

SaaS

Technical Writing Sample

Project Portfolio

Simulation

for

Strategic Planning

**Complete data science
calculations**
and methodology pending

SaaS Technical Writing
Sample
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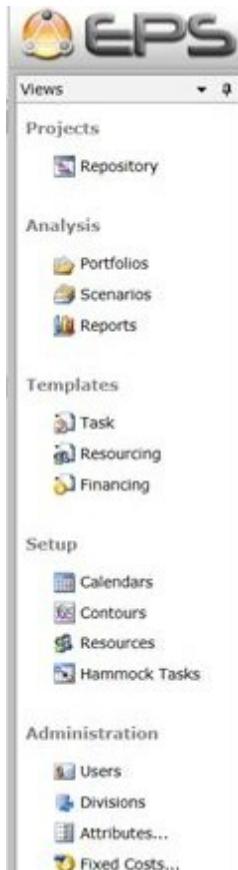
1. EPS Overview

The purpose of this document is to provide instructions on how to run deep portfolio analysis with Enterprise Portfolio Simulator (EPS), a software as a service (SaaS) product. EPS is a decision-assist technology facilitating project portfolio what-if analysis incorporating project complexity, project inter-dependencies, financials, and resource constraints.

EPS is very proficient at analyzing project portfolio accounting for adding and subtracting projects, resources, costs, and sliding projects backwards or forwards in time.

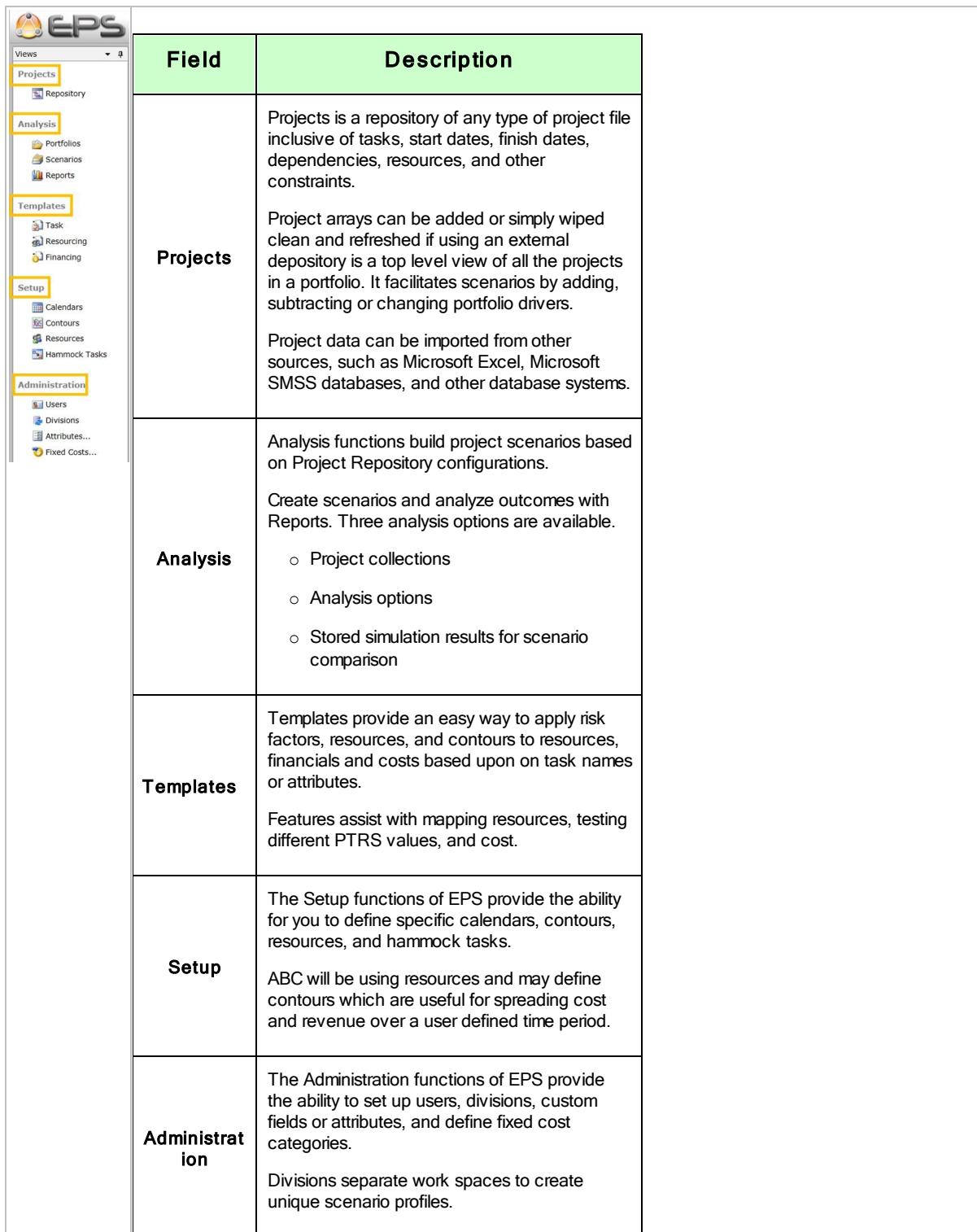
Project modeling is performed at either project task or milestone levels. Tool engineering automates task roll-up calculations to key project milestones while maintaining statistical accuracy.

EPS scenario capability helps identify drivers limiting performance and what is required to meet corporate sustainability objectives.



1.1 Navigation

Five menus guide users in portfolio analysis exercises.



The screenshot shows the EPS software interface with a sidebar containing five main menu categories: Projects, Analysis, Templates, Setup, and Administration. Each category has sub-options listed under it. To the right of the sidebar is a large table with a green header row labeled 'Field' and 'Description'. The table has five rows, each corresponding to one of the menu categories. The 'Field' column contains the menu names, and the 'Description' column contains a detailed explanation of each function.

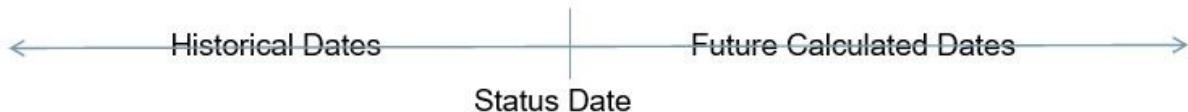
Field	Description
Projects	<p>Projects is a repository of any type of project file inclusive of tasks, start dates, finish dates, dependencies, resources, and other constraints.</p> <p>Project arrays can be added or simply wiped clean and refreshed if using an external depository is a top level view of all the projects in a portfolio. It facilitates scenarios by adding, subtracting or changing portfolio drivers.</p> <p>Project data can be imported from other sources, such as Microsoft Excel, Microsoft SMSS databases, and other database systems.</p>
Analysis	<p>Analysis functions build project scenarios based on Project Repository configurations.</p> <p>Create scenarios and analyze outcomes with Reports. Three analysis options are available.</p> <ul style="list-style-type: none"> ○ Project collections ○ Analysis options ○ Stored simulation results for scenario comparison
Templates	<p>Templates provide an easy way to apply risk factors, resources, and contours to resources, financials and costs based upon on task names or attributes.</p> <p>Features assist with mapping resources, testing different PTRS values, and cost.</p>
Setup	<p>The Setup functions of EPS provide the ability for you to define specific calendars, contours, resources, and hammock tasks.</p> <p>ABC will be using resources and may define contours which are useful for spreading cost and revenue over a user defined time period.</p>
Administration	<p>The Administration functions of EPS provide the ability to set up users, divisions, custom fields or attributes, and define fixed cost categories.</p> <p>Divisions separate work spaces to create unique scenario profiles.</p>

1.2 Overview - Status Date Mode

It is crucial to understand how project **start dates** , project **start & finish dates** , project **status mode** , and project **status date** " affects project task behavior in the simulation engine.

