access the Scenarios Tab.

All Scenarios that have been created will be listed on the main tab.

Create Scenarios to select specific schedules to create “What-if scenarios”, make corrections, and apply the corrections to.

To create a Scenario:

- Select “Create Scenario”
- Step 1: Name the Scenario and enter a description. For example, describe what changes are being applied.
- Step 2: Select the schedules for which the scenario is to be applied.
- Step 3: Select the corrections and click Finish. If no Corrections have been created, then no Corrections will be able to applied. In order to apply Corrections, rules must be established under the Corrections Tab.

**NOTE:** Scenarios may also be created from the “Schedules” Tab within the Project Dashboard. However, it is a recommended practice to create the scenario from the “Scenarios” tab

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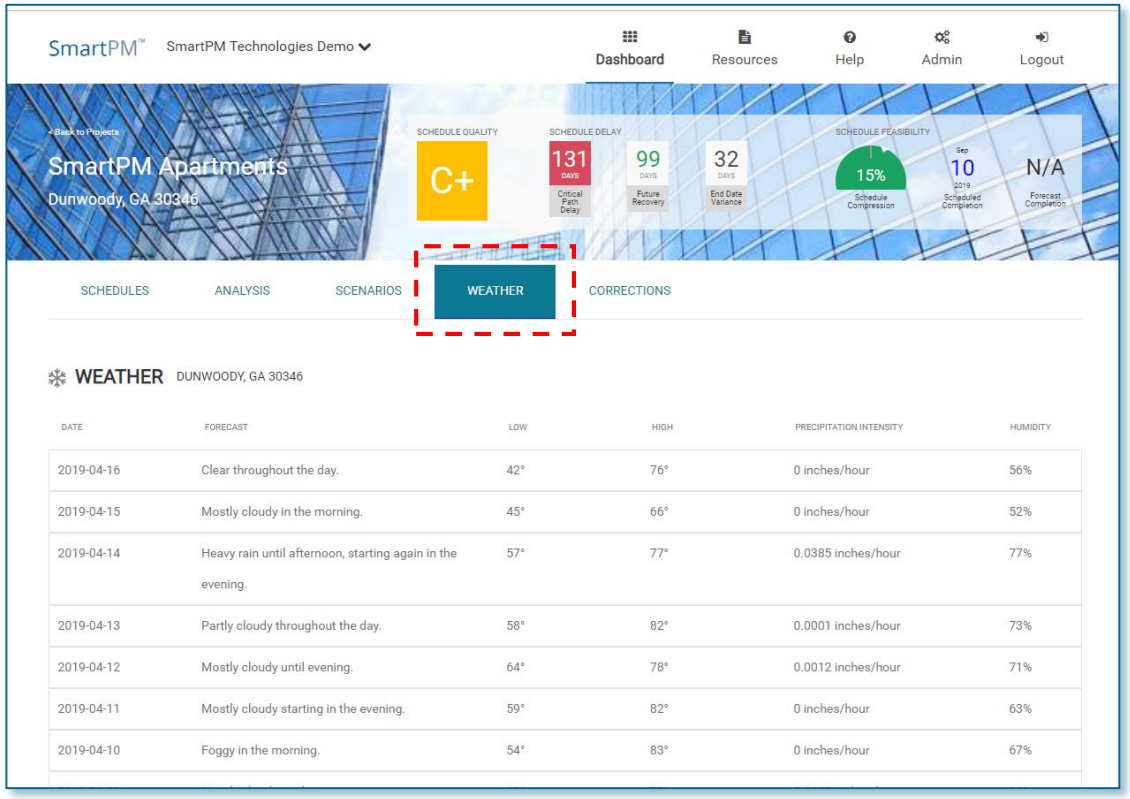
# Weather The Project Dashboard



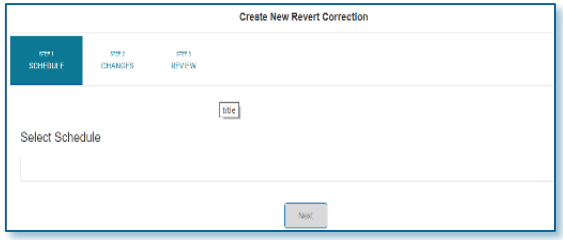

| DATE | FORECAST | LOW | HIGH | PRECIPITATION INTENSITY | HUMIDITY |
|---|---|---|---|---|---|
| 2019-04-16 | Clear throughout the day. | 42° | 76° | 0 inches/hour | 56% |
| 2019-04-15 | Mostly cloudy in the morning. | 45° | 66° | 0 inches/hour | 52% |
| 2019-04-14 | Heavy rain until afternoon, starting again in the evening. | 57° | 77° | 0.0385 inches/hour | 77% |
| 2019-04-13 | Partly cloudy throughout the day. | 58° | 82° | 0.0001 inches/hour | 73% |
| 2019-04-12 | Mostly cloudy until evening. | 64° | 78° | 0.0012 inches/hour | 71% |
| 2019-04-11 | Mostly cloudy starting in the evening. | 59° | 82° | 0 inches/hour | 63% |
| 2019-04-10 | Foggy in the morning. | 54° | 83° | 0 inches/hour | 67% |

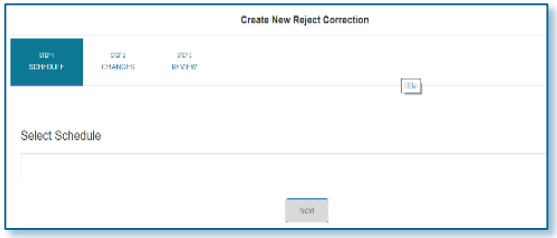
Click on “Weather” to access the recent two week historical Weather based on the Zip Code of the Project.

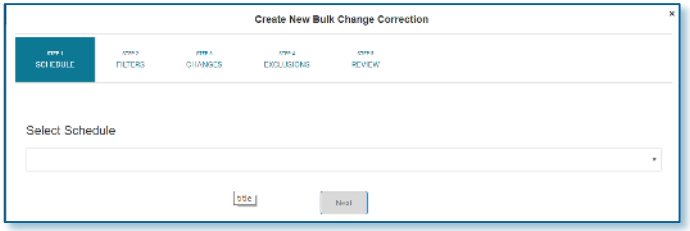
**NOTE:**
Future versions will allow for Weather Analysis based on historical weather.

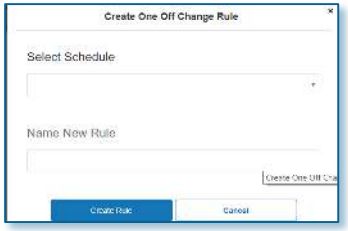
# Corrections

## The Project Dashboard




Project Dashboard “Corrections” Tab

Click on “Corrections” tab at the top ribbonbar to access the Corrections Tab. All Corrections that have been created will be listed on the main tab.

Create rules for Corrections to select specific schedules to make corrections and apply the corrections to. There are four rule types:

“Revert”: Make changes that should have been made for a prior date. This creates a rule that applies the change and re-runs the delay analysis assuming that the change is in affect.

“Reject”: Allows users to reject changes from a schedule update and re-runs the delay analysis without the change considered. This rule is applied on a go forward basis for subsequent schedule updates.

“Bulk Change”: Create a change to a large set of activities, by pre-defined or user defined Filters that are selected. Changes are applied from the schedule that is selected to a go-forward basis for subsequent schedule updates.

“One-off”: Similar to Bulk Change but creates rules for changes to individual activities. Changes are applied from the schedule that is selected to a go-forward basis for subsequent schedule updates.

For additional information, contact your Customer Service representative.

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- Gantt Chart Navigation
- Project Metrics
- Activity Metrics
- Group Metrics
- Audit Log
- Understanding the Delay Table

# Gantt Chart Navigation

From the Company Dashboard, click on the Schedule Delay metrics on the summary to open up the Gantt Chart view. Or, from the Project Dashboard select the schedule to view the Gantt Chart. This view is more familiar to a traditional schedule view.

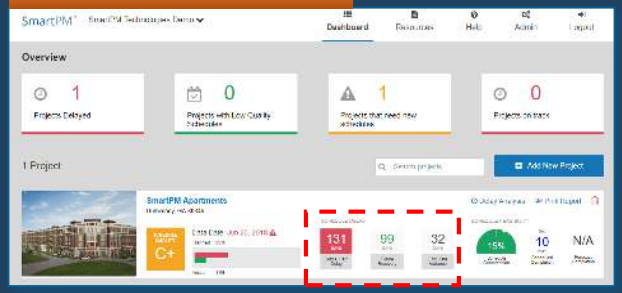
In addition to viewing your schedule, you can drill down with specific analytics, and review delays, recoveries, and changes across the life of your Project.

