

SmartPM™ Onboarding

Release Version 2, Rev.2 – Last Updated August 6, 2019

Training Agenda

1	Introduction and Objectives Resources Overview of Key Terms / Scheduling Basics Logging In Setting up a New Project Importing Schedule Updates Running an Analysis Generating The Pink Report	Getting Started
2	Understanding the Company Dashboard Understanding the Project Dashboard Understanding Dashboards & Analytics Creating Scenarios	Working in Dashboards
3	Gantt Chart Navigation Filters and Organizational Structure Print Understanding the Delay Table in the Gantt Chart Audit Log in the Gantt Chart Project Metrics Activity Metrics Group Metrics	Diving Deeper
4	Tools Menu Project Setup Menu Users Menu Calendars Activity Codes WBS Codes	Project Configuration & Customization
5		Troubleshooting and Q & A

1 Objectives

SmartPM™

This training leads you through the fundamentals of initial set up and importation of a project schedule into SmartPM™. At the end of this training, you'll develop a solid understanding of how to use the software, interpret the initial results, navigate to make changes and corrections, and create scenarios.

Desired outcomes:

- ☐ Understand how to log in and set up users
- ☐ Understand how to set up a project
- ☐ Understand how to import a schedule
- ☐ Understand how to perform a schedule update import
- ☐ How to run an analysis
- ☐ Understand initial program and project dashboard results
- ☐ Create a Scenario
- ☐ Understand how to interpret the data
- ☐ Understand basic Gantt chart navigation
- ☐ Explore additional features
- ☐ Understand data considerations, import issues, and basic troubleshooting activities and Q&A

Resources

1. Onboarding Training Manual
2. User Manual – Online
3. Quality Index Explained (supplemental document)
4. Procedures (*supplemental document*)
5. Online Help support@smartpmtech.com
6. Customer Service (9am – 5pm EST): 404-329-3000
7. Suggestion Box

Overview of key terms

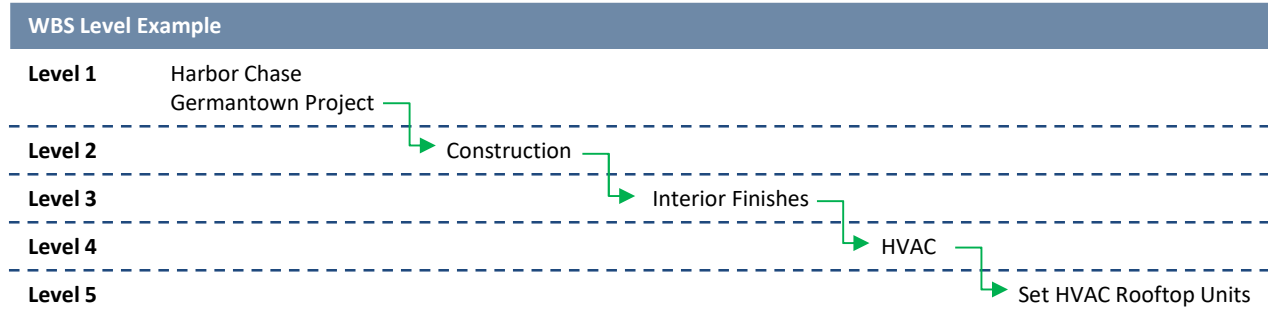
- **CPM Method** – Critical Path Method (CPM) scheduling is a mathematically based scheduling technique used for scheduling an interdependent set of activities to complete a project. A critical path is determined by identifying the longest path of dependent activities and measuring the time required to complete those activities from start to finish. The CPM method requires that all activities (typically categorized within a work breakdown structure – WBS), activity durations (time), constraints (end points such as milestones or deliverables), and relationships or “logic” between activities are defined. The “Critical” path is the only path that extends from start to finish of the project – with no room for delay. Every other path is considered “Non Critical” and have “Float” which can be delayed without making the project longer.
- **Activity or Task** – A discrete scheduled component of work.
- **Data Date** – The “as-of” date of the schedule.
- **Calendar** – The sequencing of days for which an activity can be performed. (e.g. 5-day work week, 6-day, etc.)
- **Logic Types**
 - **Finish-to-Start (FS)**: A tie denoting that a Successor can start after its Predecessor is Complete (e.g. Land must be purchased before road building can start). The Predecessor must finish before Successor can start.
 - **Start-to-Start (SS)**: A tie denoting that a Successor can start after its Predecessor has started (e.g. Road excavating must start before asphalt can be laid). The Predecessor must start before the Successor can start but the Successor can finish before or after the Predecessor.
 - **Finish-to-Finish (FF)**: A tie denoting that a Successor can finish after its Predecessor is finished. (e.g. Laying asphalt must be complete before line painting can be completed). The Predecessor must finish before the Successor can finish.
 - **Start-to-Finish (SF)**: A tie denoting that a Successor can finish after its Predecessor has started. (e.g. Road excavating must start before line painting can be completed). The Predecessor must start before the Successor can finish.

Best Practice

Finish-to-Start (FS) relationships are preferred whereas other relationships should be used on a limited basis.

Overview of key terms

- **Planned Duration** – The total number of working days estimated to complete an activity or task.
- **Milestone** – A significant event in the project schedule, such as an event restraining future work
- **Constraint** – A schedule constraint is a limitation that affects the start or end date of an activity. Schedule constraints can take the form of fixed imposed dates for a work item. *Wide use of constraints is discouraged.*
- **WBS Structure** - Work Breakdown Structure - A work breakdown structure (WBS) is the hierarchical organization of the project activities into manageable scopes of work. The Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK) defines the work breakdown structure as a "deliverable oriented hierarchical decomposition of the work to be executed by the project team." The work breakdown structure defines the scope into manageable chunks that a project team can understand, as each level of the work breakdown structure provides further definition and detail. Starting with WBS Level 1 as the most summarized level, each subsequent WBS Level further breaks down the scope of work into more detail.
 - **Level 1 WBS** – Most Summarized / Least Detailed
 - **Levels 2 through Level X** – More Detailed Activities based on the scope of work to be performed



Printing Reports in SmartPM uses the WBS structure of the schedule.

Overview of key terms

- **Float** - or slack is the amount of time that a task in a project network can be delayed without causing a delay to: subsequent tasks ("free float"), or project completion date ("total float"). The total float represents the schedule flexibility. Total Float (finish date) and Free Float (tasks).
- **Lag (Positive / Negative)** – Lag: an additional time component that can be assigned to a relationship (e.g. a relationship with a Finish-to-Start relationship with a 2 day lag means that the Successor starts 2 days after the finish of the Predecessor.) Lag can be positive or negative.
- **Critical Path Delay** – Critical Path Delay represents the amount of time in days the activities on the longest path have been delayed (e.g. delay impacting the project end date). SmartPM's™ Schedule Delay section indicates the total delay, future recovery, and end date variance from the Baseline to the latest update on the Project.
- **Recovery** – Recovery represents the amount of time in days an activity or schedule has progressed better than planned.
- **End Date Variance** - The difference between a scheduled end date and another scheduled end date. Typically measured in days from the Baseline schedule to the most recent or current updated schedule.
- **Compression** – SmartPM's™ Schedule Compression captures the amount of effort remaining in the schedule as compared to the baseline. This is an indicator of the effort required to meet the scheduled completion date.
 - A schedule compression value of 1.0 or 0% represents a non-compressed schedule
 - A schedule compression value > 1.0 or > 0% represents a compressed schedule
 - A schedule compression value < 1.0 or < 0% represents a decompressed schedule
- **Forecasted Completion** - SmartPM's™ Forecasted Completion date uses a proprietary AI based algorithm utilizing current progress to give an 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 estimated completion date based on the current schedule update, delays to date, recovery, and schedule compression.

Guidelines for using SmartPM

- ✓ **“Get in the Zone”** – Use Google Chrome Browser
- ✓ **“Stay in Your Lane”** – Import schedules starting with the baseline and loading subsequent updates in sequential order
- ✓ **“Don’t Cross the Streams”** – Import Only “like” files (e.g. XER and MPP files cannot be crossed)
- ✓ **“Hang On”** – After kicking off an analysis, wait for confirmation of the analysis before evaluating the performance metrics
- ✓ **“Keep it Going”** – Forecasted Completion Dates won’t be populated until the project achieves >25% complete
- ✓ **“Explore”** – Explore the product to analyze the metrics and understand quality, changes, delays, and recovery

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.

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.

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



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/resetsmartpmtech.com/eje4mly2Xo5mBVRcOxY4uV3J0sOuQaLU>

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

Thank you!

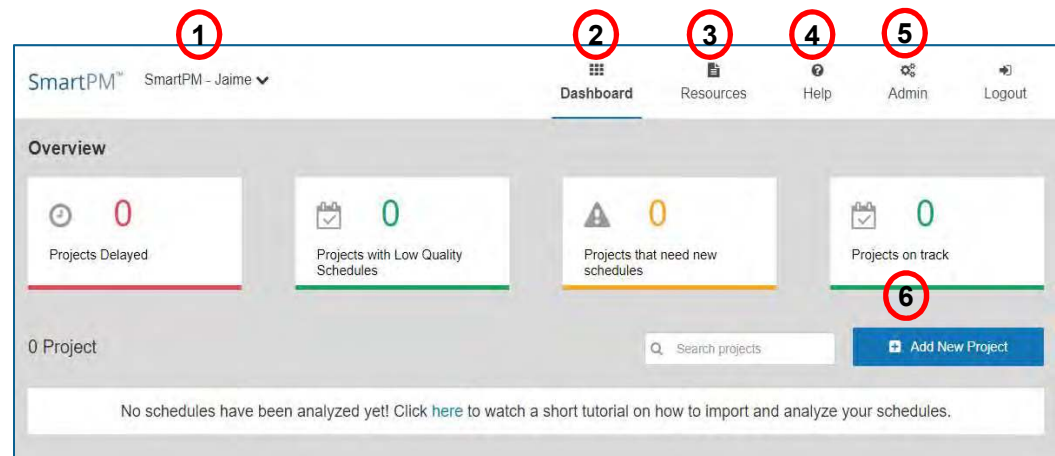
SmartPM Technologies Team

SmartPM Technologies
All rights reserved

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

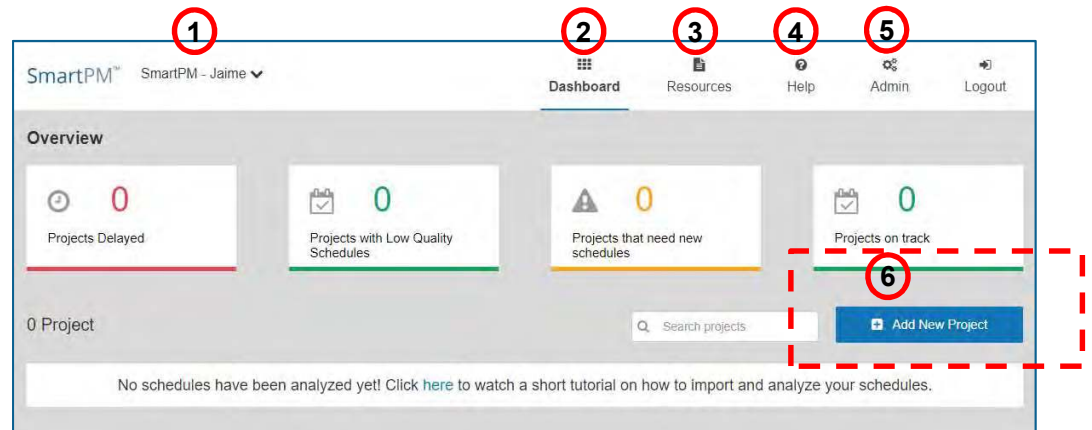
After logging into SmartPM™, users will be guided to the Company Dashboard. The Company Dashboard provides users with a complete listing of all projects loaded into the system.