In general, most pharmaceutical models with project architecture at a milestone level, i.e. PreClinical, Phase I, Phase 2, and Registration will use the “calculate status” status mode.

All project dates are relative to the status date. Project task dates are either historical or future.



A Historical task is any task occurring before the status date. A historical task's duration is dependent on its start and finish dates. Calculated tasks occur after the status date are calculated based on predecessors, duration, and resources.

The following applies to Historical tasks:

1. Financial data is not calculated for historical tasks
2. EPS will not start recording resource performance until a status date. Historical resource requirements are neither calculated or reported on
3. For annual resource requirements set a status date to start on 01/01/ [yr]

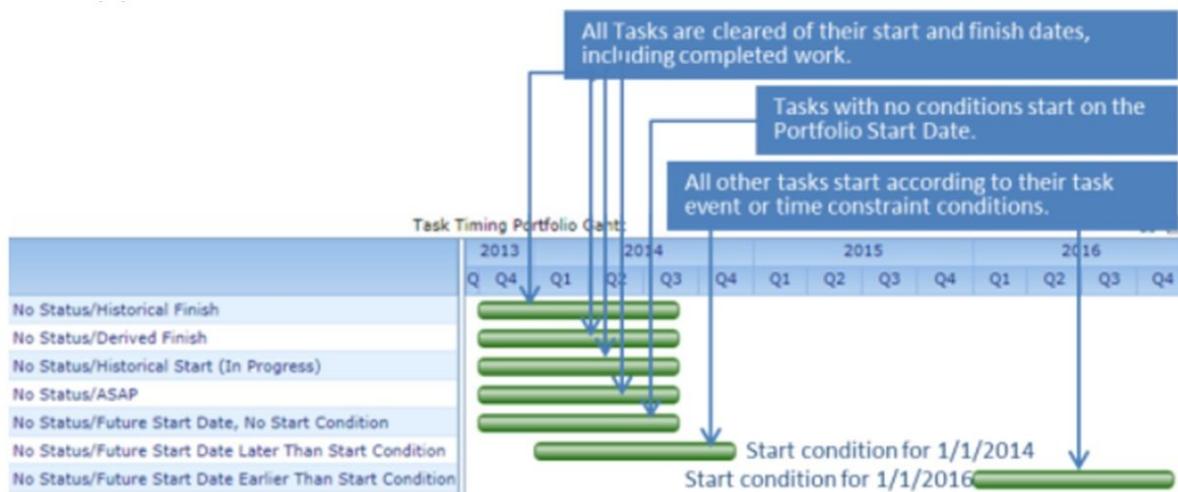
1.3 Status Date - No Status

No status date directs the simulation engine to clear all dates and prior work completed.

Select this option to assess a portfolio's root delivery capability.

Projects are released at the same time and compete for resources simultaneously.

ID	Description
1.	All tasks are cleared of their start dates, finish dates, and work completed.
2.	Tasks with no conditions and start on the project's start date. If there is no start date it starts the date of the simulation start.
3.	All other tasks start according to their task event or time constraint conditions less than the start date.

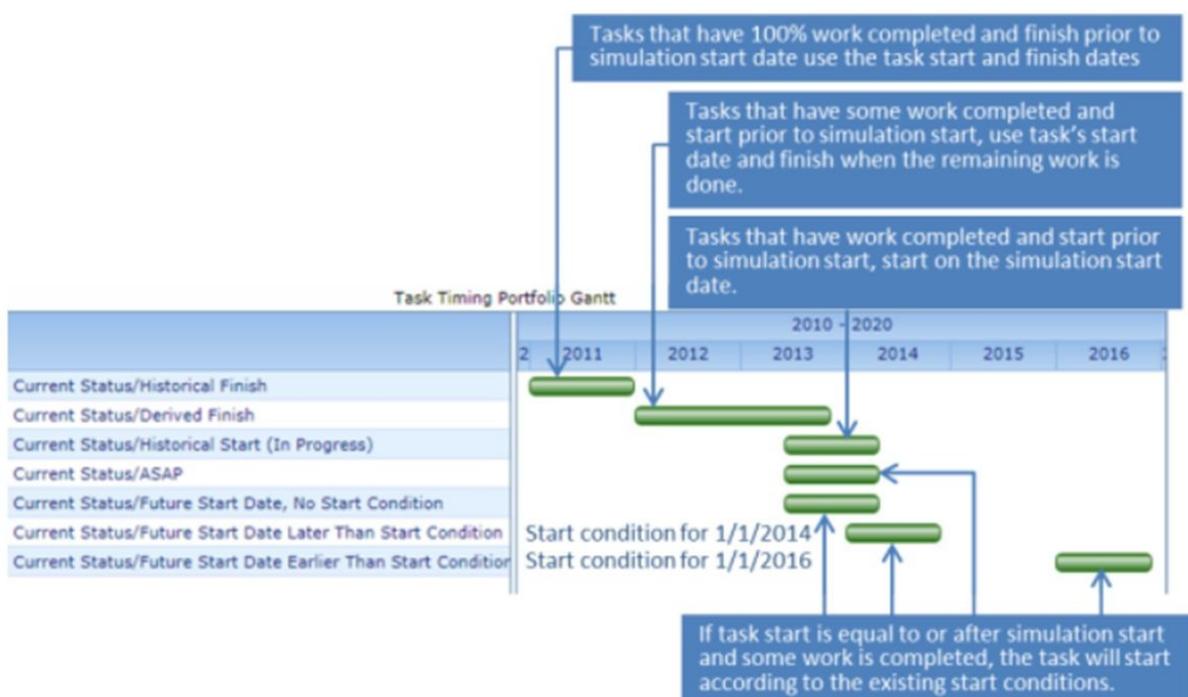


1.4 Status Date - Current

Current status date ignores all project tasks dates before the simulation start date.

Any project work completed is ignored and will not be available in output reports.

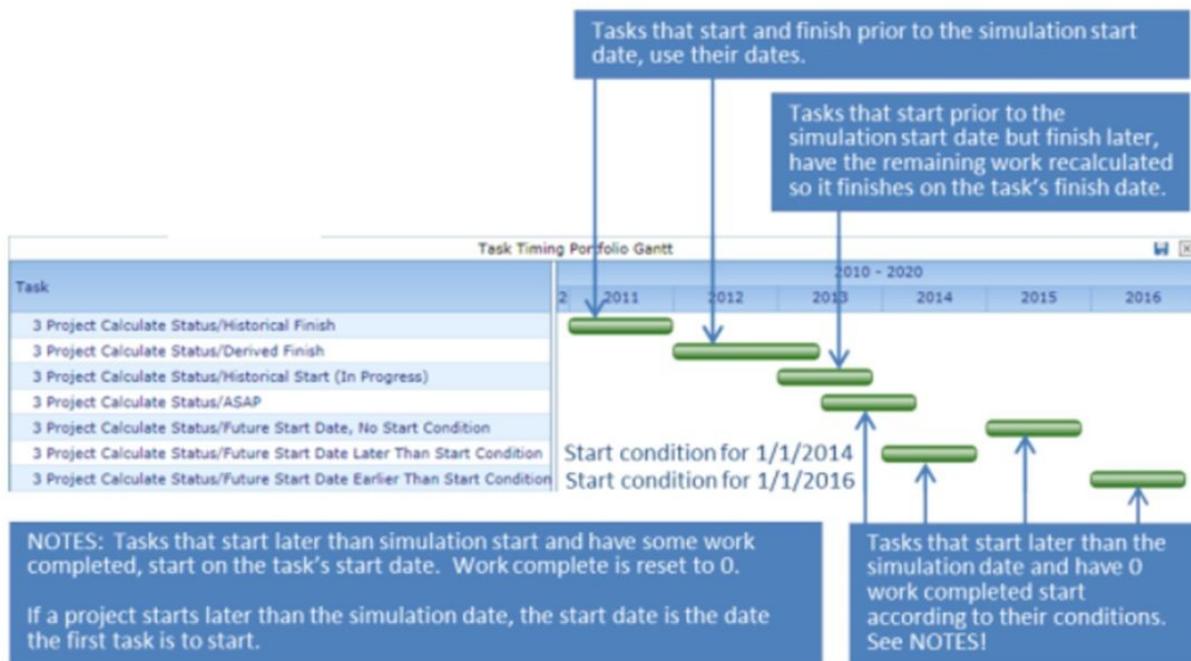
ID	Description
1.	Simulate actual project performance by using start dates, finish dates, and work completed based on inputs.
2.	Tasks that have 100% work completed and start and finish dates prior to the simulation start date would use the tasks dates and appear as historically finished.
3.	Tasks that have partial work complete and a start date prior to the simulation start date would use the task's start date and finish after the simulation start date once the remaining work is completed. Using this setting, task finish dates would never be prior to the simulation start date.
4.	Tasks that have 0% work complete and a start date prior to the simulation start date would start on the simulation start date. Any task start dates are ignored.
5.	If a task has a start date after or equal to the simulation start date, or has no start date, any work completed will be ignored and reset to 0%. The task will start according to its existing start conditions and no additional time constraint conditions are created.