1. Analytics at the Project level
2. Analytics at the Activity level
3. Analytics based on an Applied Filter
4. The Audit Log
5. The Delay Table
6. Delay-Analysis "On" Switch (this MUST be on to use of SmartPM's best capabilities)
7. Planned Bar "On" Switch
8. Organizational Structure "On" Switch
9. Filter "On" Switch
10. Quick Search

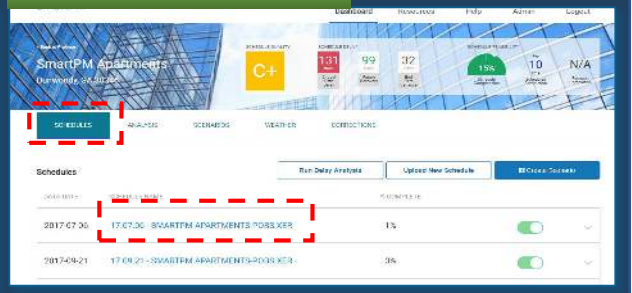
Bar Chart Key:

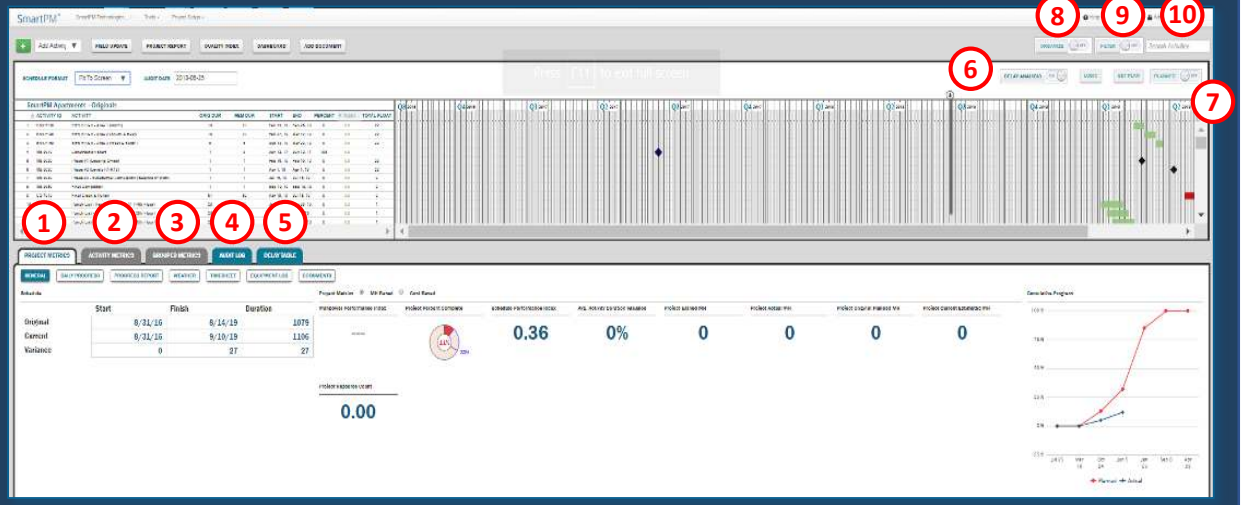
- Blue Fill: Period of Actual Progress
- White Fill: Period of No Progress for an Activity that should have had Progress
- Green Fill: Planned Work
- Red Fill: Critical Path
- Green Outline: Actual Critical Path Recovery
- Yellow Outline: Historical Near Critical Path
- Red Outline: Historical Critical Path
- "X": Averaged Day of Delay

**Company Dashboard**




**Project Dashboard**

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# Project Metrics

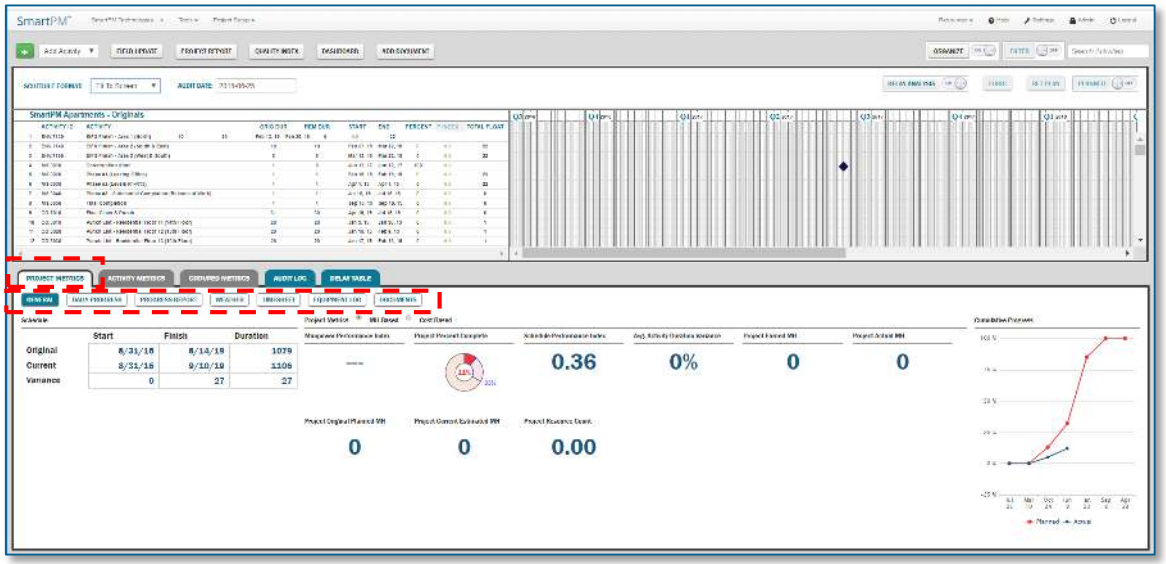
From the Gantt Chart view, navigate to the Project Metrics tab to view:

- Original Start and Finish Dates
- Total Project Duration
- Variances from Baseline
- Percent Complete
- Schedule Performance Index (SPI)
- Cumulative Progress Curve

For resource loaded schedules, additional performance indicators are available such as Manpower Performance, Earned MH, Project Actual MH, Planned Original MH, Current Estimated MH and Project Resource Count.

For Cost Based schedules, Original Budget, Earned Cost, and Remaining Budget are available.

Additional functions include the ability to view Daily Progress, Progress Reports, historical Weather, Timesheets, Equipment Logs, and upload and attach Documents.



# Activity Metrics

To view specific activity metrics, from the Gantt Chart view, select an Activity from the Gantt Chart. The Activity selected will be highlighted and the Activity Metrics Tab will be active. Metrics for the selected activity will be displayed including:

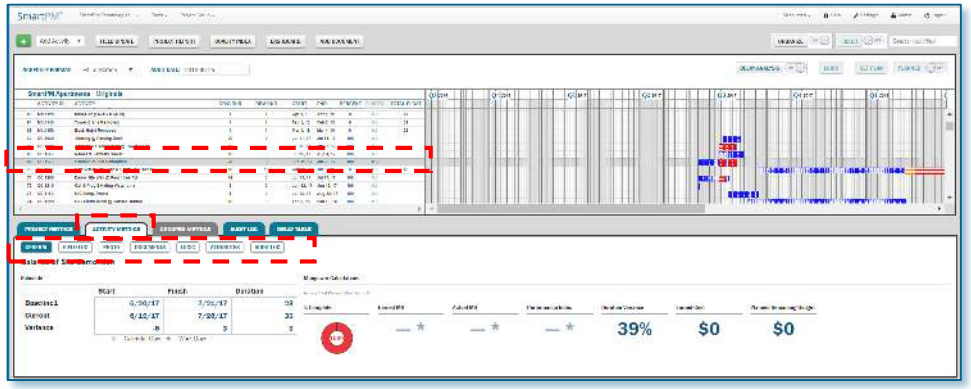
- Original Start and Finish Dates
- Total Duration
- Variances
- Percent Complete
- Duration Variance

For Resource loaded schedules, Earned MH, Actual MH and a Performance Index will be populated.

For Cost Based schedules, Earned Cost and Planned Remaining Budget will be populated.

Additional features including Field Logs, Photos, associated Documents, Logic, Activity Attributes, and an Audit Log of changes to the selected Activity are able to be displayed.

User the Logic button to quickly understand the relationships for a selected Activity.