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

Setting Up a New Project

- 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



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: Input Project Info

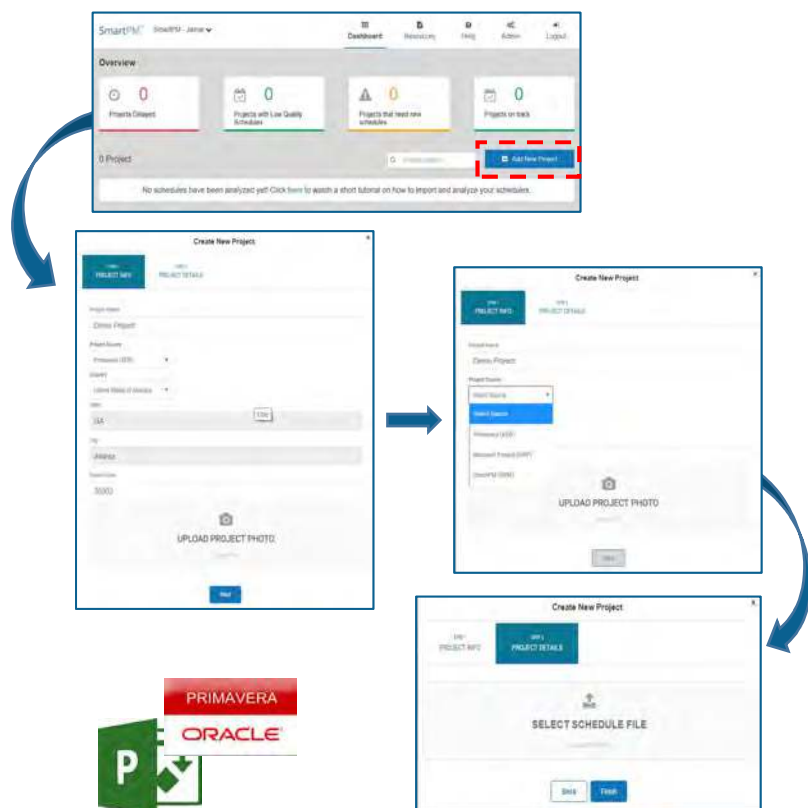
1. Give the Project a Name.
2. Select “Project Source file Type” (Primavera XER or Microsoft MPP).
3. Enter the Country and Zip Code where the Project is located. **User Note: This will establish the weather station for the project weather analysis.**
4. Add an optional Project Photo by clicking on “Upload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

Step 2: Enter Project Details

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

User Note: You will be notified if the import is successful; if you receive an error message, there may be an issue with the file you are trying to import. If you receive an error message, please reach out to Customer Support for resolution.

Setting Up a New Project (cont.)



After logging in, you will see your Company Dashboard. On the Company Dashboard Click “+ Add New Project”

Step 1: Input Project Info

1. Project Name – name the project
2. Select “**Project Source: Schedule File Type**” (e.g. Microsoft Project *.*MPP or Primavera P6 *.*XER)
3. Input Project Zip Code **User Note: This will establish the weather station for the project weather analysis.**
4. (Optional) Click “**Upload Project Photo**” and navigate to the folder on your computer where the file is located, Select the file, and Click Open to upload the photo to be displayed on the Dashboard
5. Click “**Next**” at bottom

Step 2: Enter Project Details:

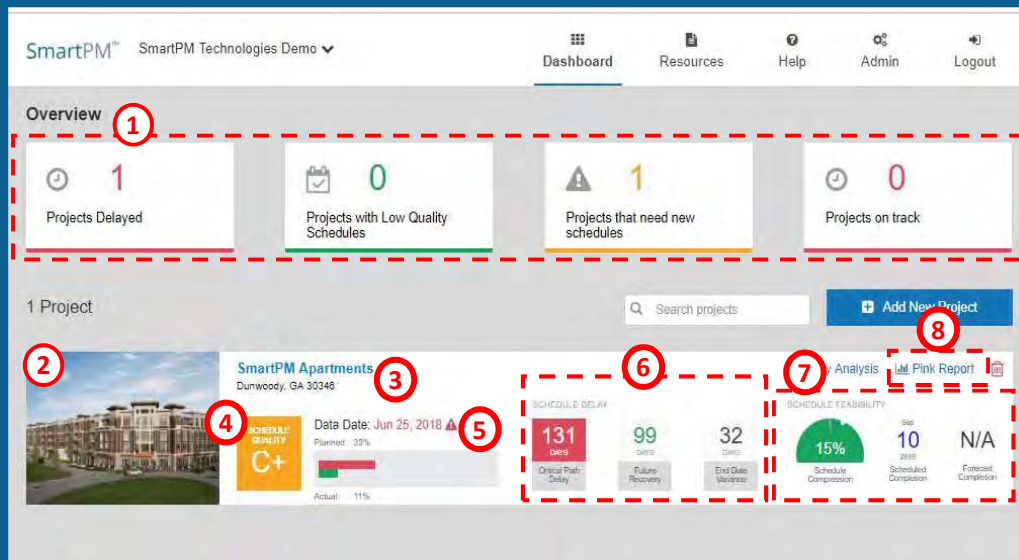
User Note: If a Microsoft Project (MPP) is being imported, you will be prompted to enter the Data Date for the schedule.

1. Click “**Select Schedule File**” and select the Baseline Schedule File to be imported
2. Navigate to the folder on your computer where the file is located, Select the File, Click Open
3. Click “**Finish**”

User Note: You will be notified if the import is successful; if you receive an error message, there may be an issue with the file you are trying to import. If you receive an error message, please reach out to Customer Support for resolution.

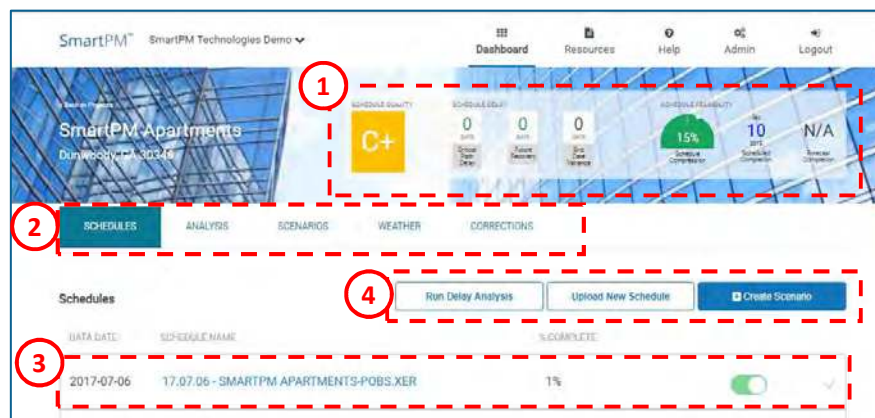
The Company & Project Dashboards

The Company Dashboard



After you have set up the Project and imported the first schedule, the Company Dashboard and the Project Dashboard will begin to be populated. From these dashboards, 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.
User Note: Forecasted completion dates won't populate until the project is greater than 25% complete.
8. The Pink Report button - this will create an executive report based on the most recent schedule update imported



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.

User 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.

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.

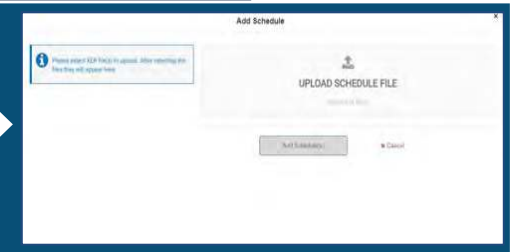
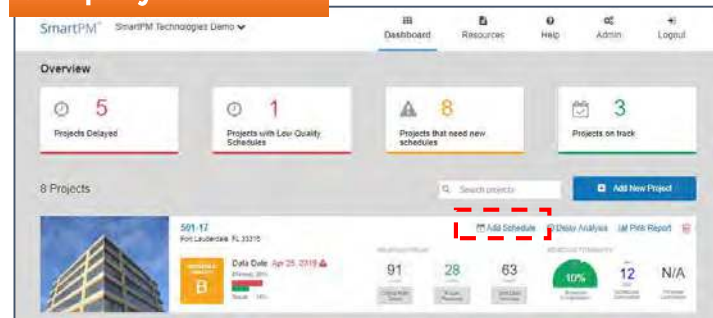
1. From the Company Dashboard, Click the **"Add Schedule"** link.
2. Select **"Upload Schedule File"** button and locate the file(s) in your computer's directory

User Note: If a Microsoft Project (MPP) is being imported, you will be prompted to enter the Data Date for the schedule.

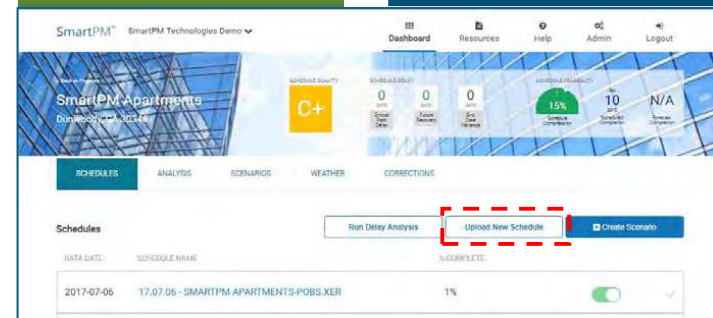
3. To add multiple schedules for upload at one time (bulk import), re-perform Step 2 above or select multiple files in Step 2 before continuing.
4. Click **"Add Schedule"**

User 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



Importing Schedule Updates – Method 1 Company Dashboard

Method 1

Company Dashboard

SmartPM Apartments
Atlanta, GA 30326

Data Date: Dec 19, 2016
Progress: 82%
Actual: 42%

214 Units
131 Units
83 Units
17%
31 Units
06 Units

1 Add Schedule

2 UPLOAD SCHEDULE FILE

3 **4** Add Schedule

Method 1: From the Company Dashboard

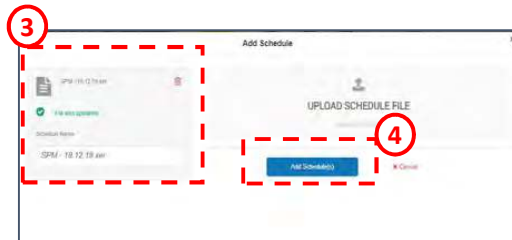
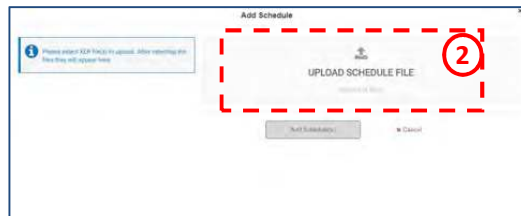
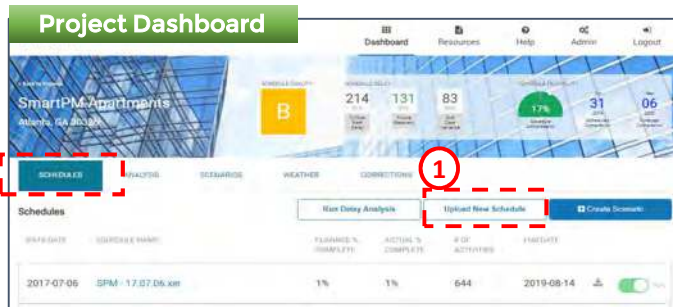
1. In the Project window, select “**Add Schedule**” and a new window will appear
2. Click “**Upload Schedule File**” and navigate to the folder on your computer where the file is located, Select the file, Click Open, the uploaded schedule will be populated in the left box
3. Enter a “Schedule Name” or use the default file name for the schedule
To add multiple schedules for upload at one time (bulk import), re-perform Step 2 above or select multiple files in Step 2 before continuing.
4. Click “**Add Schedule**”

User Notes:

- 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.
- If a Microsoft Project (MPP) is being imported, you will be prompted to enter the Data Date for the schedule.
- You will be notified if the import is successful; if you receive an error message, there may be an issue with the file(s) you are trying to import. If you receive an error message, please reach out to Customer Support for resolution.

Importing Schedule Updates – Method 2 Project Dashboard

Method 2



Method 2: From the Project Dashboard

In the Project Dashboard, confirm that “**Schedules**” Tab is active (e.g. Blue)

1. Select “**Upload New Schedule**” and a new window will appear
 2. Select “**Upload Schedule File**” and navigate to the folder on your computer where the file is located, Select the file, Click Open and the uploaded schedule will be populated in the left box.
 3. Enter a “Schedule Name” or use the default file name for the schedule
- To add multiple schedules for upload at one time (bulk import), re-perform Step 2 above or select multiple files in Step 2 before continuing.*
4. Click “**Add Schedule**”

User Notes:

- 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.
- If a Microsoft Project (MPP) is being imported, you will be prompted to enter the Data Date for the schedule.
- You will be notified if the import is successful; if you receive an error message, there may be an issue with the file you are trying to import. If you receive an error message, please reach out to Customer Support for resolution.