1.5 Status Date - Calculate

Calculate status date makes use of start and finish dates to calculate all task milestones.

ID	Description
1.	Uses start/finish dates earlier than simulation start date to calculate and override work completed.
2.	Tasks that have start/finish dates prior to the simulation start date will task dates and appear historically completed.
3.	Tasks with a start date prior to the simulation start date and finish date after the status date will cycle time templates to calculate tasks times.
4.	Tasks with a start date later than the simulation start date, and no work complete, will start according to their conditions.
5.	Tasks with a start date later than the simulation start date, and % complete > 0, will get a start until date constraint (single task constraint start condition), so that they start on the task's start date regardless of prior start conditions. Work complete will get reset to 0%.
6.	Projects with a start date later than the status date will get a SNET (Start No Earlier Than) constraint for the project. This is only if the level 1 task starts after the status date. All other tasks that start after the status date behave according to rules 4 and 5.



2. Data Assembly

Microsoft Excel VBA is used to transform and load data into EPS.

Excel Organizer												
C	D	E	F	G	H	I	J	K	L	M	P	
Enter User Defined Stage Names >>>												
Unique ID	Attribute	Stage	Survival	Attribute	Date	Date	Date	Date	Date	Date	NME Declaration	NME Date
Project_Unique_ID	Project_Name	Current_Stage	Survival_Template	Current_Phase_Start_Date	Stage	Stage_2	Stage_3	Stage_4	Stage	Stage	Phase_End	Phase_End
3351	CCR6 Antagonist	Stage_2	Template_1	6/20/2012	1/23/2012	6/20/2012	9/26/2014	6/20/2011	6/20/2011	6/20/2011	11_10_2011	11_10_2011
2324	N-Type Ca Antagonist	Stage_3	Template_1	6/20/2011								

Organizer
Excel Workbook

Copy and paste project data from source data.
Use VBA automation to extract, translate, and load data into EPS
Can have as many copies of this book as necessary

Excel Loader												
ID	Task Name	Level	Tracking		Survival Con							
			Start Date	Finish Date	Base	Project_Unique_ID	Project_Name	Current_Phase_Start_Date	Survival_Template	Current_Phase_End	Phase_End	
1	2242(51)	1	06/23/2009		69	2242	Anti IL-23 mab	Stage_3	Template_2	11_10_2011	11_10_2011	
2	Phase I	2	06/23/2009	1/1/2014	69	2242	Anti IL-23 mab	Stage_3	Template_2	11_10_2011	11_10_2011	
3	Phase II	2	11/10/2011		70	2242	Anti IL-23 mab	Stage_3	Template_2	11_10_2011	11_10_2011	
4	Phase III	2			71	2242	Anti IL-23 mab	Stage_3	Template_2	11_10_2011	11_10_2011	
5	Registration	2			82	2242	Anti IL-23 mab	Stage_3	Template_2	11_10_2011	11_10_2011	

Loader
Excel Workbook

Excel file EPS imports project data from.

2.1 Excel Import Overview

Organize project data in Microsoft Excel for EPS import including projects, dates, attributes, resources, and contours.

Databases and data warehouses can export to this pre-formatted Excel environment or customize the simulator for direct import.

EPS - Excel Project Import											
ID	Task Name	Level	Tracking			Survival Con					
			Start Date	Finish Date	Base	Project_Unique	Project_Name	Current_Status	Survival_Tenure	Current_Phase	
1	2242(S1)	1	06/23/2009			2242	Anti IL-23 mab	Stage_9	Template_2	11_10_2011	
2	Phase I	2	06/23/2009	1/1/2014	69	2242	Anti IL-23 mab	Stage_9	Template_2	11_10_2011	
3	Phase II B	2	11/10/2011			2242	Anti IL-23 mab	Stage_9	Template_2	11_10_2011	
4	Phase III	2				2242	Anti IL-23 mab	Stage_9	Template_2	11_10_2011	
5	Registration	2				2242	Anti IL-23 mab	Stage_9	Template_2	11_10_2011	

Spreadsheet	Purpose
	
Task Information	Key fields updated include: projects, a project's task matrix, start & finish dates, survival, cycle times, and attributes. Can also set start conditions, if tasks are other than finish to start relationships, or require conditions to another project task.
Resource Requirements	Each task has a unique ID. Resource requirements are populated for each unique task ID. Each task ID can have 1 to resources assigned to it.
Resources	Simply the classification of model resource types, capacity, and their costs.
Contours	Facilitate importing financial data with monthly, quarterly, or annual costs.
Properties	Model calendar options.

2.2 Excel Import Options

The “Organizer” workbook automation for translating project data into an EPS import format.

There are data manipulation options a user needs to master but nothing too complicated.

Update stage names, cycle times, and survival parameters.

Additional automation can be implemented for direct database import.

Spreadsheet	Purpose
Instructions	Detail instructions on how to use the Excel Workbook
Data	Contains copy and pasted client source project data, dates, and desired attributes.
Stage ID and Controls	Define the stage names that will be built in the model.
Scenario ID	Define the scenario names to be loaded.
Cycle Time	Define cycle time parameters.
Survival	Define stage survival parameters.
Error Log	Projects missing dates, or have field exceptions, are ignored and appended to this log for analyst processing.

3. Organizer Options

Microsoft Excel VBA is used to transform and load data into EPS.

Excel Organizer													
C	D	E	F	G	H	I	J	K	L	M	N	O	P
THESE COLUMNS CAN NOT BE MOVED													
Unique ID	Attribute	Stage	Survival	Attribute	Date	Date	Date	Date	Date	Date	NME Declaration	NME	P
Project_Unique_ID	Project_Name	Current Stage	Survival_Template	Current_Phase_Start_Date	Stage	Stage_2	Stage_3	Stage_4	Stage	Stage			
3351	CCR6 Antagonist	Stage_2	Template_1	6/20/2012	1/23/2012	6/20/2012	9/26/2014	6/20/2011					
2324	N-Type Ca Arr	Stage_3	Template_1	6/20/2011									

Organizer
Excel Workbook

Copy and paste project data from source data.
Use VBA automation to extract, translate, and load data into EPS
Can have as many copies of this book as necessary

3.1 Data Worksheet

Organize project data for importing. Do not leave any “blank” rows between project data rows.