# Group Metrics

To view metrics for a group of activities (e.g. Electrical, Mechanical):

- Confirm that the Filter toggle is set On
- Select the Filter button
- Select a pre-determined Filter or create a new Filter. **For more on creating a new Filter, see the Filters section of this manual.**
- Create Apply to apply the Filter

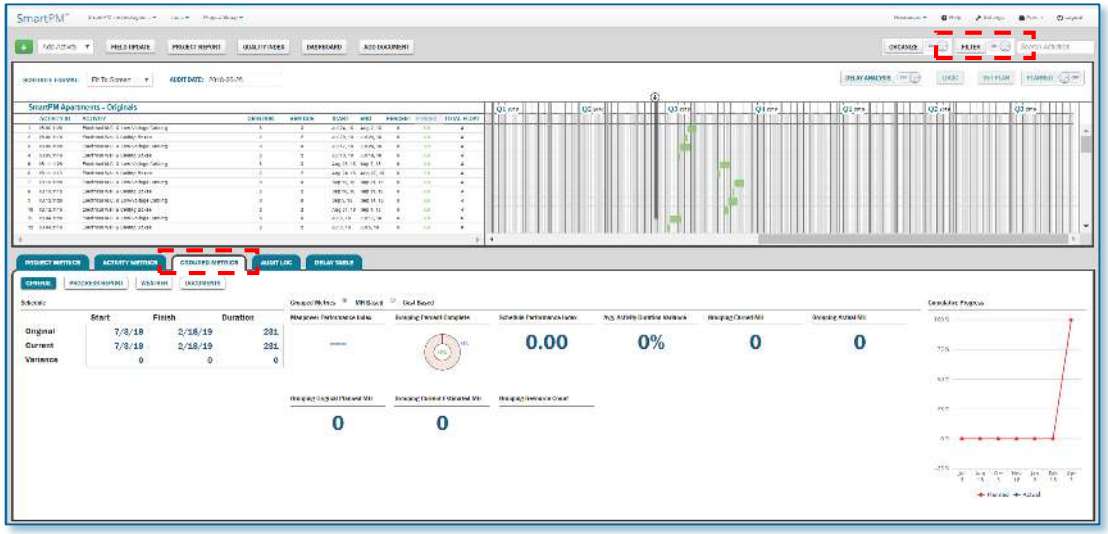
Similar to Activity Metrics, Group Metrics will be displayed for the Filter that was selected and include:

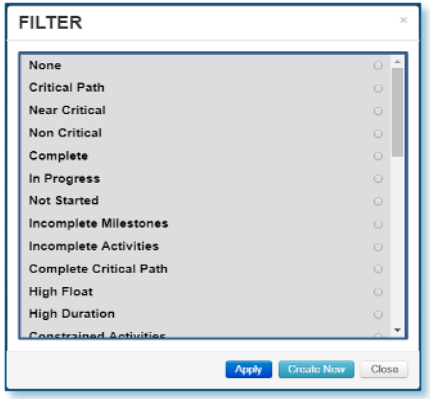
- Original Start and Finish Dates
- Total Duration
- Variances
- Grouped Percent Complete
- Schedule Performance Index (SPI)
- Duration Variance

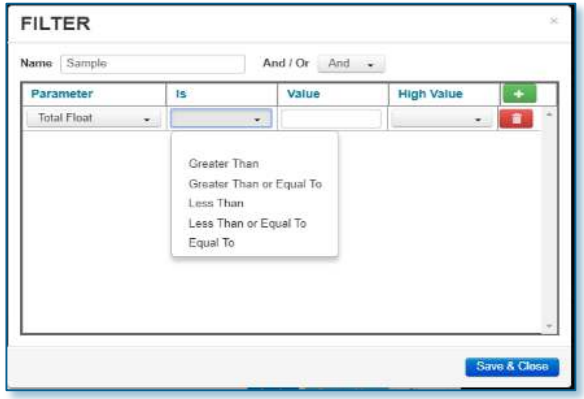
For Resource loaded schedules, Earned MH, Actual MH and a Performance Index will be populated.

For Cost Based schedules, Earned Cost, Original Planned Budget, and Remaining Budget will be populated.

Additional features including Progress Report, Weather, and Documents will be displayed.

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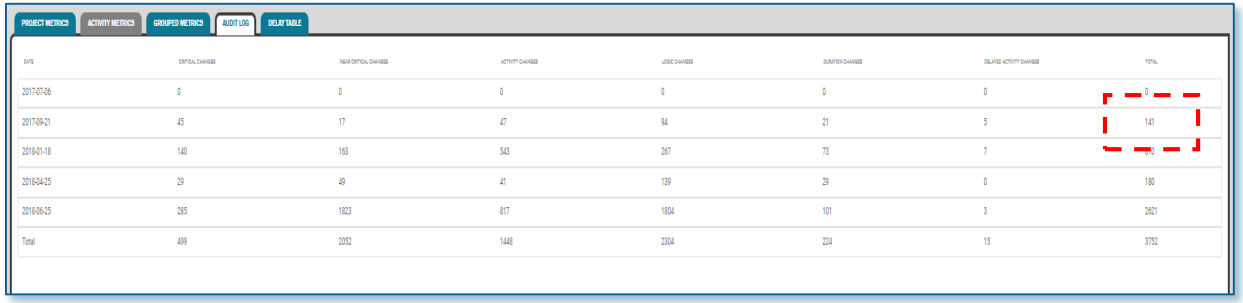
# Audit Log

In an effort to better understand the various modifications made from one schedule update, SmartPM™ maintains a running log of changes and dates for these changes. SmartPM™ then distills these changes to filter those changes that had a direct impact on the go-forward critical and near critical paths.

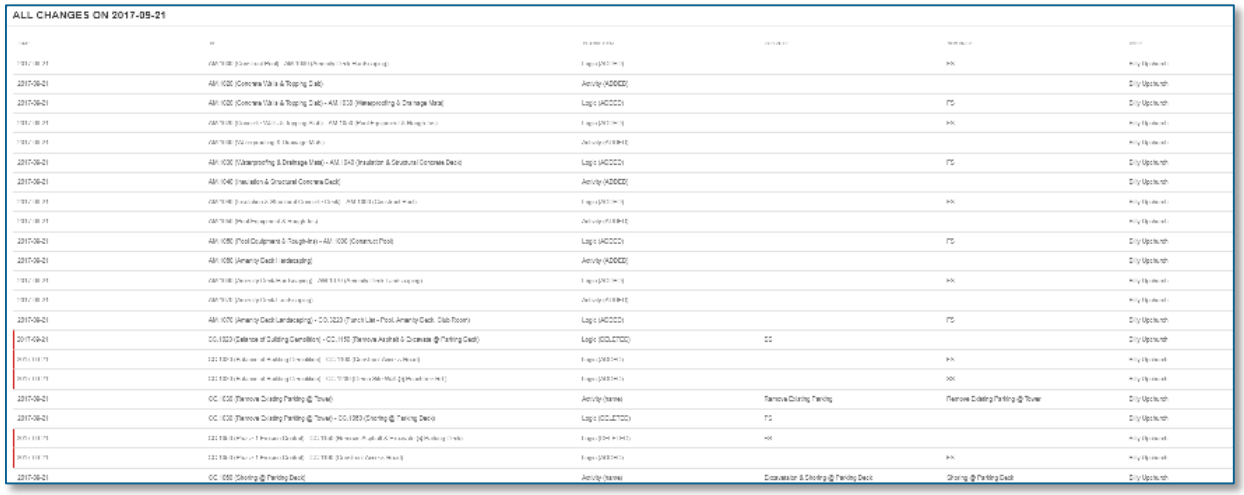
On the Audit Log, click on any figure to drill down to see what specific changes were made.

Note: Changes to the Critical Path and Near Critical Path will have a red and orange box, respectively, in the far left column.



PROJECT METRICS | ACTIVITY METRICS | GROUPED METRICS | AUDIT LOG | DELAY TABLE

| DATE | CRITICAL CHANGES | NEAR CRITICAL CHANGES | ACTIVITY CHANGES | LOGIC CHANGES | DURATION CHANGES | DELAYED ACTIVITY CHANGES | TOTAL |
|---|---|---|---|---|---|---|---|
| 2017-07-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2017-09-21 | 45 | 17 | 47 | 94 | 21 | 5 | 141 |
| 2018-01-18 | 140 | 163 | 543 | 267 | 73 | 7 | [illegible] |
| 2018-04-25 | 29 | 49 | 41 | 139 | 29 | 0 | 180 |
| 2018-06-25 | 285 | 1823 | 817 | 1804 | 101 | 3 | 2621 |
| Total | 499 | 2052 | 1448 | 2304 | 224 | 15 | 3792 |