Running an Analysis

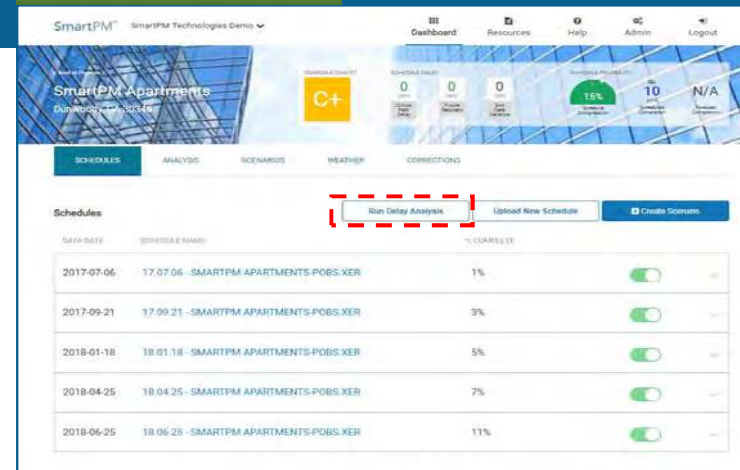
After importing Schedule Updates, the Project Dashboard will be populated with the schedules that have been uploaded.

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

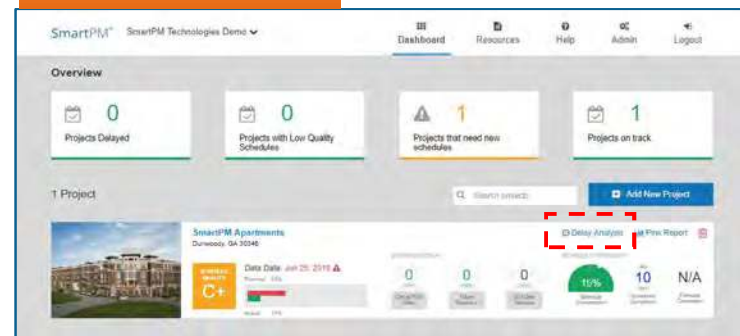
Once all your schedules are imported you will notice that there are zeros across the Project's Schedule Delay section. In order to automatically calculate these figures, you will need to run a Delay Analysis.

- 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



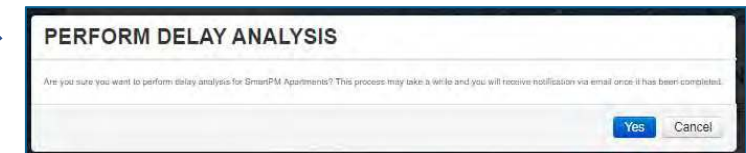
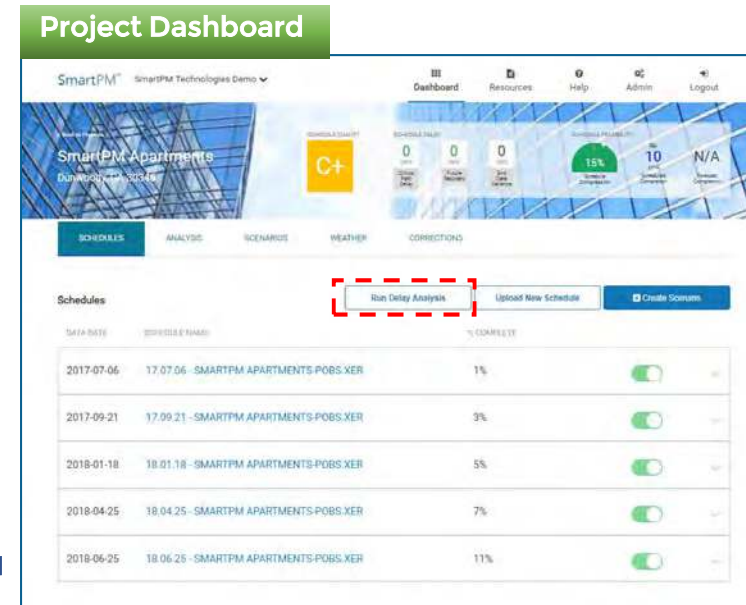
Running an Analysis

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 an analysis to be completed.
3. You will receive an email once the delay analysis is complete

User Note: Running a Delay Analysis can take 5min to 45min depending on the number of schedule updates, the number of activities, and the total time duration of the project.

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.



User Note: You will be notified if the Delay Analysis request is successful and you will receive an email when it is complete; if you receive an error message, there may be an issue with the files you are trying to analyze. If you receive an error message, please reach out to Customer Support for resolution.

2

Working in Dashboards

SmartPM™

Check Point

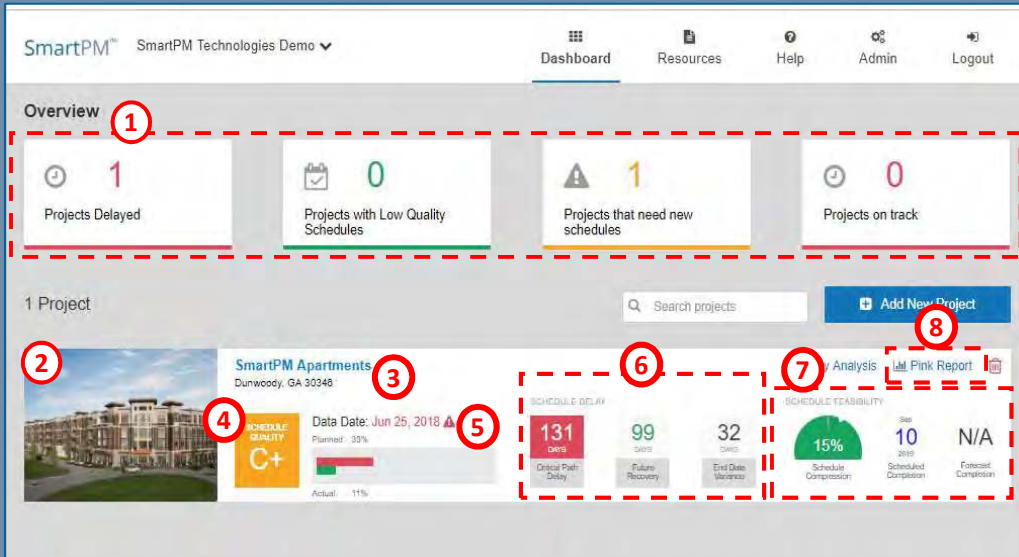
Desired outcomes:

- ✓ Understand how to log in and set up users
- ✓ Understand how to set up a project
- ✓ Understand how to import a schedule
- ✓ Understand how to perform a schedule update import
- ✓ How to run an Analysis
- ☐ Understand initial program and project dashboard results
- ☐ Create a Scenario
- ☐ Understand how to interpret the data
- ☐ Understand basic Gantt chart navigation
- ☐ Explore additional features
- ☐ Understand data considerations, import issues, and basic troubleshooting activities and Q&A

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.
User Note: Forecasted completion dates won't populate until the project is greater than 25% complete.
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Schedule Quality

SmartPM's™ Schedule Quality Index evaluates whether a schedule is developed using industry best practices considered important to the success and manageability of a project and is guided by the United States Defense Contract Management Agency's (DCMA) 14-point schedule assessment guideline.

Total Relationships	Missing Logic	Constraints	Lag
Relationship Types	High Duration & High Float Activities	Critical Path %	Average Total Float

User Note: Schedule Quality Index indicates whether a schedule is built with best practices; it does NOT indicate if a schedule is appropriate for the project, if it represents the scope of work, or if it is been manipulated. The quality metrics shown reflect the schedule that is being analyzed and do not reflect the schedule from the source system. Please visit the help desk for a list of the changes that SmartPM makes in order to analyze the schedule while importing.

Interpreting the Schedule Quality Results

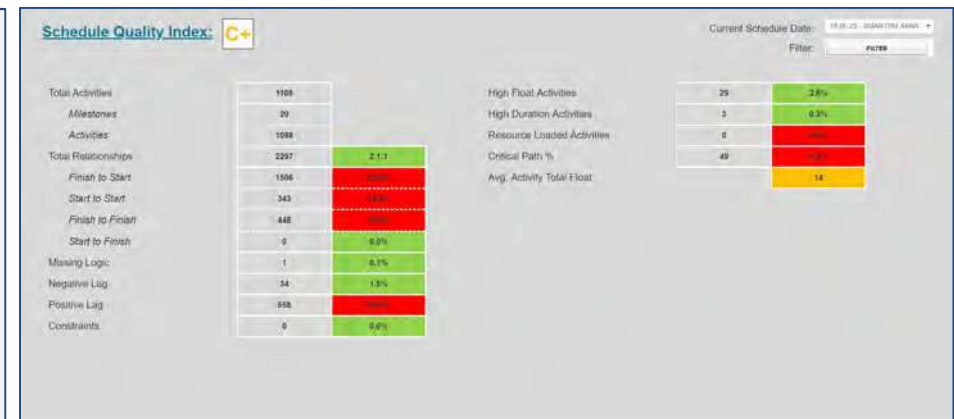
Each quality parameter index is color coded to reflect its impact on the overall Quality Grade

Red = Bad / Unacceptable

Yellow = Okay / Acceptable

Green = Good / On Target

Descriptions of each index, why they are tracked, and the thresholds for each index can be found in the "Schedule Quality Explained" document



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

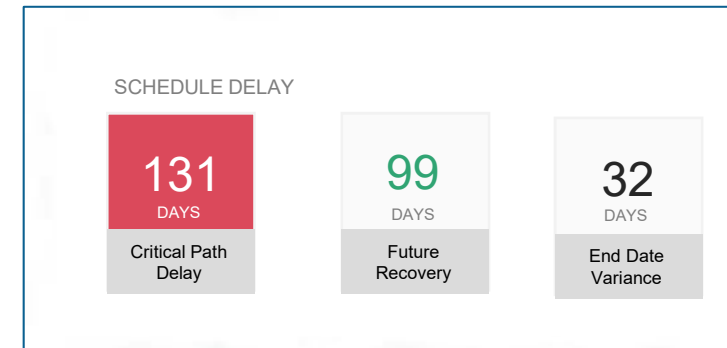
- This metric indicates how many days of actual critical path delay the project has suffered to date. Supporting this metric is an in depth delay analysis complete with a delay table and schedule summary that can be reviewed, analyzed and/or drilled down into.

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.



$$\text{End Date Variance} = \text{Delay} - \text{Recovery}$$

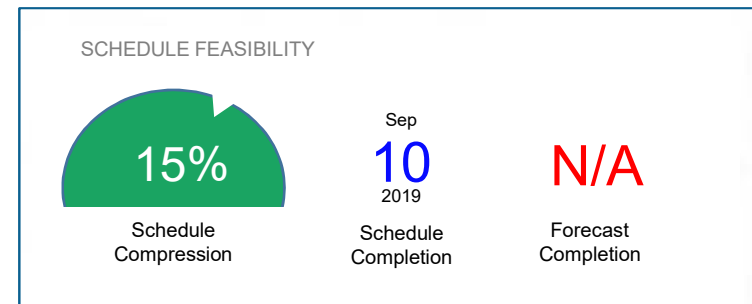
User Note: Negative days of future recovery indicate that the end date has been pushed out.

Schedule Feasibility & Compression

The Schedule Feasibility section provides a window into to the health of the Project and feasibility 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

User Note: Forecast Completion date will not populate until project is approximately 25% complete.