Column	Purpose																			
THESE COLUMNS CAN NOT BE MOVED																				
Enter User Defined Stage Names >>																				
Unique ID	Attribute	Stage	Survival	Attribute	Date	Date	Date	Date												
Project_Unique_ID	Project_Name	Current_Status	Survival_Template	Current_Phase_Start_Date	Stage	Stage_2	Stage_3	Stage_4												
3351	CCR6 Antagonist	Stage_2	Template_1	6/20/2012	1/23/2012	6/20/2012	9/26/2014													
2324	N-Type Ca An	Stage_3	Template_1	6/20/2011			6/20/2011													
Row 8		Project data elements customized to solution delivery.																		
Columns C to G		Project stage and templates. Every project must have a current stage and project template assigned.																		
Columns H to R		Project stage start and finish dates.																		
Columns S+		Project attribute columns. Attributes can be added and subtracted as desired. <ul style="list-style-type: none"> o If attributes are added / subtracted, the “exact” name needs to be updated to EPS \ Administration \ Attributes so the values are imported correctly. o Attributes with < > ? # \ / . invalid characters and must be cleaned before importing. o All projects are brought in with a “unique” numeric stage ID from 1 to 11. Useful for mapping additional scenario data when working in EPS. 																		

3.2 Stage ID & Controls

Define user stage

Stage ID										
A	B	C	D	E	F	G	H	I	J	K
ID	STAGE ORDER	EPS Stage Name	Include in Simulation Build ?	Client Milestone Name	Notes					
1	Stage_1	AD-Hit ID	Yes		Promodel to report if we check for earliest date					
2	Stage_2	H2L	Yes							
3	Stage_3	LO	Yes							
4	Stage_4	LLO	Yes							
5	Stage_5	NME Milestone	Yes							
6	Stage_6	PreClinical	Yes							
7	Stage_7	Phase I	Yes							
8	Stage_8	Phase IIA	Yes							
9	Stage_9	Phase IIB	Yes							
10	Stage_10	Phase III	Yes							
11	Stage_11	Registration	Yes							

This is a very important control. If you want historical dates enter "yes." Else leave blank and only projects from their current stage forward will be loaded.

If loading all stages. If a stage prior to the current stage does not have a start date it is ignored. The logic is this way because of how prior stages with not dates are handled.

Enter "Yes" if want to use dates as cycle time duration. If a task has both a start and finish date then the exact # of days will be loaded for both planned and over-ride cycle time durations.

Any subsequent stages missing dates will be then be applied the cycle time template.

If "No" or blank, only historical stages will have the exact # of days calculated.

HOWEVER, a project in its current stage will have the exact # of days calculated to its next stage if the next stage's dates is <= today's date, ie whatever day the data is loaded.

Column C	update the desired stage name.
Column D	select if the stage will be built for projects in the model. Missing date rules and project stage deletions business rules can still apply.
Column E	client information on any other internal naming convention

Data Load Options

Options	Purpose
Load Historical Stages	<ul style="list-style-type: none"> a. If completed stages, i.e. historical stages with dates, are desired for historical stage throughput reporting then select "yes." b. No: only a project in its current stage, and subsequent stages, will be loaded.

Options	Purpose
Only Load Business Dates ?	<ul style="list-style-type: none"> a. Enter "Yes" if want to use dates as a stages cycle time duration. If a task has both a start and finish date then the exact number of days will be loaded for both planned and over-ride cycle time durations. b. Any subsequent stages missing dates are applied to the cycle time template. c. If "No" or blank, only historical stages will have the exact number of days calculated.
Pre-H2L Start Date	<ul style="list-style-type: none"> a. Some Pre-H2L projects do not have start dates but do have a H2L start date. b. Perform a data analysis on internal data and enter the mean or median number of days based on other project data. The data transformation will input a date based median less H2L start date.
No Pre-H2L Start Date	<ul style="list-style-type: none"> a. Some projects have NO start date, but are in the first stage. b. Enter the range of days, from today's date, that a project could have started. c. Range goes from 1 to [entered value]. The date value is chosen at random.
Other Date Rules	<ul style="list-style-type: none"> a. If a project stage has a finish date, but no start date, the stage is deleted. b. Any stage missing both a start & finish date, but prior and after stages have dates, is deleted. c. If a stage's start date is > stage's finished date the stage is deleted.

3.3 Scenario ID

Scenarios can be organized in the Excel import environment or directly in the simulator.

Scenario ID					
A	B	C	E	F	
1 Scenario ID	Scenario Long Name	Scenario Short Name			
2 Scenario 1	Baseline	S1			
3					
4	HoganBP: Name of scenario as viewed in both EPS Portfolios & Output Reports. An attribute called "Scenario ID" is populated with this name, and updated to each projects and its tasks. This is useful if multiple versions of the portfolio are being imported. Simply change the names before importing.	HoganBP: Short abbreviated scenario name "tagged" to each project on end. Helps distinguish which project is which in EPS project repository. Examples: Project_1 (Base) or S1 for Scenario 1: Project_1 (S1)			
5					
6					
7					
8					
9					
10					
11					
12					
13					
Column A	Define scenario name				
Column B	<ul style="list-style-type: none"> ○ The "scenario ID" attribute can be used to help parse data into different scenario buckets. ○ EPS \ Analysis \ Add Projects ○ Window opens and can use attributes to quickly filter projects and build desired project collections for scenario analysis ○ The "scenario short name" is tagged to a project's name so the user can quickly distinguish multiple versions of the same project in the EPS \ Project Repository 				
Column C	Project short name used for reporting				

3.4 Cycle Time

Project use cycle time templates and statistical variability to for completing tasks and stages.

Organize template data in Excel for import or directly in the simulator.

Cycle Time									
	A	B	C	D	E	F	G	H	I
1	Cycle Time	TEMPLATE_1: Small				TEMPLATE_2: Large			
2	Stage	Min	Avg	St. Dev	Max	Min	Avg	St. Dev	Max
3									
4	AD/Hit ID	14	17	0.5	21	14	17	0.5	18
5	H2L	9	12	0.5	16	9	12	0.5	29
6	LO	8	11	0.5	15	8	11	0.5	15
7	LLO	9	12	0.5	16	9	12	0.5	13
8	NME Declaration								
9	PreClinical	8.5	11.5	0.5	15.5	13.8	16.8	0.5	32
10	Phase I	17.6	20.6	0.5	24.6	21.8	24.8	0.5	34
11	Phase IIA	16.2	19.2	0.5	23.2	23	26	0.5	29
12	Phase IIB	15.5	18.5	0.5	22.5	12.8	15.8	0.5	18
13	Phase III	36.7	39.7	0.5	43.7	42.5	45.5	0.5	65
14	Registration	8.9	11.9	0.5	15.9	8.5	11.5	0.5	17

Cycle Time Parameters	<ul style="list-style-type: none"> • Enter cycle time parameters for four templates <ul style="list-style-type: none"> ◦ Average values are updated to “planned” cycle time values ◦ Override or variable cycle time, use Lognormal distributions L(mean, standard deviation) • Min and max values are used to bound sampled values in the Lognormal • Template names are “generic.” A max of four templates available in this utility • Generally, only one digit beyond a decimal is needed for modeling purposes • All data in months
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4. Import Data

Data pre-processing is done in Excel selecting the "EPS ETL Data Loader" macro in the add-ins menu.