ALL CHANGES ON 2017-09-21

| | | | | | |
|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | | | [illegible] |
| 2017-09-21 | AM.1030 (Concrete Walk & Topping Slab) | Activity (ADDED) | | | Dilly Upchurch |
| 2017-09-21 | AM.1030 (Concrete Walk & Topping Slab) - AM.1030 (Waterproofing & Drainage Mat) | Logic (ADDED) | | FS | Dilly Upchurch |
| [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | | | [illegible] |
| 2017-09-21 | AM.1030 (Waterproofing & Drainage Mat) - AM.1040 (Insulation & Structural Concrete Deck) | Logic (ADDED) | | FS | Dilly Upchurch |
| 2017-09-21 | AM.1040 (Insulation & Structural Concrete Deck) | Activity (ADDED) | | | Dilly Upchurch |
| [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | | | [illegible] |
| 2017-09-21 | AM.1050 (Pool Equipment & Rough-Ins) - AM.1030 (Construct Pool) | Logic (ADDED) | | FS | Dilly Upchurch |
| 2017-09-21 | AM.1050 (Amenity Deck Landscaping) | Activity (ADDED) | | | Dilly Upchurch |
| [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | | | [illegible] |
| 2017-09-21 | AM.1070 (Amenity Deck Landscaping) - CO.1023 (Punch List - Pool, Amenity Deck, Club Room) | Logic (ADDED) | | FS | Dilly Upchurch |
| 2017-09-21 | CO.1023 (Balance of Building Demolition) - CC.1150 (Remove Asphalt & Concrete @ Parking Deck) | Logic (COLLETTOD) | SS | | Dilly Upchurch |
| [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] |
| 2017-09-21 | CC.1030 (Remove Existing Parking @ Tower) | Activity (name) | Remove Existing Parking | Remove Existing Parking @ Tower | Dilly Upchurch |
| 2017-09-21 | CC.1030 (Remove Existing Parking @ Tower) - CO.1023 (Existing @ Parking Deck) | Logic (COLLETTOD) | FS | | Dilly Upchurch |
| [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | | [illegible] | [illegible] |
| 2017-09-21 | CC.1050 (Shoring @ Parking Deck) | Activity (name) | Demolition & Shoring @ Parking Deck | Shoring @ Parking Deck | Dilly Upchurch |

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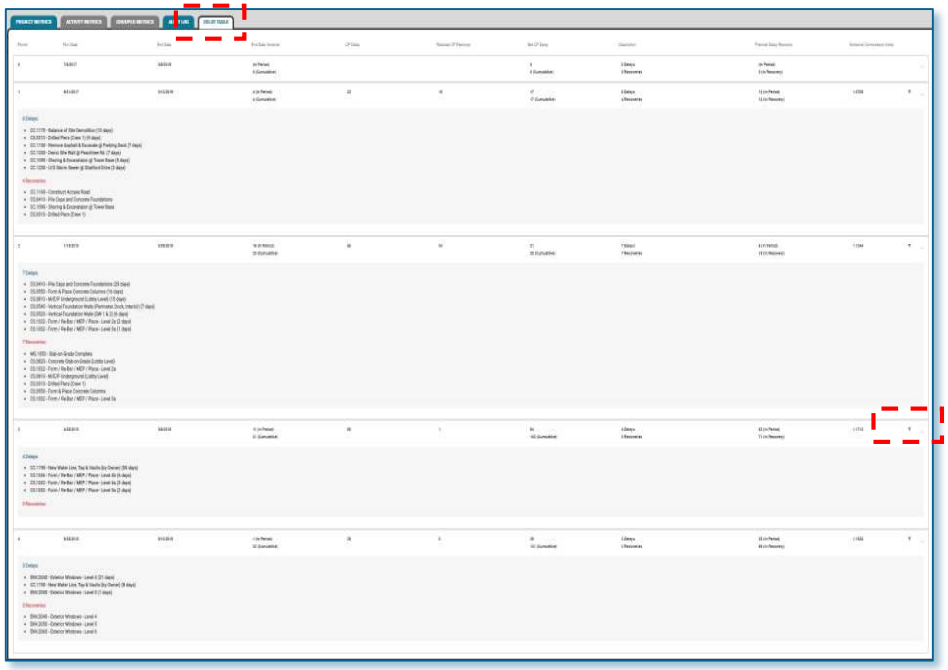
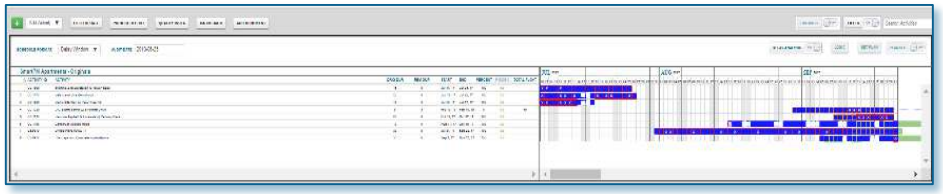
# Understanding the Delay Table





The Delay Table provides you an automatically generated Windows Analysis; letting you know exactly what activities were delayed, recovered, and where you stand moving forward

- Schedule Period
- Schedule Run Date
- End Date Variance
- Critical Path Delay
- Realized Critical Path Recovery
- Net Critical Path Delay
- Description of Critical Path Delays/Recovery
- Planned Delay Recovery
- Schedule Compression Index

Select the expand button to the right of the schedule to expand the delay to display the specific activities delayed or recovered.

Select the filter button to the right of a schedule to filter the Gantt Chart to the specific activities related to the delay or recovery.

SEE NEXT PAGE FOR DEFINITIONS.

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- **Schedule Period** – This is the period for review between the current schedule and the one before, listed by title.
- **Schedule Run Date** – This is the data date of the schedule that was imported during a specific period.
- **Schedule End Date** – This is the planned end date of the schedule that was imported during a specific period
- **End Date Variance** – This is the difference between the end date of the current schedule and the baseline (cumulative) and the previous schedule update (period).
- **Critical Path Delay** – This is the total historical/actual critical path delay that has accumulated on a project (cumulative) or during a specific window (period) of time.
- **Realized Critical Path Recovery** – This is the total historical/actual critical path recovery that has accumulated on a project (cumulative) or during a specific window (period) of time.
- **Net Critical Path Delay** – This is the net historical critical path delay that has accumulated on a project (cumulative) or during a specific window (period) of time minus historical critical path recovery (both cumulative and in each period.) This explains how much the project has been impacted and factors in how much realized recovery has existed to minimize delay exposure.
- **Description of Critical Path Delays/Recover**y – this identifies the activities that were critically delayed or recovered during a specific period.
- **Planned Delay Recovery** – This is the amount of critical path recovery that has been built in to the go-forward schedule (so, unrealized recovery) to reduce historical delay exposure or extend the project's finish date.
- **Schedule Compression Index** – This is a gauge that indicates whether a schedule has been modified to complete more collective work in equal or less time as compared to the baseline. Generally speaking, a number greater than 1 indicates compression, less than 1 equals decompression and 1 is equal to the same level as the baseline. To explain in other words; if the schedule compression index is equal to 2, then that means the schedule is now set up to do twice the amount of work in the remaining time frame than it was originally to do (thus geared to minimize delay, albeit at risk).

# *Project Configuration & Customization*

# 4

- Tools Menu
- Print Menu
- Project Setup Menu
- Users Menu
- Calendars
- Activity Codes
- WBS Codes
- Filters
- Organizational Structure

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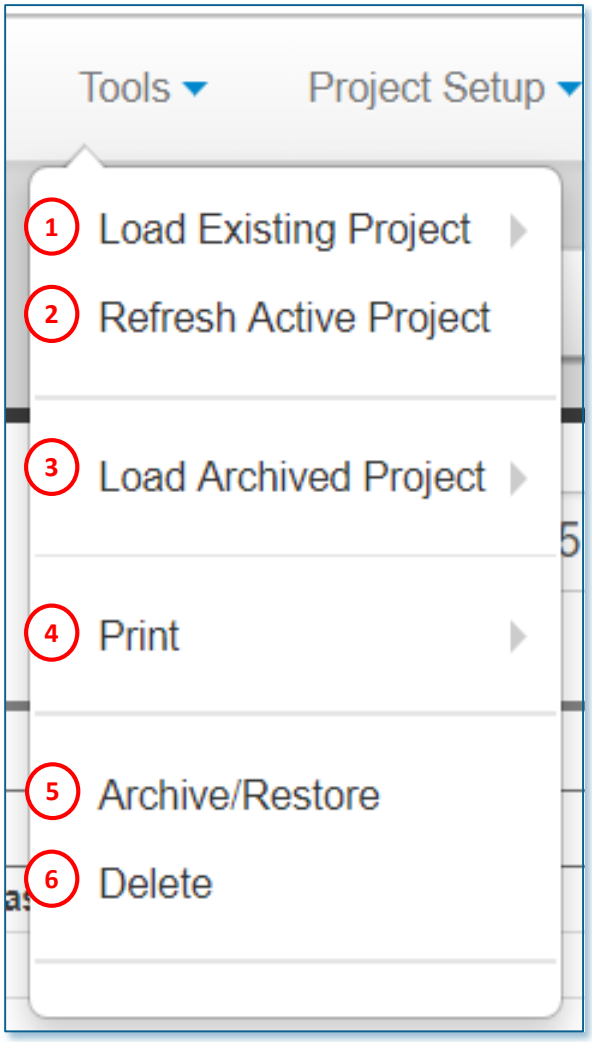
# Tools




The Tools menu located on the top ribbon of the Gantt Chart view allows you to quickly maintain your available projects. The Tools menu provides the following options:

1. Open an already existing Active Project. You will have quick access to any Project without having to navigate to the dashboard
2. Re-load / Re-fresh the currently opened Project
3. Resurrect a Project that has been Archived
4. Open the Print menu to choose from Print to PDF options
5. Toggle the opened Project between Active and Archived. When “Active,” the Project is available to Company Users for normal use. When “Archived,” the Project is removed from the Company’s dashboard and is stored in a safe place until it is resurrected
6. Deleting a project completely removes every aspect of the opened Project from the Company. **Deleting a Project is irreversible and Project will never be accessible again**.