Interpreting Compression Results

Compression Index Rating		
Decompressed	Equal to Baseline	Compressed
<1	1	> 1
< 0%	0%	> 0%

For Compressed Schedules (e.g. > 1 or >0%)

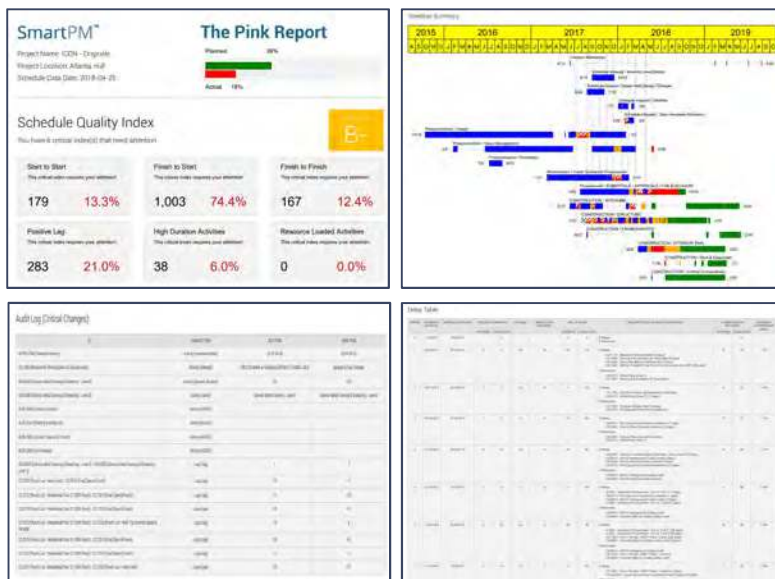
> 40% Compression	Bad / Unacceptable
25% to 40%	At Risk
< 25%	Acceptable

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

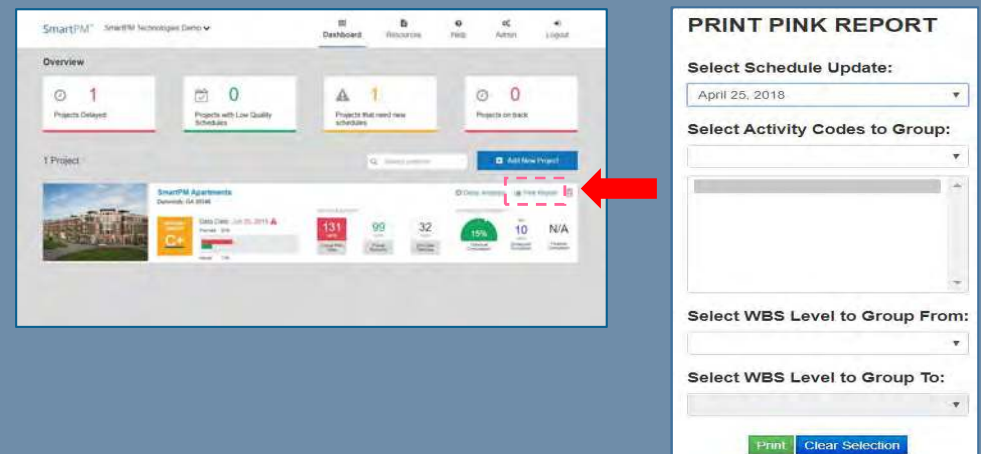
The Pink Report includes:

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



Follow these steps to generate The Pink Report:

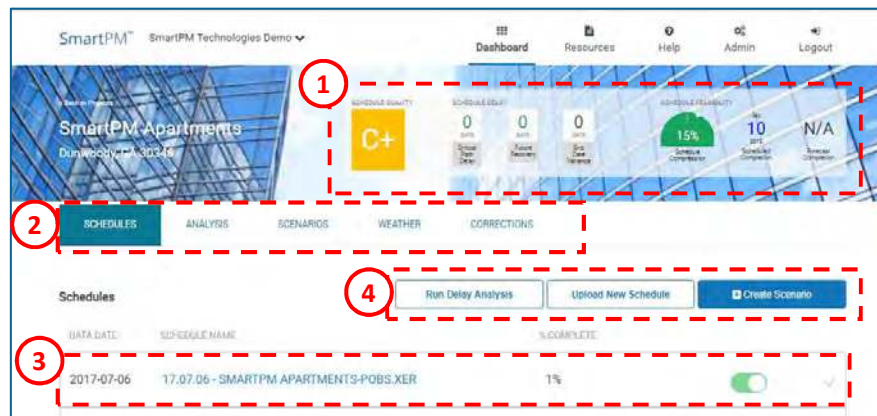
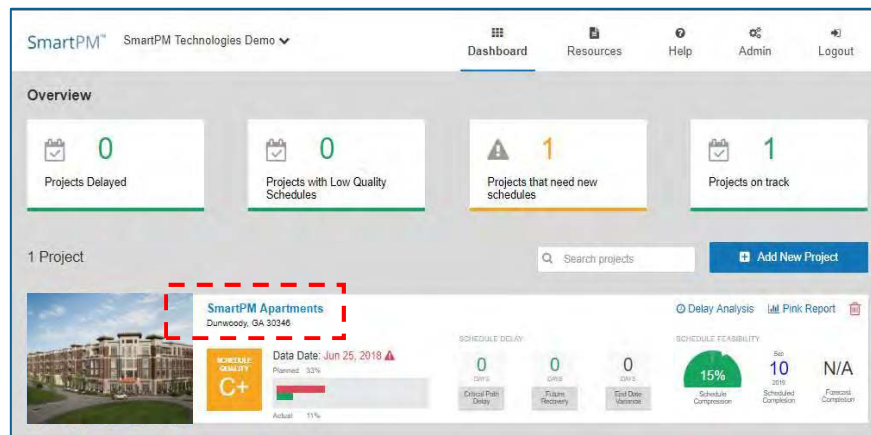
1. Click the **Pink Report** button on the dashboard to activate the Pink Report Creation menu
2. Select Schedule Update: Select from which schedule update the graphic will be based off of
3. Select WBS Level to Group From/To: Select the range of WBS Levels the summary bars in the summary graphic will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



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Accessing the 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.

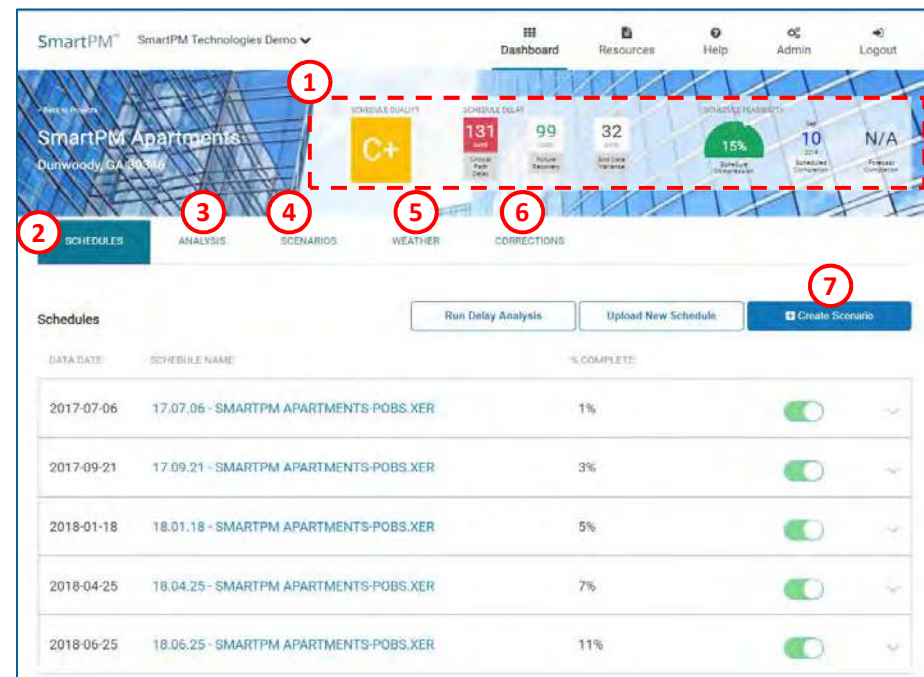
User Note: If only the baseline schedule is loaded, Running a Delay Analysis, and other actions may not yield any results as an analysis requires two schedules to be compared.

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.



Schedule Quality

Viewing the Quality Grade and Indices

Method 1: From the Company Dashboard

1. In the Company Dashboard, click the Schedule Quality Grade Box for the Project you wish to evaluate
2. The Compact Schedule Quality view will open in a new tab
3. To view the captured activities for any index, click on the index's corresponding Activity Count box
4. To view the Grade for any previous schedule, click the drop-down menu in the top left and select the schedule you wish to view

Method 2: From the Project Dashboard

1. In the Project Dashboard, confirm that “**Analysis**” Tab is active (e.g. Blue)
2. Click the “**Quality**” tab in the left menu to display the analysis
3. To view the captured activities for any index, click on the index's corresponding filter icon
4. To view the grade for any previous schedule, click the drop-down menu in the top left and select the schedule you wish to view

User Note: Threshold are pre-determined parameters but may be customized depending on the type of project. Contact your Customer Service Representative to adjust any thresholds.

The quality metrics shown reflect the schedule that is being analyzed and do not reflect the schedule from the source system. Please visit the help desk for a list of the changes that SmartPM makes in order to analyze the schedule while importing.

Method 1: The Company Dashboard- Quality

Company Dashboard Schedule Quality

Click on the Quality Rating to open a new window with the Quality Index and parameters.

From the From the drop down “**Current Schedule Date**”, choose the schedule to be analyzed.

User Note: Clicking on any metric will bring you to the Gantt Chart view filtered for the metric you selected.

Interpreting the Schedule Quality Results

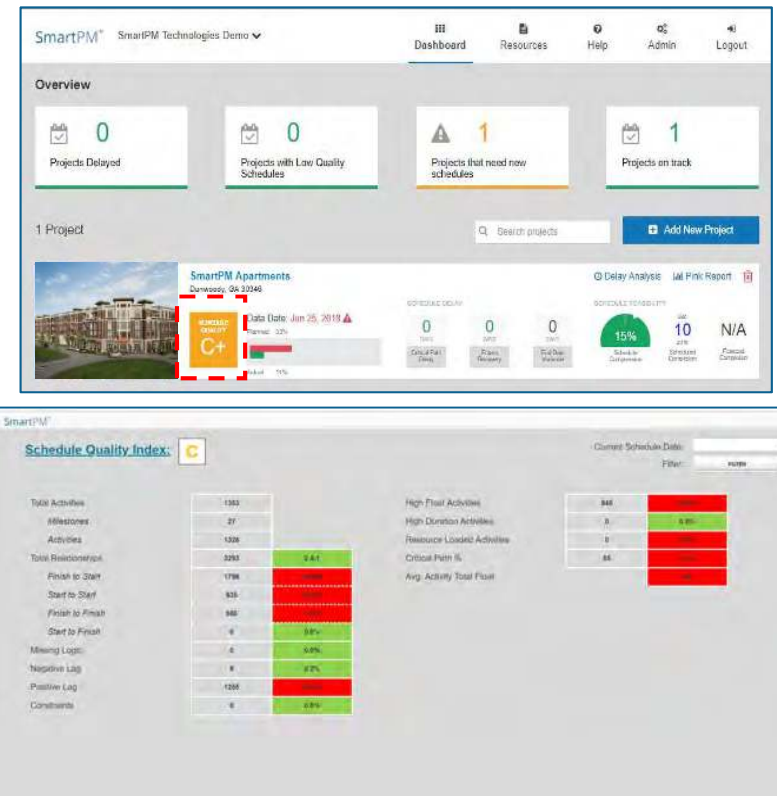
Each quality parameter index is color coded to reflect its impact on the overall Quality Grade

Red = Bad / Unacceptable

Yellow = Okay / Acceptable

Green = Good / On Target

Descriptions of each index, why they are tracked, and the thresholds for each index can be found in the “Schedule Quality Explained” document



The quality metrics shown reflect the schedule that is being analyzed and do not reflect the schedule from the source system. Please visit the help desk for a list of the changes that SmartPM makes in order to analyze the schedule while importing.