Import Overview									
Enter User Defined Stage Names >>>									
THESE COLUMNS CAN NOT BE MOVED									
Unique ID	Attribute	Stage	Survival	Attribute	Date	Date	Date	Date	
Project_UniqueId	Project_Name	Current Stage	Survival Template	Current_Phase_Start_Date	Stage	Stage_2	Stage_3	Stage_4	
3351	CCR6 Antagonist	Stage_2	Template_1	6/20/2012	1/23/2012	6/20/2012	9/26/2014		
2324	N-Type Ca An	Stage_3	Template_1	6/20/2011			6/20/2011		

↓

Project data is assembled or extracted into Excel detailing project, current stage, template, dates and attributes											
1	2	A	B	C	D	H	I	R	AH	AI	AJ
ID	Impl	Task Name	Level	Tracking			Survival Con			Project_Unique	Project_Name
				Start Date	Finish Date	Base	End Date				
3	1	2242(S1)	1	06/23/2009	1/1/2014	69	70	71	82	2242	Anti IL-23 mab
4	2	Phase I	2	06/23/2009						2242	Anti IL-23 mab
5	3	Phase IIB	2	11/10/2011						2242	Anti IL-23 mab
6	4	Phase III	2							2242	Anti IL-23 mab
7	5	Registration	2							2242	Anti IL-23 mab
8	6	2376(S1)	1	10/31/2006						2376	H4 Antagonist
9	7	PreClinical	2	10/31/2006	3/14/2008	100				2376	H4 Antagonist

Transformed project data

Repository Projects						
General Conditions Financials Attribute Assignments						
<input type="button" value="Clear"/> <input type="button" value="Import"/> <input type="button" value="Add New"/> <input type="button" value="Edit..."/> <input type="button" value="Duplicate"/> <input type="button" value="Delete"/> <input type="button" value="Update"/> <input type="button" value="Apply Tem"/>						
Repository Projects • (None Selected)						
#	Name	Start Date	Finish Date	Take Priority	Calendar	
1	2109(S1)	3/23/2007		500	(24/7)	
2	2185(S1)	10/21/2008		500	(24/7)	
3	2217(S1)	10/22/2008		500	(24/7)	
4	2242(S1)	6/23/2009		500	(24/7)	
5	2307(S1)	8/5/2008		500	(24/7)	
6	2324(S1)	6/20/2011		500	(24/7)	

Import Overview
Imported EPS data

4.1 Data Assembly

The following details tasks to perform extract, translate, an load activities to prepare portfolio for loading into the simulator.

Import Overview									
C	D	E	F	G	H	I	J	K	
6									
THESE COLUMNS CAN NOT BE MOVED									
7	Enter User Defined Stage Names >>>					ADWHit ID	H2L	LO	LLO
8	Unique ID	Attribute	Stage	Survival	Attribute	Date	Date	Date	Date
9	Project_UniqueId	Project_Name	Current Stage	Survival Template	Current_Phase_Start Date	Stage	Stage 2	Stage 3	Stage 4
10	3351	CCR6 Antagonist	Stage_2	Template_1	6/20/2012	1/23/2012	6/20/2012	9/26/2014	
11	2324	N-Type Cancer	Stage_3	Template_1	6/20/2011			6/20/2011	
1.	Copy & paste source project data into the “Data” worksheet in the “Data Organizer” <ul style="list-style-type: none"> o Update any field names, on row 9, if changed or new o Ensure each project has a unique ID 								
2.	Use VLOOKUPS, on a random worksheet, to populate for each project: <ul style="list-style-type: none"> o Current Stage o Survival Template o Current Phase Date Value 								
3.	Perform an Excel search & replace to remove invalid characters: # ? / \ < > @ & <ul style="list-style-type: none"> o Ensure all dates are formatted as dates. o Set if a project type is Discovery or Development in column AH 								
4.	Future Projects: <ul style="list-style-type: none"> o Update number of starts in column AI. o Update time between starts in column AJ. o Update Scenario ID values o Update Cycle Time values o Update PTRS values 								
5.	Select the Add-Ins Button \ EPS ETL Data Load <ul style="list-style-type: none"> o Search for the “Loader” file & hit “OK” o The tool will inform you if there are any issues 								
6.	Inspect the “Error Log” before importing data into EPS <ul style="list-style-type: none"> o Ensure to name the Loader.xls file as desired per the data it contains 								

Import Overview

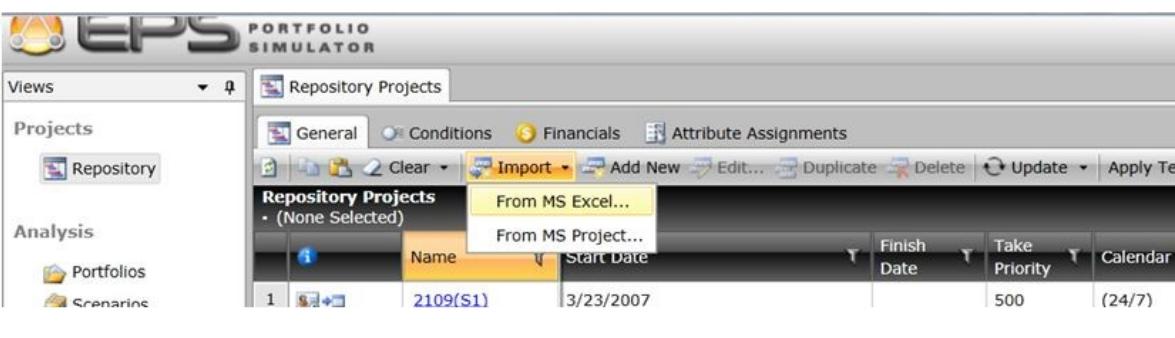
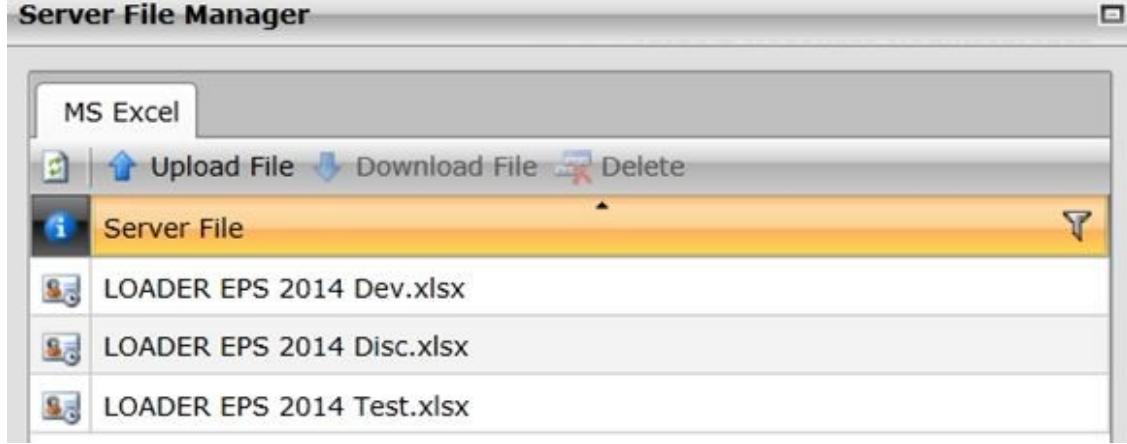
	A	B	C	D	H	I	R	AH	AI	AJ	
1	ID	mpl	Task Name	Level	Tracking		Survival	Con			
2					Start Date	Finish Date	Base	“n”	D	Project_Unique	Project_Name
3	1	2242(S1)		1	06/23/2009				69	2242	Anti IL-23 mab
4	2	Phase I		2	06/23/2009	1/1/2014	70			2242	Anti IL-23 mab
5	3	Phase IIB		2	11/10/2011		71			2242	Anti IL-23 mab
6	4	Phase III		2			82			2242	Anti IL-23 mab
7	5	Registration		2						2376	H4 Antagonist
8	6	2376(S1)		1	10/31/2006					2376	H4 Antagonist
9	7	PreClinical		2	10/31/2006	3/14/2008	100				

-> Copy & paste source project data into the “Data” worksheet in the “Data Organizer”.

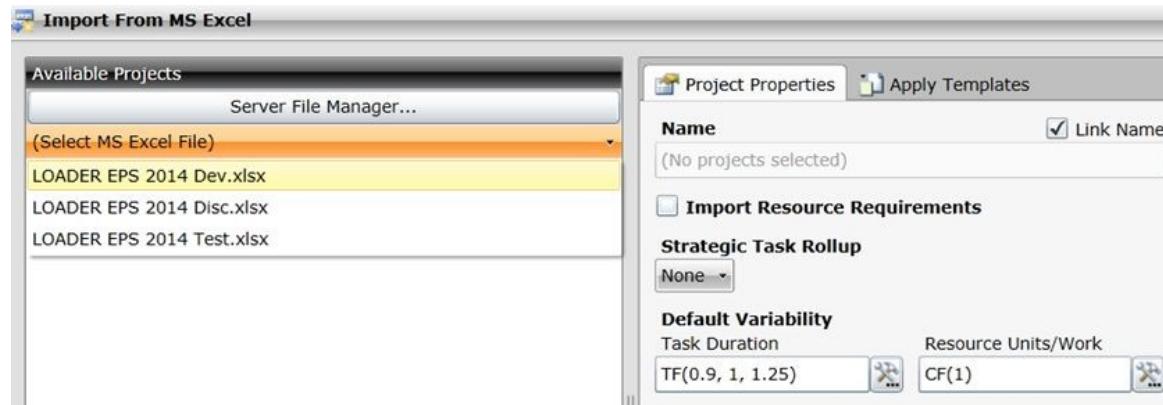
- o Update any field names, on row 9, if changed or new.
- o Ensure each project has a unique ID.