# Print

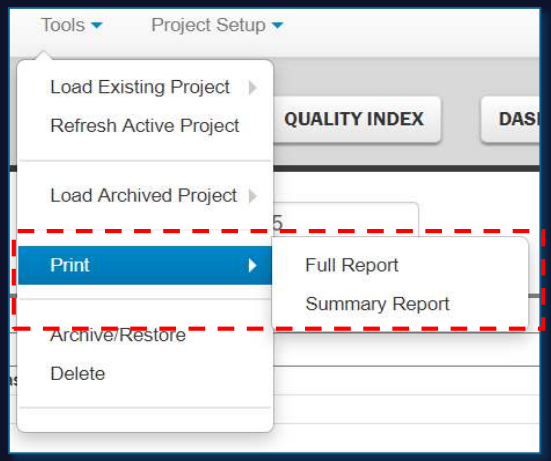
The Print function allows you to generate a PDF Document that illustrates the status of the Project Gantt Chart. You can choose from a Full or Summary Report:

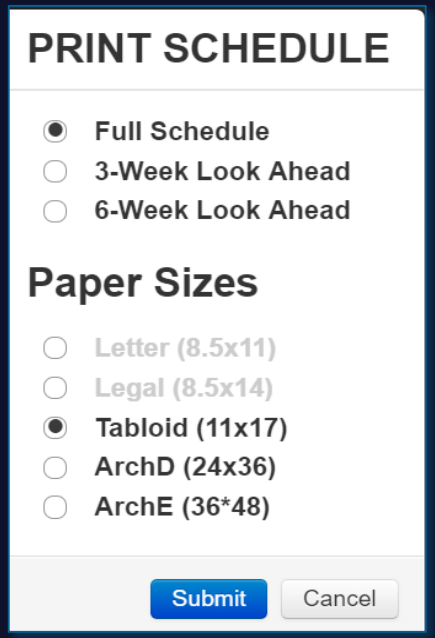
1. Full Report prints the Project as it is shown on the screen. It will print based on any Filters, Organization, or Sorting that is currently active. Additionally, the Full Report menu has 3 Calendar time-scale options:

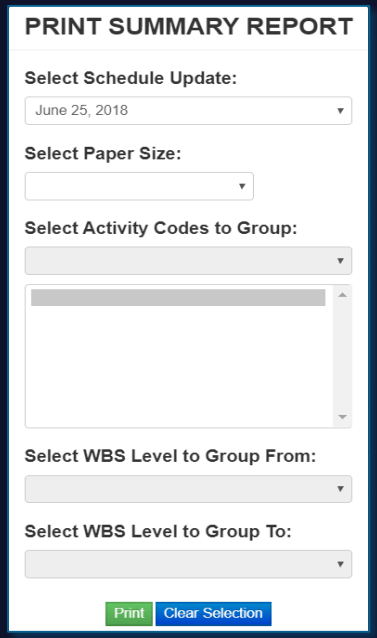
    - Full Schedule - The time scale of the Calendar will span from the Original Start Date to the Current Finish Date listed in the Schedule Spreadsheet in the Project Metrics' General Tab
    - 3-Week Look Ahead - The time scale of the Calendar will span from 3 Weeks before the Data Date to 3 Weeks after the Data Date
    - 6-Week Look Ahead - The time scale of the Calendar will span from 6 Weeks before the Data Date to 6 Weeks after the Data Date

2. Summary Report prints the Project in a summarized view based on the Project's WBS Structure. It will print summary bars based on a selected range of WBS levels which will highlight Historical Critical Path, Historical Near Critical Path, Critical Path Delay, Critical Path Recovery. The Summary Schedule menu requires the following Menu choices:

    - Select Schedule Update: Select from which schedule update the graphic will be based off of
    - Select Paper Size: Select the dimensions of the generated PDF
    - Select WBS Level to Group From/To: Select the range of WBS Levels the summary bars will be generated via. Note, the maximum selectable range is 2 levels apart

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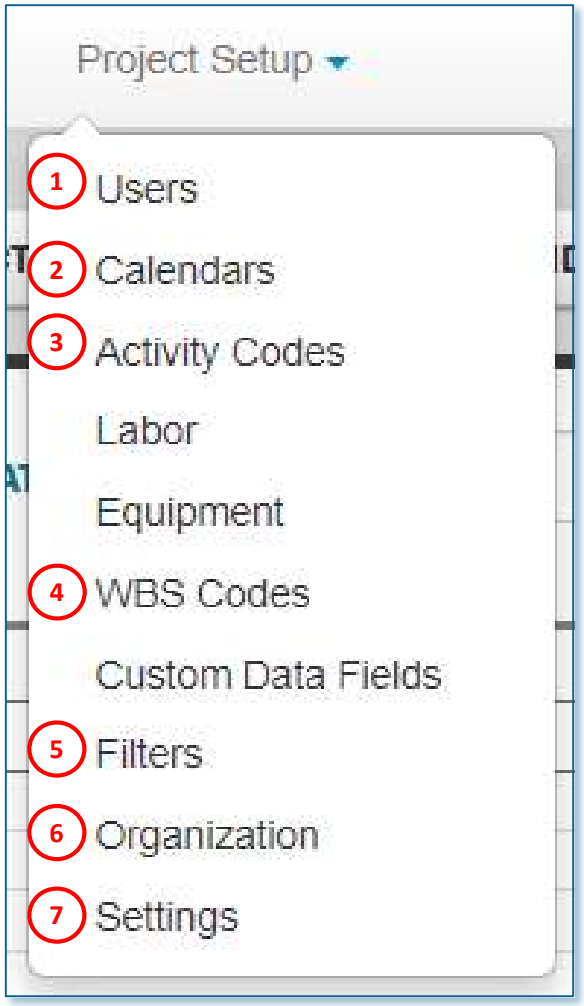
# Project Setup




The Project Setup menu located on the top ribbon of the Gantt Chart view allows you to quickly maintain the currently opened project. The Project Setup menu provides the following options:

1. Add Users in order for them to access to the opened project
2. Review and edit all Activity Calendars
3. Review and edit all Activity Codes
4. Review and edit the WBS Structure
5. Review, add, edit, and activate Project Filters
6. Review, add, edit, and activate the Project's Sorting and Organizational Structure
7. Modify the Project's Name, Location, and Features

# User Menus

## Project Setup

1. Once a Project is created, decide which Users from your Company's Roster will have access to the Project. Define the User Role each User will have in interacting with the Project.

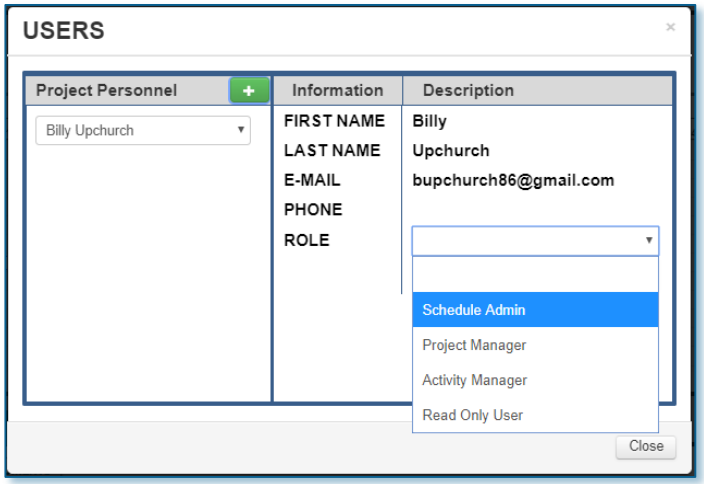
2. Click the green "+" button and select the New User from the dropdown

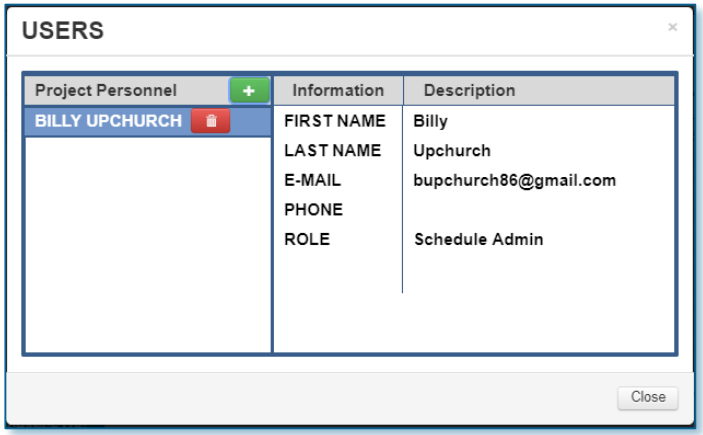
3. In the right window, select the new User's role

   - 4 different User Roles can be assigned:

     - *Schedule Administrator*: The Schedule Administrator Role allows users access to all aspects of the SmartPM™ platform including project set up, schedule management, and field entry/modification.
     - *Project Manager*: Project Managers have the ability to enter data into the program through the field update log for any activity in the schedule. They do not have the ability to modify the project setup or schedule in any way.
     - *Activity Manager*: Activity Managers have the ability to enter data into the program through the field update log for only the activities for which they are listed as the "Activity Manager". They do not have the ability to modify the project setup or schedule in any way and they don't have the ability to enter data on activities for which they aren't listed as the "Activity Manager".
     - *Read-Only*: A Read-Only User will have no ability to alter the state of the Project in anyway, however can utilize the program for project review and analysis purposes.