Method 2: The Project Dashboard- Quality

Project Dashboard “Analysis” Tab

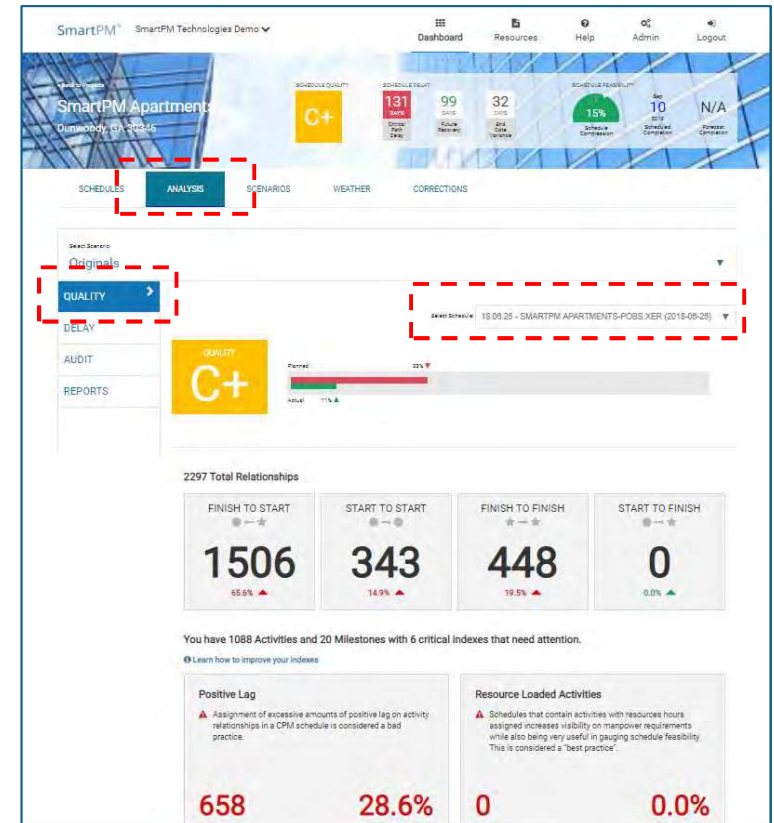
Click on “**Analysis**” tab at the top ribbon bar to access the Analysis Tab. The left menu includes 4 areas: Quality, Delay, Audit, and Reports.

“**Quality**” allows users to view critical information related to the quality and integrity of the schedule.

From the 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



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 penalties from 100 based on the default individual threshold metrics on the Quality Index.

METRIC	GOOD THRESHOLD	OKAY THRESHOLD	BAD 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

Schedule Quality

Just because your car passes emissions, doesn't mean it is safe to drive

Additional Factors to Consider Overall Schedule Quality

In addition to the parameters for measuring quality, additional areas should be investigated to consider the overall health of the schedule.

Changes to the Schedule	Significant changes made to the schedule may be indicative of: <ul style="list-style-type: none">• Manipulation,• Masking of the true critical path,• Errors in sequencing of work,• Inadequate, unrealistic, or unachievable durations or dates	<ul style="list-style-type: none">✓ Check SmartPM's Audit Log to Evaluate Changes✓ Evaluate Critical Path
Delays & Recovery	Delays in your critical path may be indicative of: <ul style="list-style-type: none">• Inadequate logic or sequencing of work• Poor progress against planned activities• Inadequate, unrealistic, or unachievable durations• Inadequate schedule detail	<ul style="list-style-type: none">✓ Check SmartPM's Delay and Recovery Metrics✓ Evaluate Critical Path
Compression	Compression in the schedule may be indicative of: <ul style="list-style-type: none">• Stacking of work towards the end of the project• Deferring critical path work• Inadequate resources• Changes made to mask actual progress	<ul style="list-style-type: none">✓ Check SmartPM's Compression Metrics✓ Use Gantt Chart to spot check

The Company Dashboard- 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

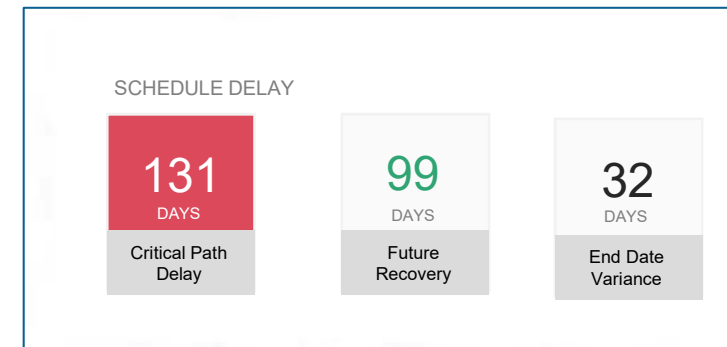
- This metric indicates how many days of actual critical path delay the project has suffered to date. Supporting this metric is an in depth delay analysis complete with a delay table and schedule summary that can be reviewed, analyzed and/or drilled down into.

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.



End Date Variance = Delay - Recovery

***User Note:** Negative days of future recovery indicate that the end date has been pushed out.*

The Project Dashboard- Delay

Project Delay or “Critical Path Delay” is calculated by identifying activities that were on the schedule’s “Longest Path” at specific points in time, and measuring “delay days” for the period which the activities are on the longest path.

SmartPM’s Delay Table indicates the following for each schedule update:

Schedule Status Date	Date of the most recent schedule update
Scheduled End Date	Current scheduled completion end date indicated by the most recent schedule
End Date Variance (in period & cumulative)	The difference between the baseline end date and most current schedule end date
Critical Path “CP” Delay	Total Delay including concurrent delay between activities and show as net delay for the period
Recovery	Amount of time saved by critical activities progress at a better rate than planned
Net CP Delay (in period & cumulative)	Critical path delay minus recovery
Number of Delayed Activities	Number of Delayed Activities along with the specific activity IDs and scopes of work that are delayed
Planned Delay Recovery	Amount of time saved or lost by changes to the schedule
Schedule Compression Index	A measure of the amount of work to be completed as of the most recent schedule as compared to the original plan or baseline; how much more work needs to be completed vs. planned

Evaluating Delays & Recovery

Accessing the Delay Table:

Method 1: From the Project Dashboard

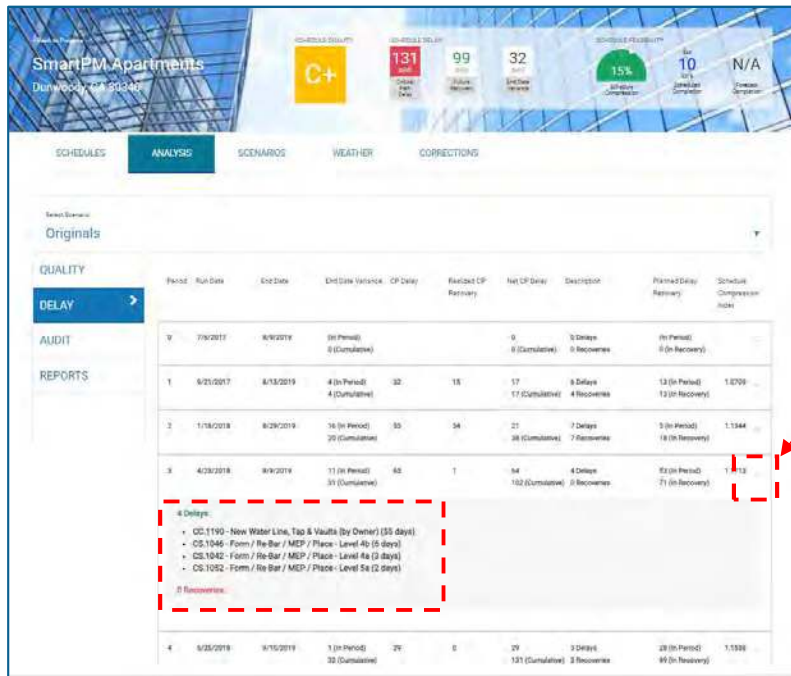
1. In the Project Dashboard, confirm that “Analysis” Tab is active (e.g. Blue)
2. Click the “**Delay**” tab in the left menu to display the analysis
3. Select the Scenario you wish to view in the “**Scenario**” dropdown

Advanced Method 2: From the Gantt Chart

1. In the Gantt Chart view, click the “**Delay Table**” tab at the top of the Analytics Window below the Gantt Chart
2. Follow the steps from Method 1
3. *Additionally, in the Gantt Chart view, you can filter the schedule to the critical activities for each period by clicking the “Filter” icon on the right side of each update row.*

User Note: *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 of the Delay Table. Use this filter to understand specific activities that may have been causing delays or experienced recovery.*

The Project Dashboard- Delay



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.

The Project Dashboard- Reports

Project Dashboard “Analysis” Tab

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

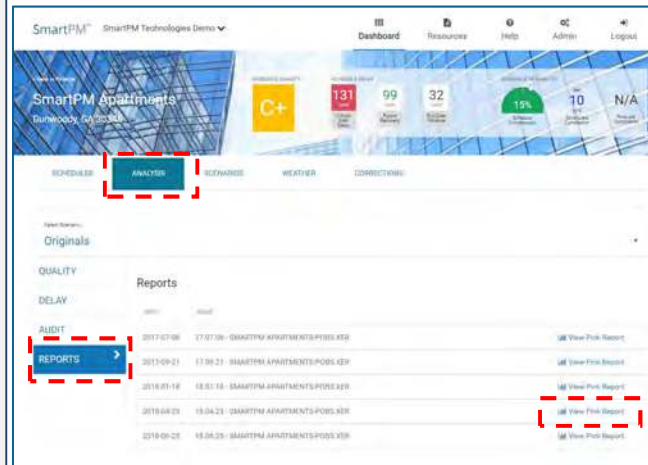
“Reports” allows users to generate executive level reports, “Pink Reports”, for a given schedule update.

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.
- Click “Print” and the report will generate



PRINT PINK REPORT

Select Schedule Update:
April 25, 2018

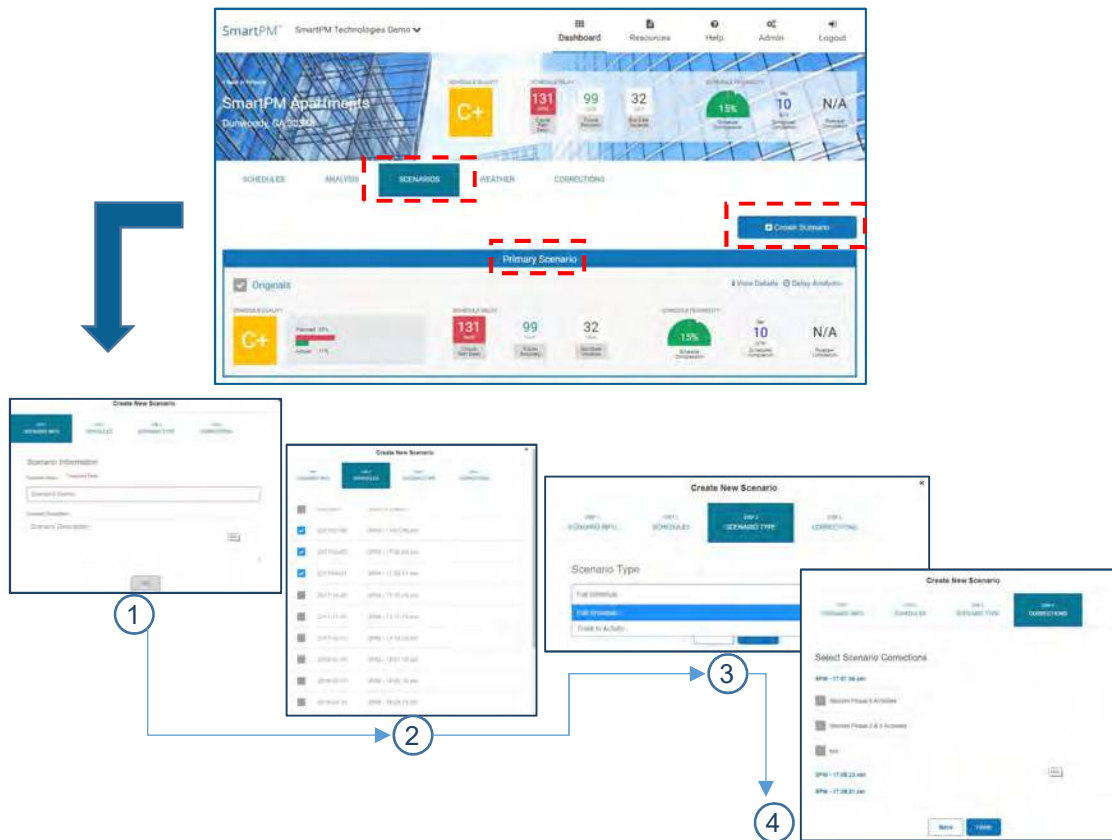
Select Activity Codes to Group:
[Dropdown menu]

Select WBS Level to Group From:
[Dropdown menu]

Select WBS Level to Group To:
[Dropdown menu]

User Note: Pink Reports may also be generated from the Company Dashboard.

The Project Dashboard- Scenarios



User 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.

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 generate “What-if scenarios”, make corrections, and apply the schedule corrections.