4.2 Data Import to EPS

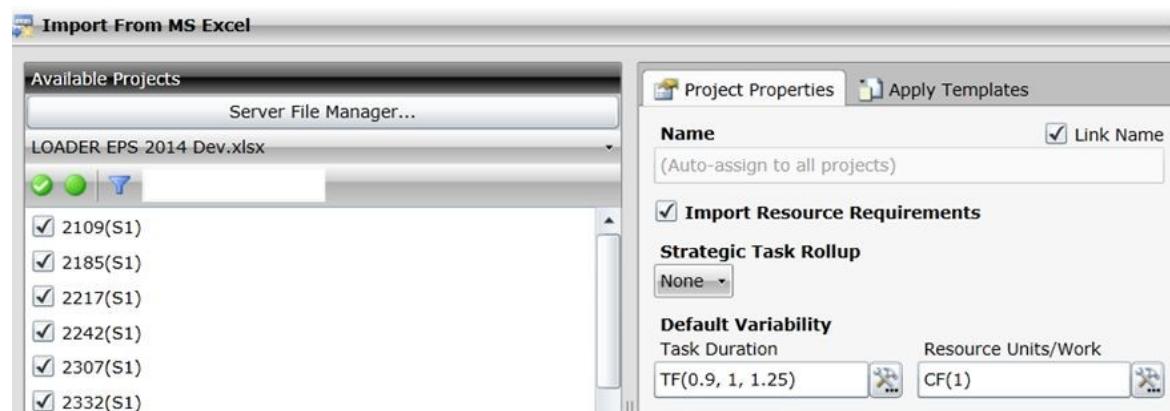
Login to Enterprise Portfolio Simulator and import project from Microsoft Excel, Project, or directly from database structures when enabled.

Import EPS	
	
1.	Open EPS Select Projects \ Repository \ MS Excel Import
	
2.	<ol style="list-style-type: none"> Select the “Server File Manager” once the Import from MS Excel dialogue box is open Select the “upload file” menu and search for the Loader.xls file Select “Close” once the file has been loaded

Import EPS



- 3.** Select "Select MS Excel File" and select the appropriate loader



- 4.**
- i. Select the "check box" to quickly select all projects
 - ii. Check the "import resource requirements" if resources built
 - iii. "Default variability" adds variability to any task missing data based on templates

Source Attribute	EPS Project Attribute	EPS Task Attribute
BU_Num		BU_Num
Current_Phase_Start_Date	Current_Phase_Start_Date	
Current_Stage	Current_Stage	
CURRENT_STATUS		CURRENT_STATUS
DAS_vs_CS		
Disc_or_Dev	Disc_or_Dev	
DISC_Project_Status		DISC_Project_Status

- 5.**
- i. Attributes will be automatically mapped to the correct attribute name in EPS.
Review the list and ensure none of the attributes are blank.

Import EPS

	<p>Project Attributes are at the parent level while Task Attributes are at the stage level.</p> <ul style="list-style-type: none">ii. Task attributes are necessary for additional scenario creation data mapping & reportingiii. After selecting “Ok” the tool will provide any data errors. Generally it would be “invalid characters” not previously scrubbed.
--	--

4.3 Import Data

Project data is assembled or extracted into Excel detailing project, current stage, template, dates and attributes.

Import Overview

The screenshot shows the EPS PORTFOLIO SIMULATOR application. On the left, there's a sidebar with 'Views' expanded, showing 'Projects' (with 'Repository' selected), 'Analysis' (with 'Portfolios', 'Scenarios', and 'Reports'), and 'Templates' (with 'Task' and 'Resourcing'). The main area has a title bar 'Repository Projects'. Below it is a toolbar with icons for General, Conditions, Financials, Attribute Assignments, Clear, Import, Add New, Edit, Duplicate, Delete, Update, and Apply Template. A table titled 'Repository Projects' displays six rows of data:

	Name	Start Date	Finish Date	Take Priority	Calendar
1	2109(S1)	3/23/2007		500	(24/7)
2	2185(S1)	10/21/2008		500	(24/7)
3	2217(S1)	10/22/2008		500	(24/7)
4	2242(S1)	6/23/2009		500	(24/7)
5	2307(S1)	8/5/2008		500	(24/7)
6	2324(S1)	6/20/2011		500	(24/7)

4.4 Import Overview

EPS views of imported data.

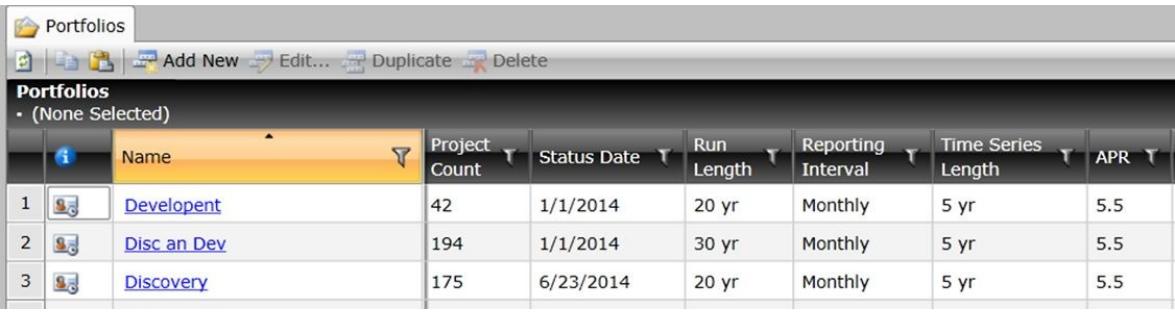
Data Inspection																																																														
<p>Repository Projects</p> <p>General Conditions Financials Attribute Assignments</p> <p>Clear Import Add New Edit... Duplicate Delete Update Apply Templates:</p> <p>Repository Projects • (None Selected)</p> <table border="1"> <thead> <tr> <th></th> <th>Name</th> <th>Start Date</th> <th>Finish Date</th> <th>Take Priority</th> <th>Calendar</th> </tr> </thead> <tbody> <tr><td>1</td><td>2109(S1)</td><td>3/23/2007</td><td></td><td>500</td><td>(24/7)</td></tr> <tr><td>2</td><td>2185(S1)</td><td>10/21/2008</td><td></td><td>500</td><td>(24/7)</td></tr> <tr><td>3</td><td>2217(S1)</td><td>10/22/2008</td><td></td><td>500</td><td>(24/7)</td></tr> <tr><td>4</td><td>2242(S1)</td><td>6/23/2009</td><td></td><td>500</td><td>(24/7)</td></tr> <tr><td>5</td><td>2307(S1)</td><td>8/5/2008</td><td></td><td>500</td><td>(24/7)</td></tr> <tr><td>6</td><td>2324(S1)</td><td>6/20/2011</td><td></td><td>500</td><td>(24/7)</td></tr> </tbody> </table>								Name	Start Date	Finish Date	Take Priority	Calendar	1	2109(S1)	3/23/2007		500	(24/7)	2	2185(S1)	10/21/2008		500	(24/7)	3	2217(S1)	10/22/2008		500	(24/7)	4	2242(S1)	6/23/2009		500	(24/7)	5	2307(S1)	8/5/2008		500	(24/7)	6	2324(S1)	6/20/2011		500	(24/7)														
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<p>Repository Project Tasks</p> <p>General Resource Requirements Conditions Financials Attribute Assignments</p> <p>Add New Edit... Delete Show Apply Templates: Task Resourcing Financing</p> <p>Repository Project Tasks • [2109(S1)] • (None Selected)</p> <table border="1"> <thead> <tr> <th></th> <th>Name</th> <th>Start Date</th> <th>Finish Date</th> <th>Survival %</th> <th>Plan Duration</th> <th>Override Duration</th> <th>Duration Time Unit</th> </tr> </thead> <tbody> <tr><td>1</td><td>PreClinical</td><td>3/23/2007</td><td>8/9/2008</td><td>100</td><td>505</td><td>505</td><td>Month</td></tr> <tr><td>2</td><td>Phase I</td><td>8/9/2008</td><td>11/5/2009</td><td>100</td><td>453</td><td>453</td><td>Month</td></tr> <tr><td>3</td><td>Phase IIA</td><td>11/5/2009</td><td></td><td>43</td><td>19.2</td><td>L(19.2, 0.5) [16.2, 23.2]</td><td>Month</td></tr> <tr><td>4</td><td>Phase IIB</td><td></td><td></td><td>67</td><td>18.5</td><td>L(18.5, 0.5) [15.5, 22.5]</td><td>Month</td></tr> <tr><td>5</td><td>Phase III</td><td></td><td></td><td>68</td><td>39.7</td><td>L(39.7, 0.5) [36.7, 43.7]</td><td>Month</td></tr> <tr><td>6</td><td>Registration</td><td></td><td></td><td>83</td><td>11.9</td><td>L(11.9, 0.5) [8.9, 15.9]</td><td>Month</td></tr> </tbody> </table>								Name	Start Date	Finish Date	Survival %	Plan Duration	Override Duration	Duration Time Unit	1	PreClinical	3/23/2007	8/9/2008	100	505	505	Month	2	Phase I	8/9/2008	11/5/2009	100	453	453	Month	3	Phase IIA	11/5/2009		43	19.2	L(19.2, 0.5) [16.2, 23.2]	Month	4	Phase IIB			67	18.5	L(18.5, 0.5) [15.5, 22.5]	Month	5	Phase III			68	39.7	L(39.7, 0.5) [36.7, 43.7]	Month	6	Registration			83	11.9	L(11.9, 0.5) [8.9, 15.9]	Month
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Project Tasks Illustration of imported project dates and template values																																																														