4. Remove a User from the Project by clicking the Red Trash Can button

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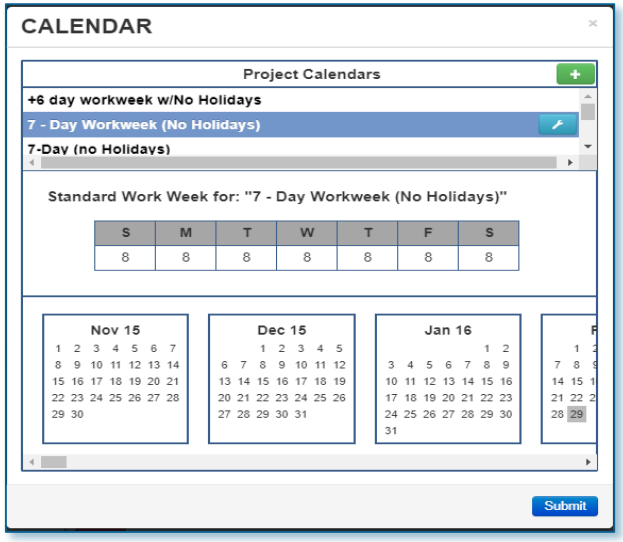
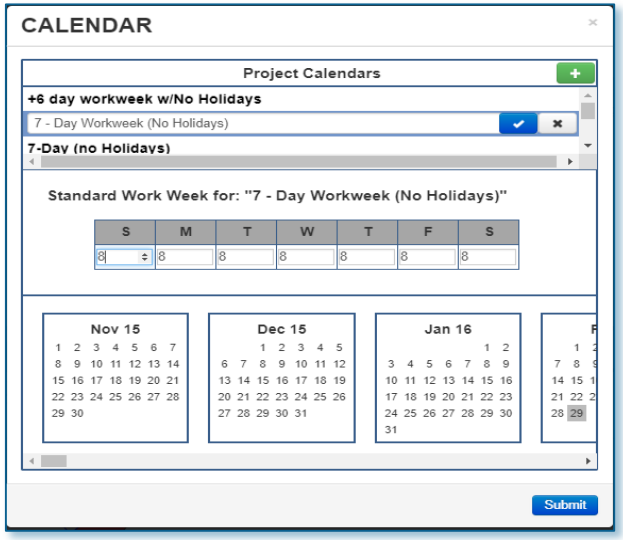
# Calendars Project Setup

Every Activity must be assigned a Calendar. The Calendar assigned will be used in the calculation of the Activity's Current & Planned Start & Finish Dates by using the Calendar's defined Work Days and Work Hours. Every new Project will include all Calendars from all imported Schedules. You can view, edit, add, and delete Calendars from this menu.




1. To add a calendar:
   - Click the Green Plus button
   - Select the newly created Calendar
   - Click the Blue Wrench button
   - Click the Blue Pencil button to edit the following Calendar information
     - ❖ Title – Type the Calendar's title into the text field
       - ➢ The new Calendar's default title will be "New Menu '#'"
     - ❖ Standard Daily Work Hours – Enter in the how many hours make up a work day for each day of the week
       - ➢ The program will default to a five day, eight hours a day schedule
     - ❖ Holidays: Select what days of the year will be considered non-working holidays. Toggle a holiday by double-clicking on a specific date within the shown 12-month calendar. All Holidays are denoted by grey boxes.
       - ➢ Newly created Calendars are defaulted to include standard US Holidays
   - To save changes, click the Blue Check Mark
   - The new Calendar can be assigned to Activities in the Activity Metrics tab
2. Edit already existing Calendars by selecting the Calendar you want to edit, clicking the blue wrench, clicking the blue pencil, and following the same steps as adding a new Calendar.
3. Delete already existing Calendars by selecting the Calendar you want to delete, clicking the blue wrench, and clicking the red trash can.

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# Activity Codes Project Setup

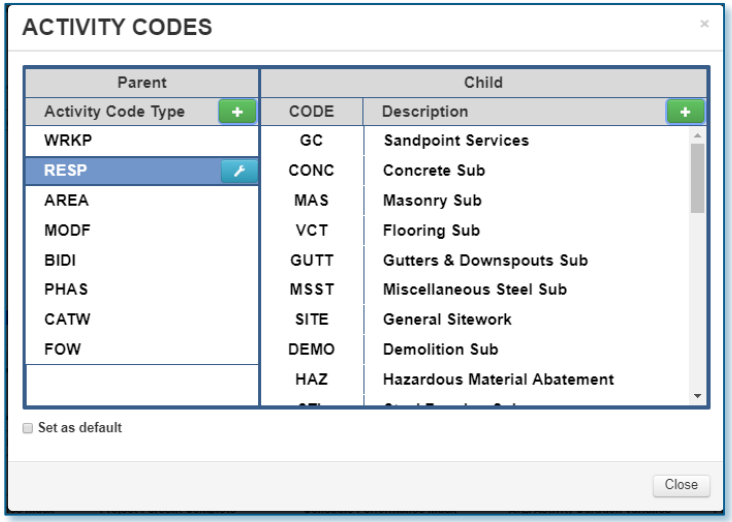
Activity Codes are values that identify characteristics of the work or in some way categorize schedule Activities that allow for filtering and ordering of Activities within reports. Activity Codes are structured by using Activity Code Parents and Activity Code Children, where the Children are subsets of the Parents. Every new Project will include all Activity Codes from all imported Schedules. You can view, edit, add, and delete Activity Codes from this menu.

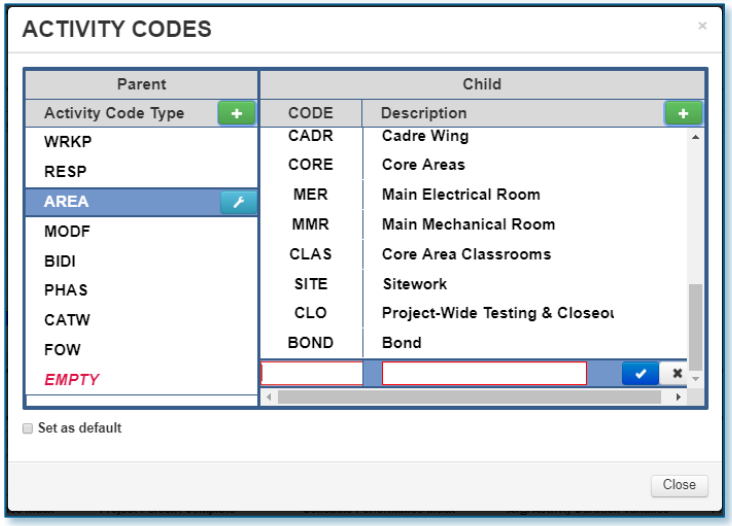
1. To add an Activity Code Parent:

    - Click the Green Plus button in the Parent window
    - Select the newly created Activity Code
    - Click the Blue Wrench button
    - Click the Blue Pencil button and give the Activity Code Parent a name
    - To save changes, click the Blue Check Mark

2. To add an Activity Code child:

    - Select the Activity Code Parent you want to add the Activity Code Child under
    - Click the Green Plus button in the Child window
    - Select the newly created Activity Code
    - Click the Blue Wrench button
    - Click the Blue Pencil button and give the Activity Code Child a name
    - To save changes, click the Blue Check Mark
    - The new Activity Code Child can be assigned to Activities in the Activity Metrics tab