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. (all or some)

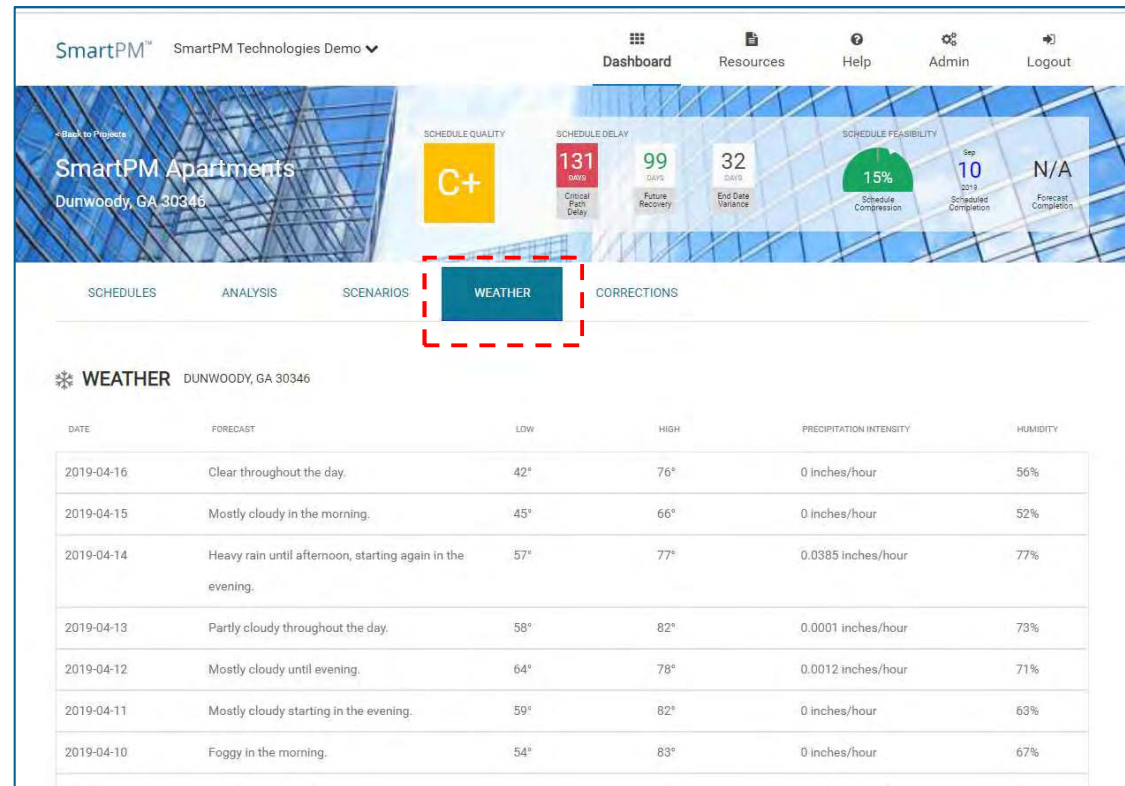
Step 3: Select the Type of Scenario to be created:
a) **Full Schedule** or b) **Track to Activity**. *User Note: Full Schedule will analyze all activities, while Track to Activity will allow you to filter and select a specific activity (such as a milestone to analyze to)*

Step 4: Select the corrections to be applied 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.

The Project Dashboard- Weather

Project Dashboard “Scenarios” Tab
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.



Project Dashboard “Corrections” Tab

Click on “Corrections” tab at the top ribbon bar 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:

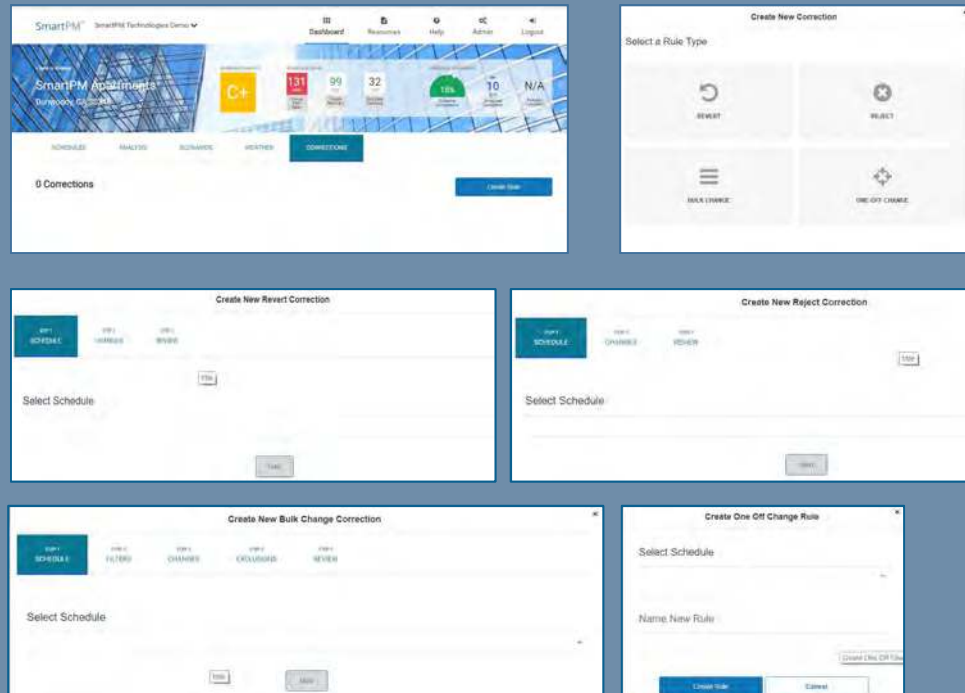
“Revert”: Make changes that should have been made for a prior date. This creates a rule that applies the change and re-runs the delay analysis assuming that the change is in affect.

“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.

The Project Dashboard - Corrections



3 Diving Deeper

Check Point

SmartPM™

Desired outcomes:

- ✓ Understand how to log in and set up users
- ✓ Understand how to set up a project
- ✓ Understand how to import a schedule
- ✓ Understand how to perform a schedule update import
- ✓ How to run an Analysis
- ✓ Understand initial program and project dashboard results
- ✓ Create a Scenario
- ✓ Understand how to interpret the data
- ☐ Understand basic Gantt chart navigation
- ☐ Explore additional features
- ☐ Understand data considerations, import issues, and basic troubleshooting activities and Q&A

Gantt Chart Navigation

- Filters and Organize
- Project Metrics
- Activity Metrics
- Group Metrics
- Audit Log
- Understanding the Delay Table

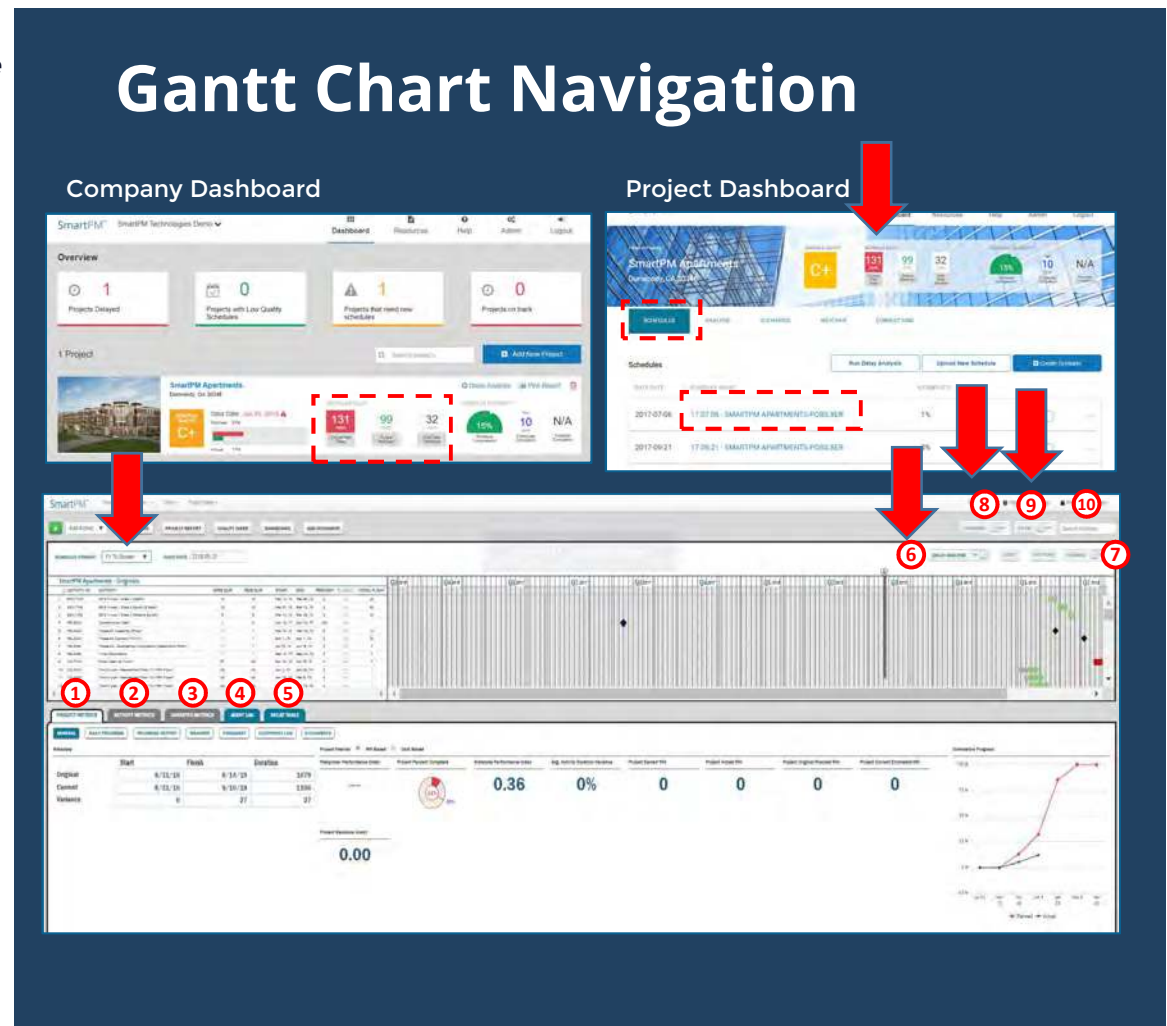
From the Company Dashboard, click on the Schedule Delay metrics on the summary to open up the Gantt Chart view. Or, from the Project Dashboard select the schedule to view the Gantt Chart.

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

Gantt 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

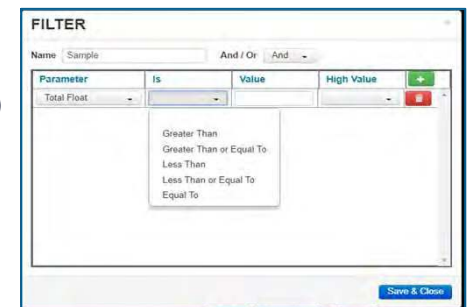
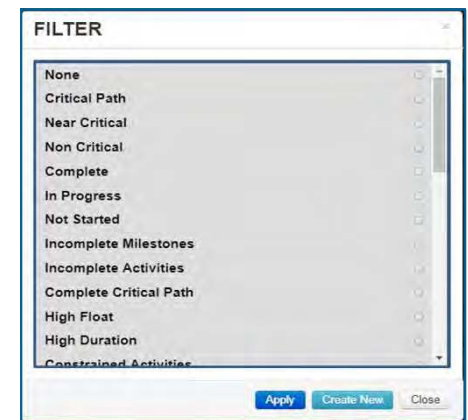


Project Setup - Filters

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”



Project Setup - Organizational Structure

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.”

The screenshot shows the 'ORGANIZATIONAL STRUCTURE' window. It has two main sections: 'Grouping Structure' and 'Sorting Structure'. The 'Grouping Structure' section has a dropdown menu with 'MODF' and 'RESP' options. The 'Sorting Structure' section has a dropdown menu with 'Start Date' and 'Ascendi' options. A 'Submit' button is at the bottom right. A 'Group by WBS' checkbox is at the bottom left.