5. Scenario Analysis

In the Analysis \ s tab, select “Add New” to create a . A can have any collection of projects.

Below we see s for “each” project type and data combined.

When the “Add New” button is selected, a dialogue box will help expedite project selection via attribute filtering, etc.

Analysis Overview							
							
<ol style="list-style-type: none">1. In Analysis \ Portfolios add a portfolio and select the project to load2. In Analysis \ Scenarios update default scenario names3. Scenarios \ Run \ Analyze							

5.1 Setup Portfolio

Detailed portfolio settings.

Portfolio Settings								
 Portfolios Add New  Edit...  Duplicate  Delete  								
	Name	Project Count	Status Date	Run Length	Reporting Interval	Time Series Length	APR	
1	Developent	42	1/1/2014	20 yr	Monthly	5 yr	5.5	
2	Disc an Dev	194	1/1/2014	30 yr	Monthly	5 yr	5.5	
3	Discovery	175	6/23/2014	20 yr	Monthly	5 yr	5.5	

1.	Status Date - This date is automatically populated from the imported plan based on the earliest project start date. All dates are relative to the Status Date; thus, dates before it are historical and dates after it are future. Generally if you want to see financial and resource data starting in 2014, you would enter 1/1/2014. Therefore, enter the start of the year, or a mid-year, from which an analysis would begin.
2.	Run Length - Enter the number of years the simulation will run; generally, 5 to 10 years.
3.	Reporting Interval - Data can be viewed Monthly, Quarterly, and Yearly. Each team becomes familiar with what presentation view is most appropriate. Some teams analyze data Monthly, but report on it Yearly.
4.	Time Series Length - This is critical for viewing resource and financial data. If you were expecting to see 20 years of data, but only had 5 years of time series data, then no financials or resources would be visualized for years 6 to 20.
5.	APR - the rate at which financials change per future simulated year.

5.2 Build Scenario

In the Analysis \ Scenarios tab default scenarios and names are automatically created.

- The “Baseline” scenario is the baseline with no changes, i.e. running planned data.
- The “Change Dates” scenario illustrates all project start dates have been pushed out to 1/1/2020.
- The “Exclude Project” scenario will exclude a project in a scenario run.

Scenario Settings										
 Scenario - All Plans/Baseline Grouped by: Portfolio										
	Name	Task Durations	Resource Units/Work	Reps	100% Survival	Resource Allocation Mode	Task Behavior	APR		
1	Baseline	Plan	Plan	1	<input checked="" type="checkbox"/>	All Unconstrained	Work-Based	5.5		
2	Changed Dates	Plan	Plan	1	<input checked="" type="checkbox"/>	Per Resource	Work-Based	5.5		
3	Exclude Mars	Plan	Plan	1	<input checked="" type="checkbox"/>	All Unconstrained	Work-Based	5.5		

Name	Name of scenario
Task Durations	Plan durations are non-variable and follow a project plan's dates. “Over-rides” are variable distributions.
Resource Units / Work	Plan resources that are non-variable will require ‘x’ number of hours of work or Fixed Units. “Over-rides” are variable distributions.
Reps	When running in “override” it is important to run a minimum of 30 replications in order to generate enough variability across all the distributions sampled in a model run. Generally, 100 replications are run when performing results analysis on a model.
100% Survival	When this field is checked, all tasks execute and do not fail. Uncheck the field when projects are loaded with survival scores and you want to analyze outcomes including project failures across many simulated futures, i.e. replications.
Resource Allocation Mode	“All Unconstrained” results in a simulation providing as many resources as needed when a workload is generated. “Constrained” resources can result in project work being delayed until another project, with captured resources, completes its work requirement. Generally models are run unconstrained.
Task Behavior	This field is considered when models are running with constrained resources. It tells the output reports to visualize task start dates either when constraints are satisfied (i.e. “Event Based” results), or with “Work-Based” results that illustrate when resources were actually performing work on a task’s start and finish dates.
APR	Annual Percentage Rate values adjust a project’s revenue growth as simulation years increment beyond the first year that a project’s revenue has started accruing.

5.3 Scenario Options

Scenario Settings

The screenshot shows a software interface titled "Scenario Settings". At the top, there's a toolbar with icons for "Projects", "Resources", "Changes", and "Optimization". Below the toolbar, there are tabs for "General", "Financials", and "Attribute Assignments", with "General" selected. The main area displays a tree view under "Portfolio": "Develop" > "Project" > "2964(S1) (1)". A dropdown menu "Scenarios" is open, showing "Dev_Base". Below this is a table:

	Exclude	Name	Start Date	Take Priority
1	<input checked="" type="checkbox"/>	2109(S1)	1/1/2020	500
2	<input type="checkbox"/>	2354(S1) (1)	1/1/2020	500
3	<input checked="" type="checkbox"/>	2400(S1) (1)	1/1/2020	500

Below the table, there are two rows of descriptive text:

- Name**: Illustrates projects being excluded from a scenario analysis
Used to help address flow & resource loading issues
- Start Date**: Date to begin portfolio analysis

Scenario Date Options

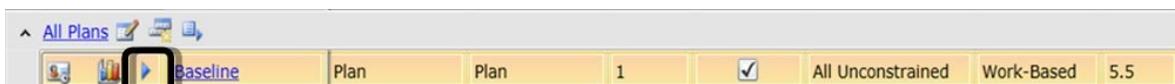
The screenshot shows a software interface titled "Scenario Date Options". The layout is identical to the "Scenario Settings" interface above, including the toolbar, tabs, and tree view under "Portfolio". The "Scenarios" dropdown shows "Dev_Base". The table is the same as in the previous screenshot:

	Exclude	Name	Start Date	Take Priority
1	<input type="checkbox"/>	2109(S1)	1/1/2020	500
2	<input type="checkbox"/>	2354(S1) (1)	1/1/2020	500

A red rectangular box highlights the "Start Date" column header.