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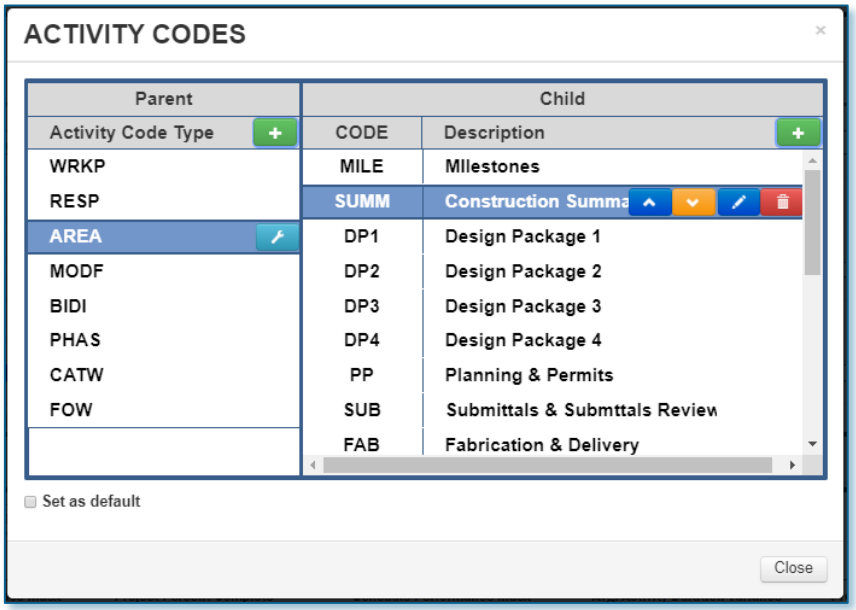
# Activity Codes Project Setup (cont.)

3. Re-Order Activity Code Child

   - Select the Activity Code Parent of the Activity Code Children to be re-ordered
   - Select the Activity Code Child to be re-ordered
   - Click the Blue Wrench button
   - Click either the Blue Up or Yellow Down Arrow buttons until the Activity Code Child is in the correct place
   - The order of the Activity Code Children within this window will be the order in which they will be Organized and Sorted within the Gantt Chart when the Organize function is being utilized

4. Edit already existing Activity Codes by selecting the Code to edit, click the blue wrench, click the blue pencil, and follow the same steps as adding a new Activity Code

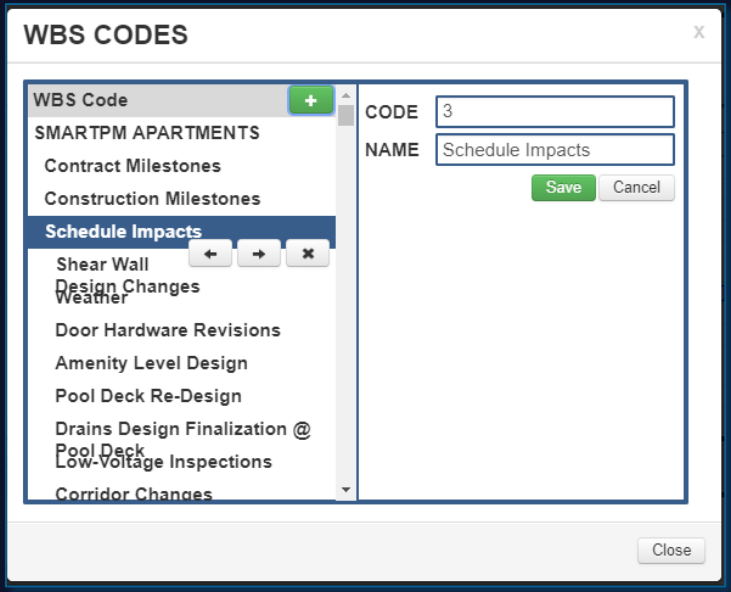
5. Delete already existing Activity Codes by selecting the Activity Code to delete, click the blue wrench, and click the red trash can



# WBS Codes Project Setup

A WBS Structure is a way to organize activities within a schedule. Each Schedule's WBS Structure is comprised of WBS Codes which are then assigned to Levels on a hierarchy. Every new Project will reflect the WBS Structure from the most recent Schedule import. You can view, edit, add to, and delete from the WBS Structure from this menu.

- To add a WBS Code:
  - Select the WBS Code to assign a new code to
  - Click the Green Plus button in the parent window
  - Enter the Code and Code Name in the right window
  - Use the left and right arrow buttons to place the new WBS Code in the correct hierarchy
- Edit already existing WBS Codes by selecting the Code to edit and follow the same steps as adding a new WBS Code
- Delete already existing WBS Codes by selecting the WBS Code to be deleted and clicking the Grey "X" button
- The new WBS Code ID can be assigned to Activities in the Activity Metrics tab

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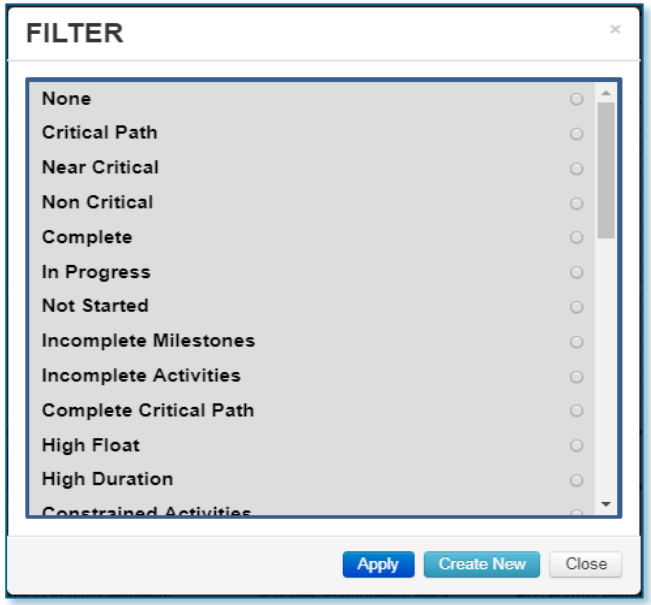
# Filters Project Setup

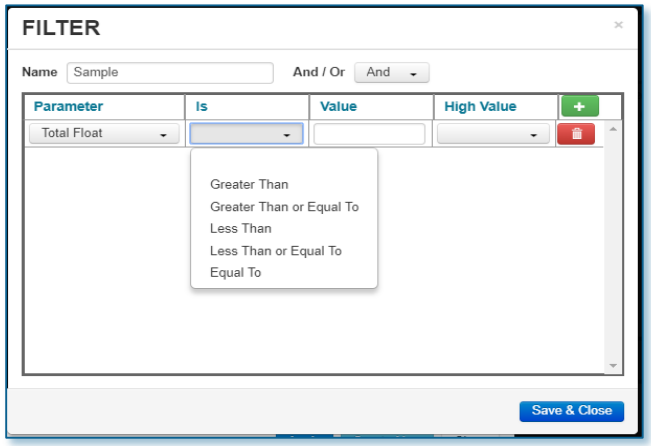
The Filter function allows users to determine which activities will be shown in the Gantt Chart based on selected activity attributes. SmartPM™ comes with numerous useful Filters built-in and also allows for custom Filters. **To apply a Filter, toggle the Filter Toggle Switch to turn "On" and then navigate to the Filter menu.**

To activate a pre-loaded filter, simply select the filter and click "Apply"

To create a New Filter:

1. Click the blue Create New button
2. Enter the Filter's name in the "Name" field
3. Click the "And/Or" drop down menu and select "And" or "Or"
   - "And" Filters – Activities must fit all defined parameters in order to be displayed in the Gantt Chart
   - "Or" Filters – Activities must fit at least one of the defined parameters to be displayed in the Gantt Chart
4. Click the Green Plus button to add a parameter
5. Click the drop-down menu in the Parameter column and select which Attribute this Parameter will be based on
6. Click the drop-down in the "Is" column and select the desired type of status of the Attribute(s)
7. In the Value column, enter or select the status of the Attribute(s) desired
8. If the type of status is a range, enter or select the top of the range in the High Value Column
   - To delete a Parameter, select the Parameter to be deleted and click the Red Trashcan Button
9. Once all Parameters are entered, click "Save & Close"