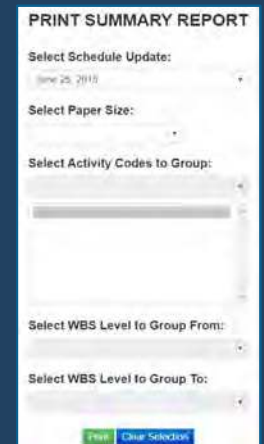
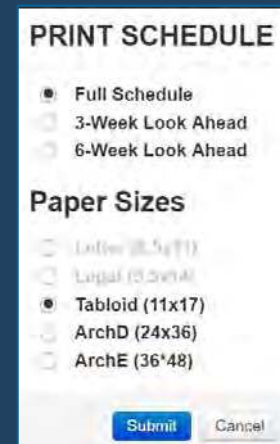
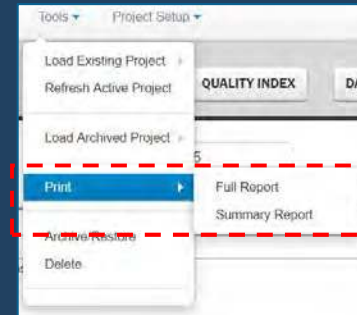
The screenshot shows the 'ORGANIZATIONAL STRUCTURE' window after clicking the 'Submit' button. The 'Grouping Structure' and 'Sorting Structure' sections are now empty. The 'Group by WBS' checkbox is checked. The 'Submit' button is still present at the bottom right.

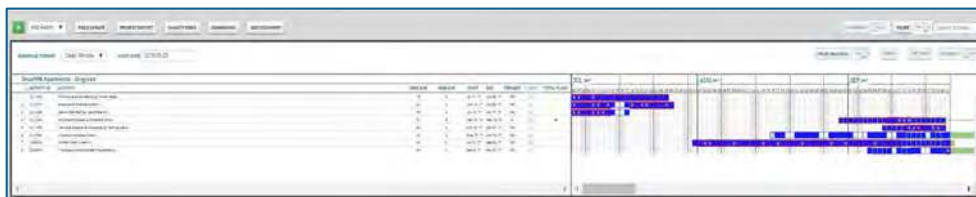
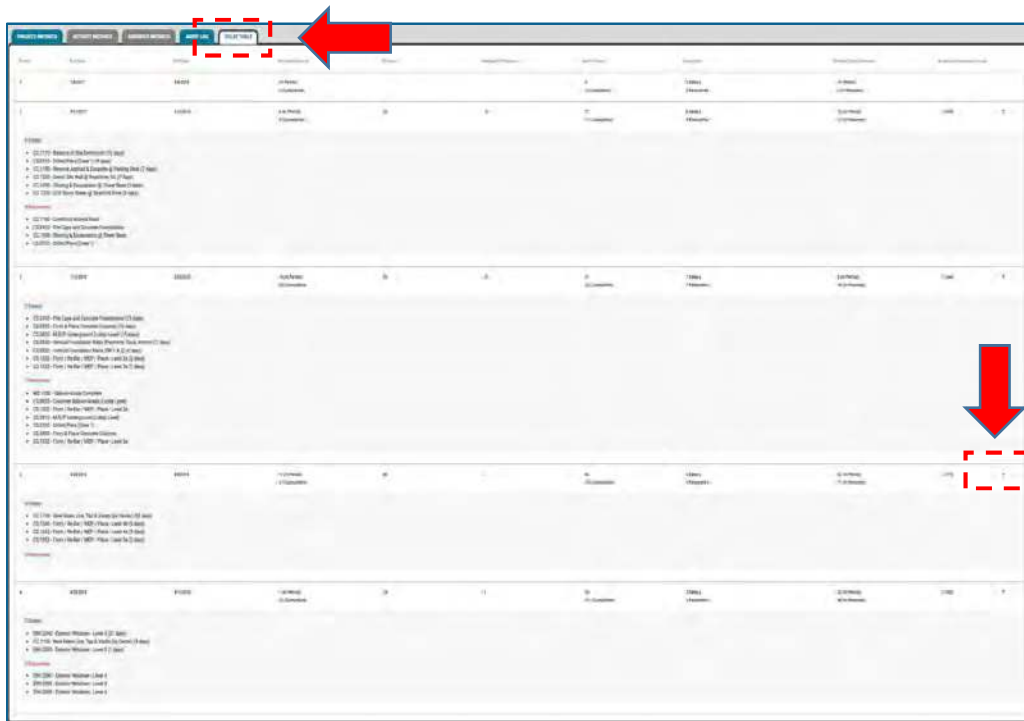
The Print function generates a PDF Document that illustrates the status of the Project Gantt Chart. You can choose from a Full or Summary Report:

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 by. **Note:** The maximum selectable range is 2 levels apart.

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Print





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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.

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

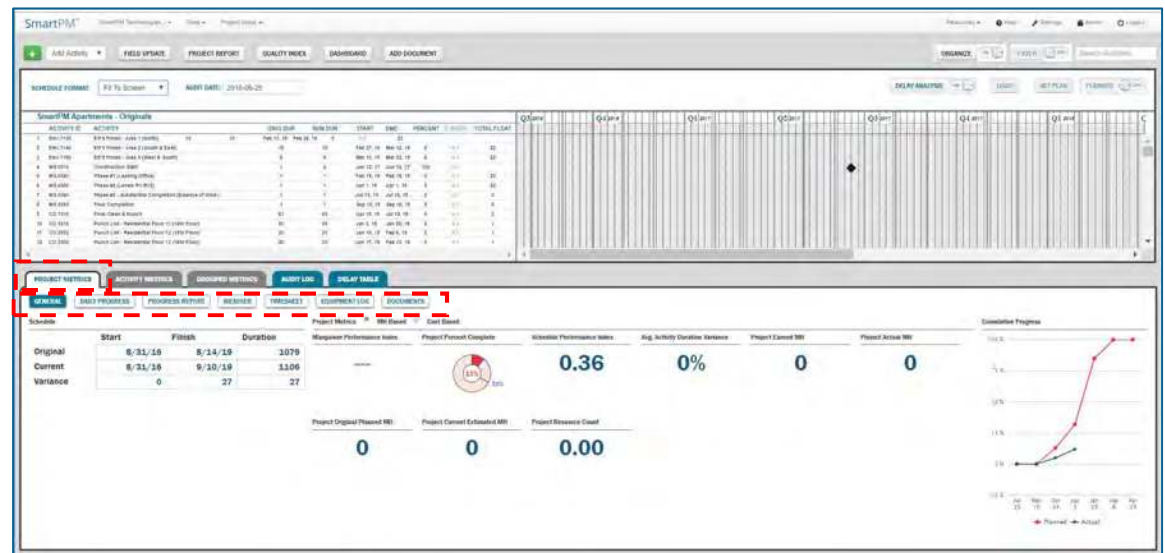
From the Gantt Chart view, navigate to the Project Metrics tab to view:

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

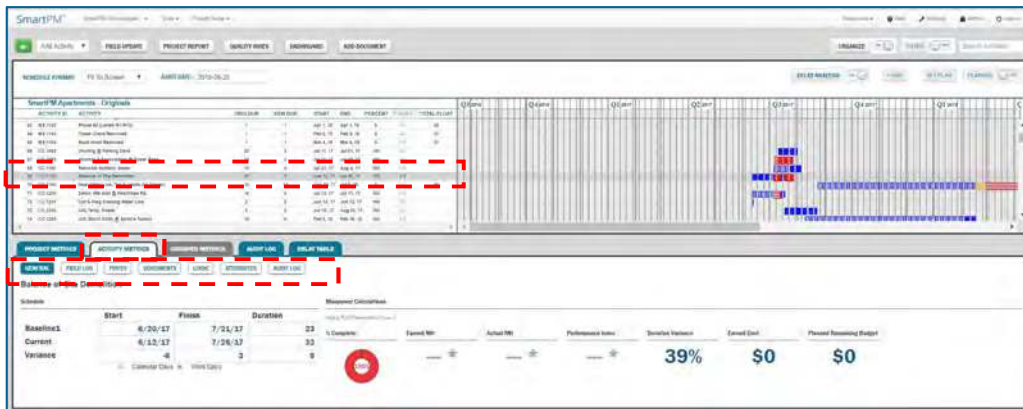
For resource loaded schedules, additional performance indicators are available such as Manpower Performance, Earned MH, Project Actual MH, Planned Original MH, Current Estimated MH and Project Resource Count.

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.
- Create Apply to apply the Filter

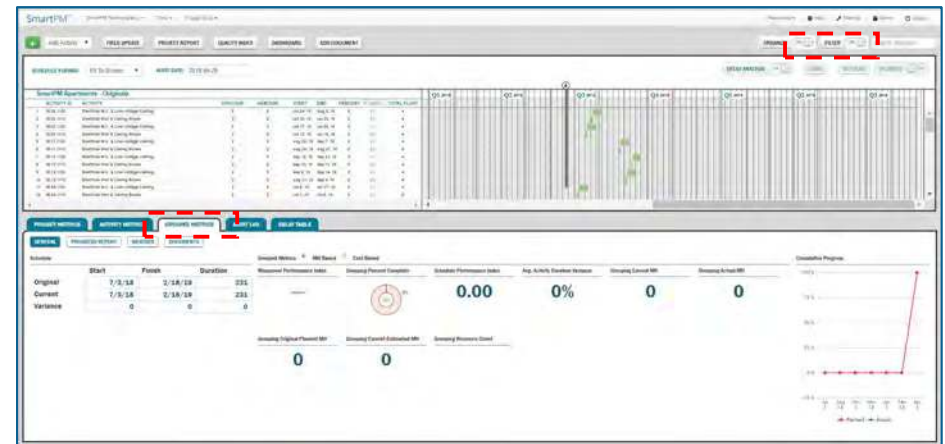
Similar to Activity Metrics, Group Metrics will be displayed for the Filter that was selected and include:

- 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.



4

Configuration and Customization

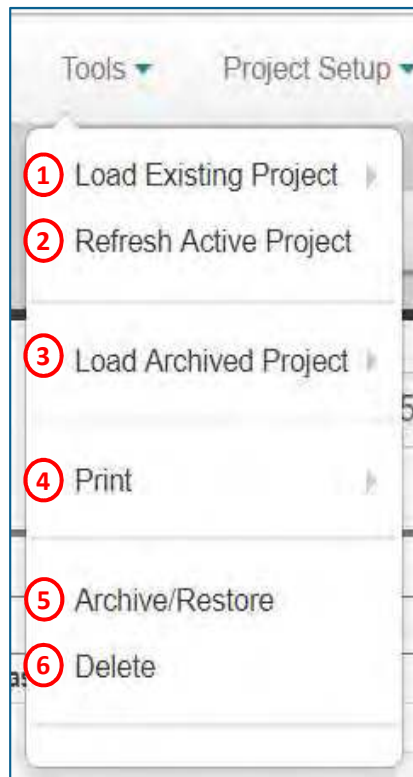
Check Point

SmartPM™

Desired outcomes:

- ✓ Understand how to log in and set up users
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- ✓ Understand how to import a schedule
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- ☐ Explore additional features
- ☐ Understand data considerations, import issues, and basic troubleshooting activities and Q&A

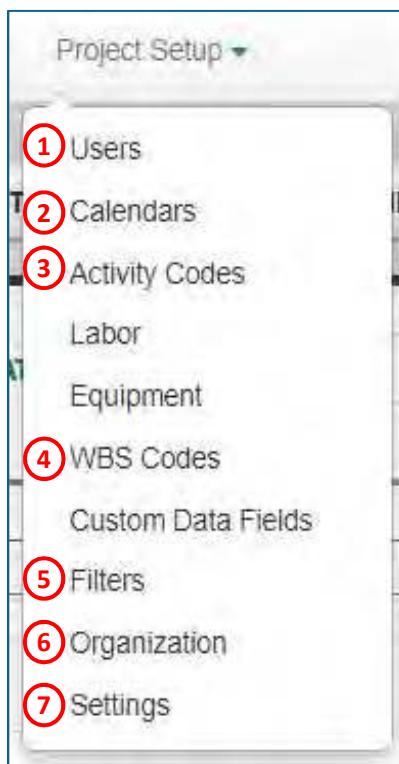
Tools



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.**

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

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

Project Setup - Users Menu

The image displays two screenshots of the 'USERS' menu in the SmartPM software. The top screenshot shows the 'Project Personnel' dropdown with 'Billy Upchurch' selected, and the 'ROLE' dropdown with 'Schedule Admin' selected. The bottom screenshot shows the same menu with 'BILLY UPCHURCH' highlighted in the 'Project Personnel' list and 'Schedule Admin' selected in the 'ROLE' dropdown.