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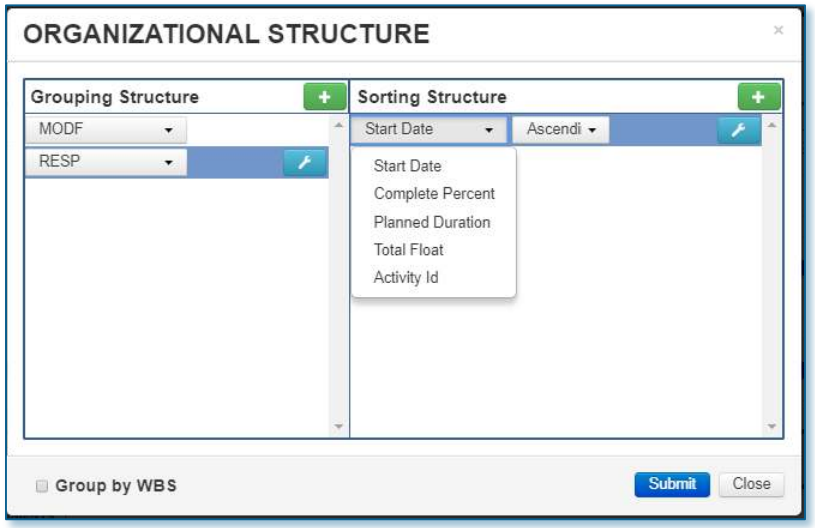
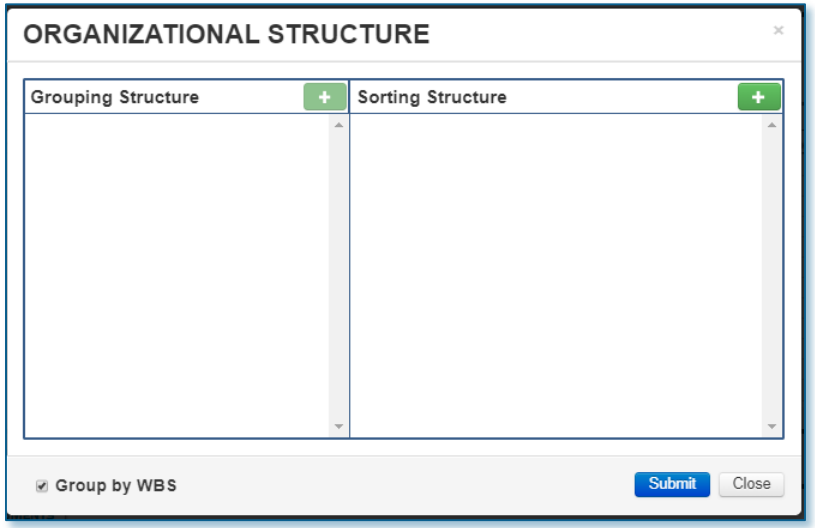
# Organizational Structure Project Setup

The Organizational Structure menu enables the organization of activities by the assigned WBS Structure or Activity Code for easier viewing & navigation of the Project.

- To organize by the WBS Structure, simply click the “Group by WBS” check box and click “Submit”
- To organize by Activity Code:
  - In the “Grouping Structure” window to Add by clicking the green “+” button. In the drop down window choose the appropriate Code and repeat as necessary
  - After the Grouping Structure is set, set the “Sorting Structure” in the right window of the window by clicking the green “+” button. In the drop down window, choose the appropriate Sort parameter and repeat as necessary
  - Click Submit

**NOTE:** To view the Organizational Structure, you need to have the Organization Toggle Switch to turn “On.”

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- Dashboard Feature Definitions

# Schedule Delay

The Schedule Delay section indicates the total delay, future recovery, and end date variance from the Baseline to the latest update on the Project.

**Critical Path Delay**

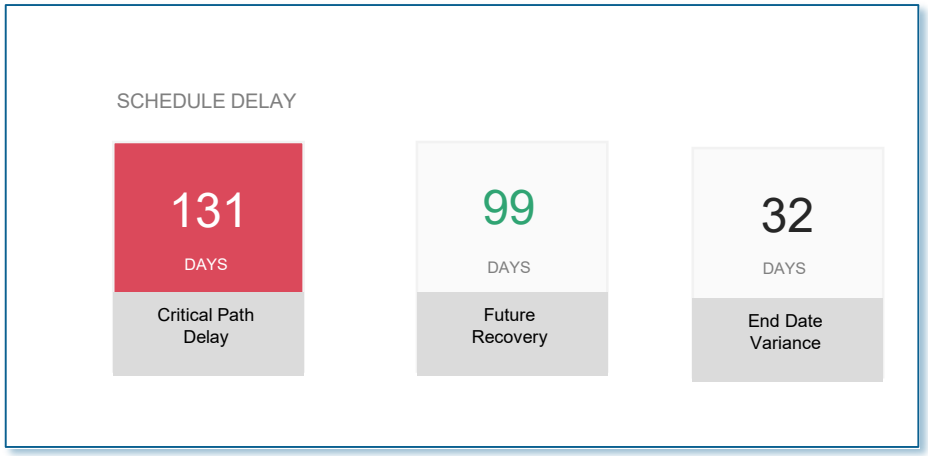
- This metric indicates how many days of actual critical path delay the project has suffered to date. Supporting this metric is an in depth delay analysis complete with a delay table and schedule summary that can be reviewed, analyzed and/or drilled down into.

**Future Recovery**

- The future recovery of a schedule captures the remediation efforts that have been put in place by the scheduler in order to recover time from the delays that have occurred thus far and bring the project completion date back in.

**End Date Variance**

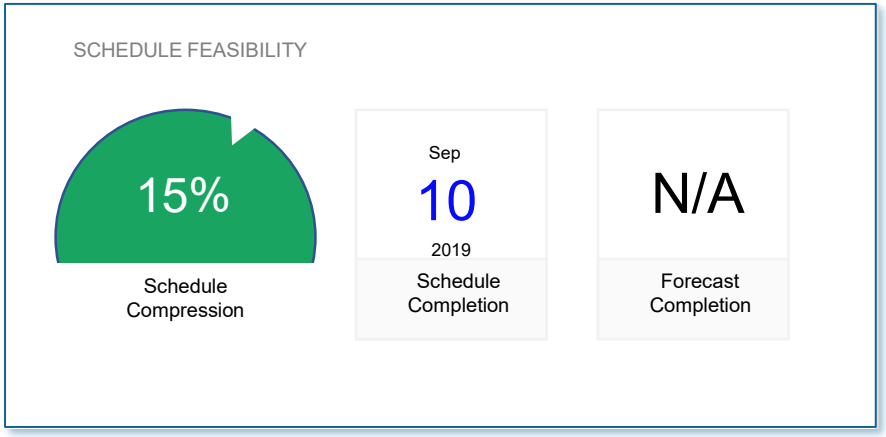
- The end date variance of a schedule captures the diversion of the current schedule completion date from the baseline schedule completion date.



# Schedule Feasibility

The Schedule Feasibility section provides a window into to the health of the Project and reliability of the plan moving forward.

- The Schedule Compression captures the amount of effort remaining in the schedule as compared to the baseline.
- SmartPM's™ Forecasted Completion date uses a proprietary AI based algorithm utilizing current progress to give a realistic estimate of what the completion date of the schedule should be given things progress as they have thus far. The scheduled completion date shows the completion date based on the current schedule update



# Schedule Quality

Click on the Schedule Quality Grade on the Company Dashboard or the Quality Index button from the Gantt Chart View.

SmartPM's™ Schedule Quality Index grade assessment is guided by the United States Defense Contract Management Agency's (DCMA) 14-point schedule assessment guideline. The DCMA guideline was developed by the Department of Defense to evaluate the enormous volume of contracts and schedules they were tasked with managing. Based on these criteria, SmartPM's™ Schedule Quality Index is evaluating whether a schedule is well-built and whether it adheres to a set of best practices considered important to the success and manageability of a project. These best practices are broken down in the attached "Schedule Quality Index Explained" document.

Click on any value to automatically filter for the identified activities in the Gantt Chart view.

# Schedule Quality Parameters

The numeric grade is categorized based on the table below.

| Grade | Value |
|---|---|
| A+ | 97-100 |
| A | 93-96 |
| A- | 90-92 |
| B+ | 87-89 |
| B | 83-86 |
| B- | 80-82 |
| C+ | 77-79 |
| C | 73-76 |
| C- | 70-72 |
| D+ | 67-69 |
| D | 63-66 |
| D- | 60-62 |
| F | 0-59 |

The grade for the quality index is calculated by subtracting the penalties from 100 based on the individual metrics based on the Quality Index.

| Metric | Good Threshold | Okay | Bad |
|---|---|---|---|
| | Threshold | Threshold | Threshold |
| Total Relationships | > = 1.5 | > = 1.25 | < 1.25 |
| Finish to Start | > 90% | 80% - 90% | < = 80% |
| Start to Start | < = 5% | 5% - 10% | > = 10% |
| Finish to Finish | < = 5% | 5% - 10% | > = 10% |
| Start to Finish | < = 0% | 0% - .2% | > = .2% |
| Missing Logic | < = 2.5% | 2.5% - 5% | > 5% |
| Negative Lag | < = 2.5% | 2.5% - 5% | > 5% |
| Positive Lag | < = 2.5% | 2.5% - 5% | > 5% |
| Constraints | < = 2.5% | 2.5% - 5% | > 5% |
| High Float Activities ( >44 days) | < = 20% | 20% - 33% | > 33% |
| High Duration Activities ( >44 days) | < = 2.5% | 2.5% - 5% | > 5% |
| Critical Path % | 10% - 20% | 5%-10% or 20% -30% | < 5% or >30% |
| Average Total Float | 15 – 44 days | 7.5 – 15 days | <7.5 or> = 44 days |

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