Project Personnel	Information	Description
Billy Upchurch	FIRST NAME LAST NAME E-MAIL PHONE ROLE	Billy Upchurch bupchurch86@gmail.com Schedule Admin Project Manager Activity Manager Read Only User

Project Personnel	Information	Description
BILLY UPCHURCH	FIRST NAME LAST NAME E-MAIL PHONE ROLE	Billy Upchurch bupchurch86@gmail.com Schedule Admin

Project Setup - Calendars

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.

CALENDAR

Project Calendars

46 day workweek w/No Holidays

7 - Day Workweek (No Holidays)

7-Day (no Holidays)

Standard Work Week for: "7 - Day Workweek (No Holidays)"

S	M	T	W	T	F	S
0	0	0	0	0	0	0

Nov 15

Dec 15

Jan 16

Sub

CALENDAR

Project Calendars

46 day workweek w/No Holidays

7 - Day Workweek (No Holidays)

7-Day (no Holidays)

Standard Work Week for: "7 - Day Workweek (No Holidays)"

S	M	T	W	T	F	S
0	0	0	0	0	0	0

Nov 15

Dec 15

Jan 16

Sub

Project Setup - Activity Codes

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:

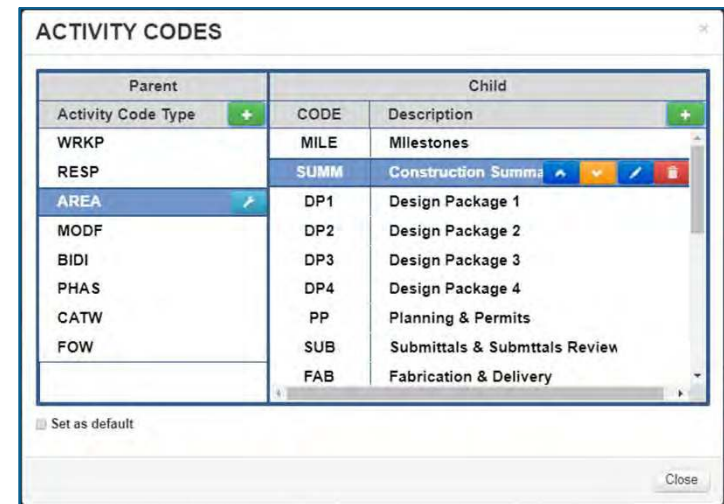
- Select the Activity Code Parent you want to add the Activity Code Child under
- Click the Green Plus button in the Child window
- Select the newly created Activity Code
- Click the Blue Wrench button
- Click the Blue Pencil button and give the Activity Code Child a name
- To save changes, click the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

Parent	Child
Activity Code Type	CODE Description
WRKP	GC Sandpoint Services
RESP	CONC Concrete Sub
AREA	MAS Masonry Sub
MODF	VCT Flooring Sub
BIDI	GUTT Gutters & Downspouts Sub
PHAS	MSST Miscellaneous Steel Sub
CATW	SITE General Sitework
FOW	DEMO Demolition Sub
	HAZ Hazardous Material Abatement

Parent	Child
Activity Code Type	CODE Description
WRKP	CADR Cadre Wing
RESP	CORE Core Areas
AREA	MER Main Electrical Room
MODF	MMR Main Mechanical Room
BIDI	CLAS Core Area Classrooms
PHAS	SITE Sitework
CATW	CLO Project-Wide Testing & Closeout
FOW	BOND Bond
EMPTY	

Project Setup - Activity Codes (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



The screenshot shows a window titled "ACTIVITY CODES" with a table. The table has two main columns: "Parent" and "Child". The "Parent" column has a sub-column "Activity Code Type" with a green plus button. The "Child" column has sub-columns "CODE" and "Description" with a green plus button. The table contains the following data:

Parent	Child	
Activity Code Type	CODE	Description
WRKP	MILE	Milestones
RESP	SUMM	Construction Summary
AREA	DP1	Design Package 1
MODF	DP2	Design Package 2
BIDI	DP3	Design Package 3
PHAS	DP4	Design Package 4
CATW	PP	Planning & Permits
FOW	SUB	Submittals & Submittals Review
	FAB	Fabrication & Delivery

At the bottom of the window, there is a checkbox labeled "Set as default" and a "Close" button.

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

Project Setup - WBS Codes

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Basic Troubleshooting and Q&A

Check Point

SmartPM™

Desired outcomes:

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Data considerations and import differences

In order for SmartPM™ to analyze schedule data, certain changes are made to the underlying information during the import process such as:

Critical Path Calculations	The Critical Path in SmartPM™ is the same as the longest path, based on the network logic contained within the group of activities in the schedule being analyzed. Only the activities that have a total float of 0 days are considered “critical path” activities in SmartPM™.
Constraints	<p>Primavera XER Constraints</p> <ul style="list-style-type: none"> • As Late As Possible - Always ignored • Finish On - Milestone only imported but converted to a start constraint • Finish On or After - Milestone only imported and converted to a start constraint • Finish on or Before - Always ignored • Mandatory Start - Always included / imported • Mandatory Finish - Milestone only imported but converted to a start constraint • Start On - Always included / imported • Start On or After - Always included / imported • Start On or Before - Always ignored • External Dates – Converted to a Start Constraint <p>MPP Constraints</p> <ul style="list-style-type: none"> • Start No Earlier Than - Imported as long as not the same as the data date • Must Start On - Imported as long as not the same as the data date • Finish No Earlier Than - Milestone only imported and converted to start constraint • Must Finish On - Milestone only imported and converted to start constraint • Manually Scheduled Tasks - SmartPM™ creates a start constraint on the task
No Partial Days on Durations	SmartPM™ does not allow users to choose specific hours of the day work activity can be performed. Therefore, all remaining duration calculations are in full “days” only, and not partial days. In addition, activities extending until midnight do not show a next day completion.

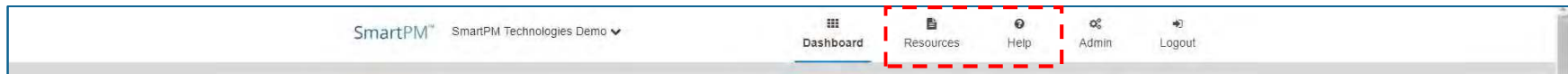
Data considerations and import differences

Actual Dates After the Data Date (e.g. Future Actual Dates)	<ul style="list-style-type: none"> • If an activity has a future Actual Start Date <u>without</u> an Actual Finish Date SmartPM™ sets the activity to not started. • If an activity has a future Actual Start Date <u>with</u> an Actual Finish Date SmartPM™ accepts the dates. • SmartPM™ accepts all Actual Finish Dates.
No Actual Start dates on activities that are 0% progressed	SmartPM™ does not accept the Actual Start Date of an activity before it has progressed more than 0%.
No Actual Finish Dates on activities that are 100% progressed	If an activity is statused as 100% complete but missing an Actual Finish Date, SmartPM™ sets the actual finish date to the last work day before the Data Date, then SmartPM™ ignores changes to the Actual Finish Date in subsequent updates.
Changes to Actual Start/Finish Dates	If a previously reported Actual Start or Actual Finish Date is changed in a subsequent update, SmartPM™ ignores the changes. SmartPM™ accepts the first Actual Dates indicated.
Backdated Actual Start / Finish Dates	When the start and/or finish dates of an activity in a later schedule are backdated for not started/not finished activities, SmartPM™ replaces this data in the previous schedules and uses the updated information to update previous analyses. Progress data is accepted based on when it occurred regardless of when it was first reported. For example, an activity that was reported as not started/completed in a February update is subsequently reported to have started/completed in January according to the March update, SmartPM™ replaces this data in the previous schedules and uses the updated information to update previous analyses.

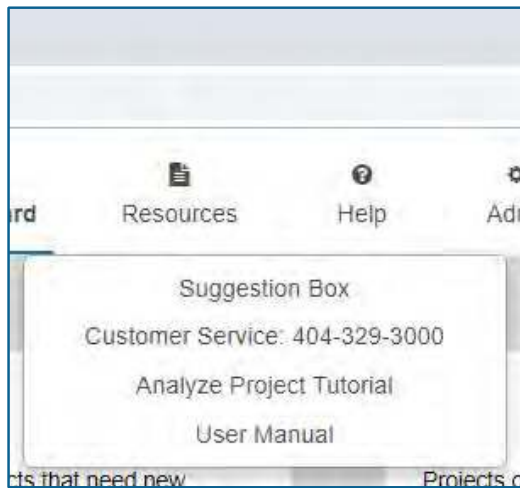
Data considerations and import differences

Start to Finish Ties	If Start-to-Finish (SF) ties are present in the schedule, for analyses, SmartPM™ converts SF ties to Start-to-Start (SS) ties with a commensurate negative lag calculation.
Activity Types	All activity types are imported except Level of Effort (LOE) and WBS. Any logic ties to an activity type with LOE is ignored.
% Complete	<ul style="list-style-type: none">• If the % Complete rolls backward, SmartPM™ ignores the roll back and keeps the previously reported % Complete.• If an activity with less than 100% is given an Actual Finish Date, SmartPM™ adjusts the % Complete to 100%.
Summary Bars (MS Project)	<ul style="list-style-type: none">• Summary Bars are not imported as activities. Summary Bars are converted to a WBS organizational structure.• If logic ties exist for a summary activity, SmartPM™ generates that same logic tie for all activities nested under the summary bar.
Progress Override	<ul style="list-style-type: none">• SmartPM schedules all activities using “retained logic” when importing a P6 schedule. “Progress override” can be set in SmartPM for each activity separate from one another.

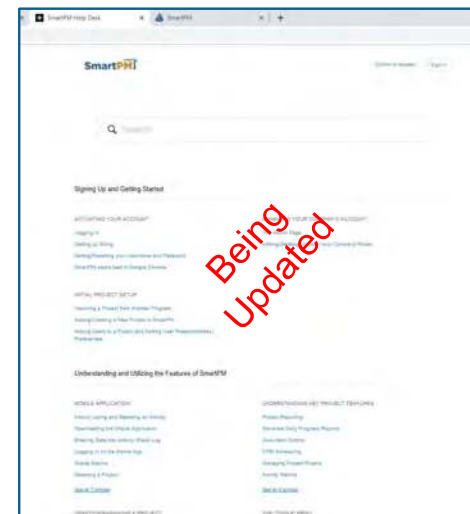
Common Questions / Issues



Resources



Help



Common Questions / Issues

Topic Area	Question / Issue	Resolution
Logging In	1. I can't login / I forgot my password	<ul style="list-style-type: none"> SmartPM™ is optimized for Google Chrome; confirm you are using Google Chrome Browser to access On the login screen there is a forgot password button to reset your password
	2. I can't see my project on the Project Dashboard	<ul style="list-style-type: none"> Confirm you have selected the appropriate Company from the drop down bar next to the SmartPM™ logo on the top ribbon Try adding your project to the Company Dashboard
	3. Can I access the system on my phone	<ul style="list-style-type: none"> SmartPM™ is optimized for a laptop or desktop
Importing a Schedule	4. Can I import PDFs?	<ul style="list-style-type: none"> SmartPM™ requires native Primavera (.XER) and Microsoft Project (.MPP) files
	5. Error message received when importing a schedule.	<ul style="list-style-type: none"> Confirm you don't have an .XER file with more than one schedule included Confirm you aren't uploading an .MPP file on top of an .XER file Confirm you are uploading schedules in chronological order Reach out to your SmartPM™ Customer Specialist

Common Questions / Issues

Topic Area	Question	Resolution
Data Differences	1. Why do some of my dates look different?	<ul style="list-style-type: none"> • Confirm schedule updates have been loaded in chronological order • There are slight differences in the way SmartPM™ calculates and interprets data from Primavera and Microsoft Project files: <ul style="list-style-type: none"> • SmartPM™ considers backdated data (e.g. activity marked complete in Update 5 which should have occurred in Update 2) • Differences in the way SmartPM™ handles retained logic • Differences in the way SmartPM™ handles hours calculations • When a MPP is imported, SmartPM™ breaks summary bar logic
Terms / Definitions	2. How do you define Critical Path Delay?	<ul style="list-style-type: none"> • Overall Project Delay or “Critical Path Delay” is calculated by identifying activities that were on the schedules “Longest Path” at specific points in time, and measuring delay days for the period which said activities are on the longest path. SmartPM™ has proprietary algorithms that compare progress points of activities at different points in time, in order to calculate delay days.
Terms / Definitions	3. What is Future Recovery?	<ul style="list-style-type: none"> • 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. Future Recovery is <u>not</u> an estimate of effort required to get the project back on track.