5.4 Run Scenarios

Scenario data is retained for comparison.

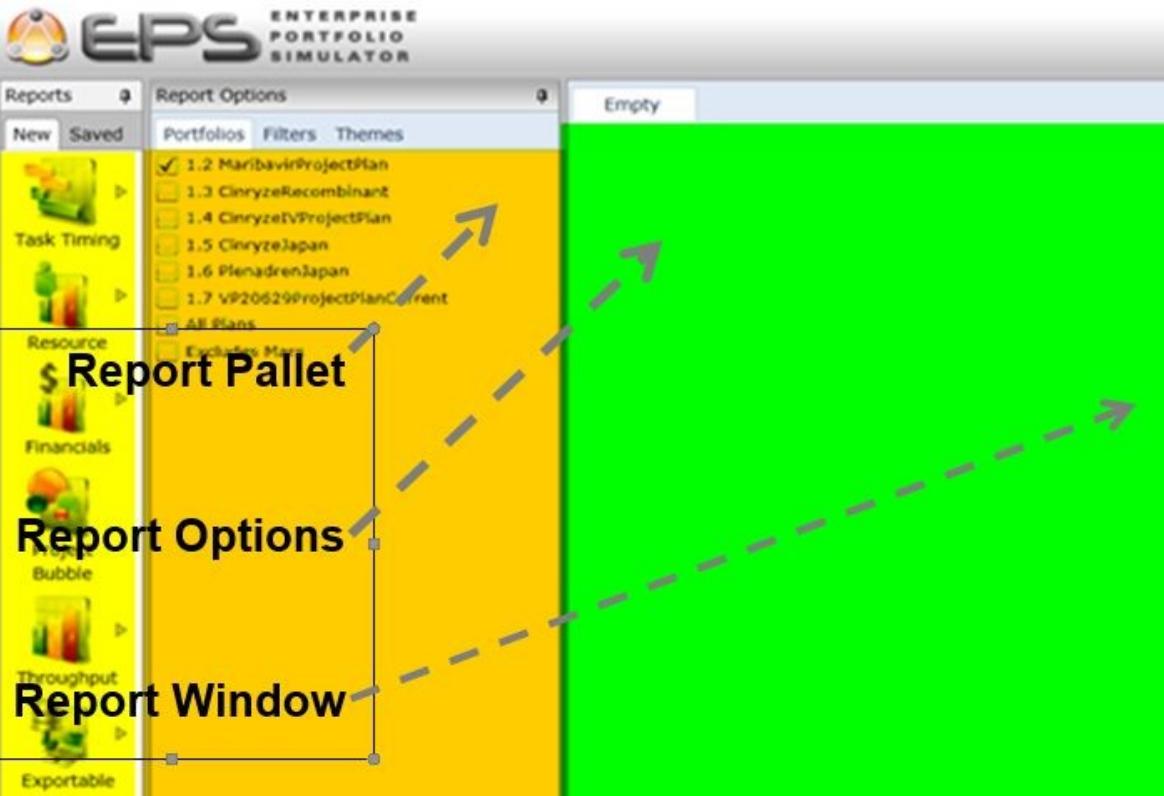
Scenario Settings	
	
All Constrained / Unconstrained	Model with unlimited resources.
Work-Based / Activity Based	Either perform tasks based on when work is completed or activities completed.

6. Analyze Results

Reports are viewed in a separate web page. Select Analysis \ Reports to open the report viewer.

On the left hand side of the reporting page are the report pallets. Following the graphic a table details how each report collection will help a client analyze results.

- **Portfolios** - users select which s will be available in the “Filters” view
- **Filters** - this window has the report query view where users select / deselect
- **Themes** - report color variation

Scenario Settings	
 <p>The screenshot shows the EPS software interface. On the left, there's a vertical menu with icons for Task Timing, Resource, Financials, Bubble, Throughput, and Exportable. The main area is divided into three sections: 'Report Pallet' (yellow), 'Report Options' (yellow), and 'Report Window' (green). The 'Report Pallet' section contains icons for Task Timing, Resource, Financials, Bubble, Throughput, and Exportable. The 'Report Options' section contains a list of portfolios: 1.2 MaribavirProjectPlan, 1.3 CinryzeRecombinant, 1.4 CinryzeIVProjectPlan, 1.5 CinryzeJapan, 1.6 PlenadrenJapan, 1.7 VP206299ProjectPlanCurrent, and All Plans. The 'Report Window' section is currently empty and labeled 'Empty'. Dashed arrows point from the table rows below to these specific areas.</p>	
Task Timing	All three reports are used for assessing project Gantt perspectives, tasks' start and finish probability and duration. The Duration report allows the user to view the total days' or months' activities required to complete the work either at the project or task level.
Resource	The “Unit Time Series” report illustrates resources required over time.

Scenario Settings	
Financials	All three sub-report types are applicable to the team. The section to follow provides a snapshot of each view and how it can be used.
Project Bubble	This report does a nice job comparing cost, revenue, and risk. Excellent reporting when survival applied.
Throughput	The Time Series and Histogram reports will be found useful as they detail total counts of milestone stages completed.
Exportable	This data-driven report supports pivot table analysis.

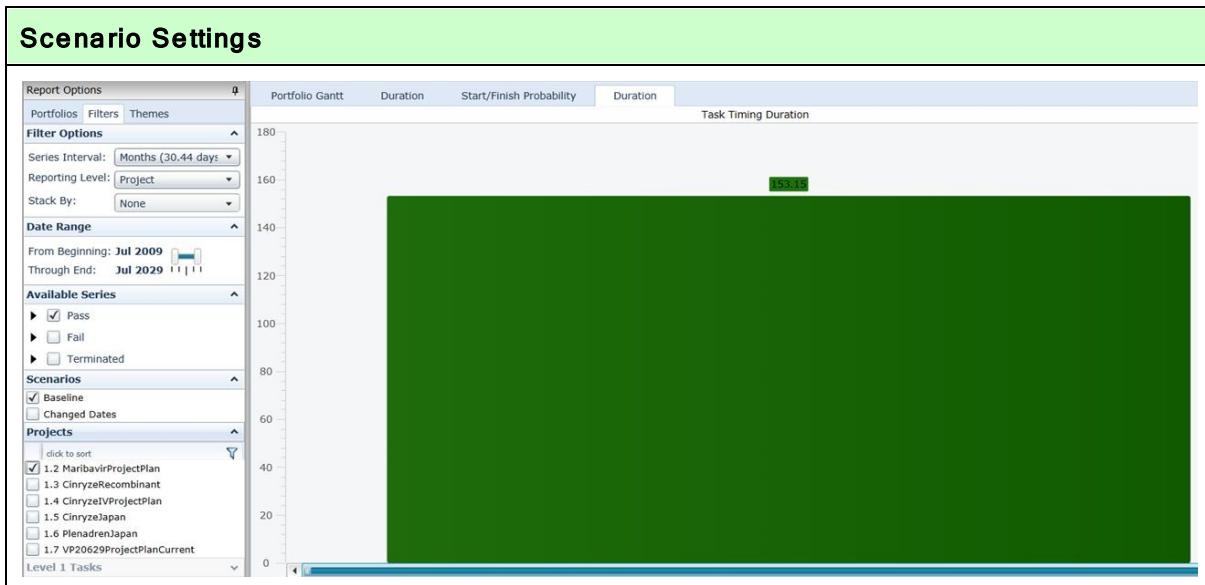
6.1 Throughput GANTT

Gantt report performs project roll-up and down for project plan start and finish times.



6.2 Throughput Duration

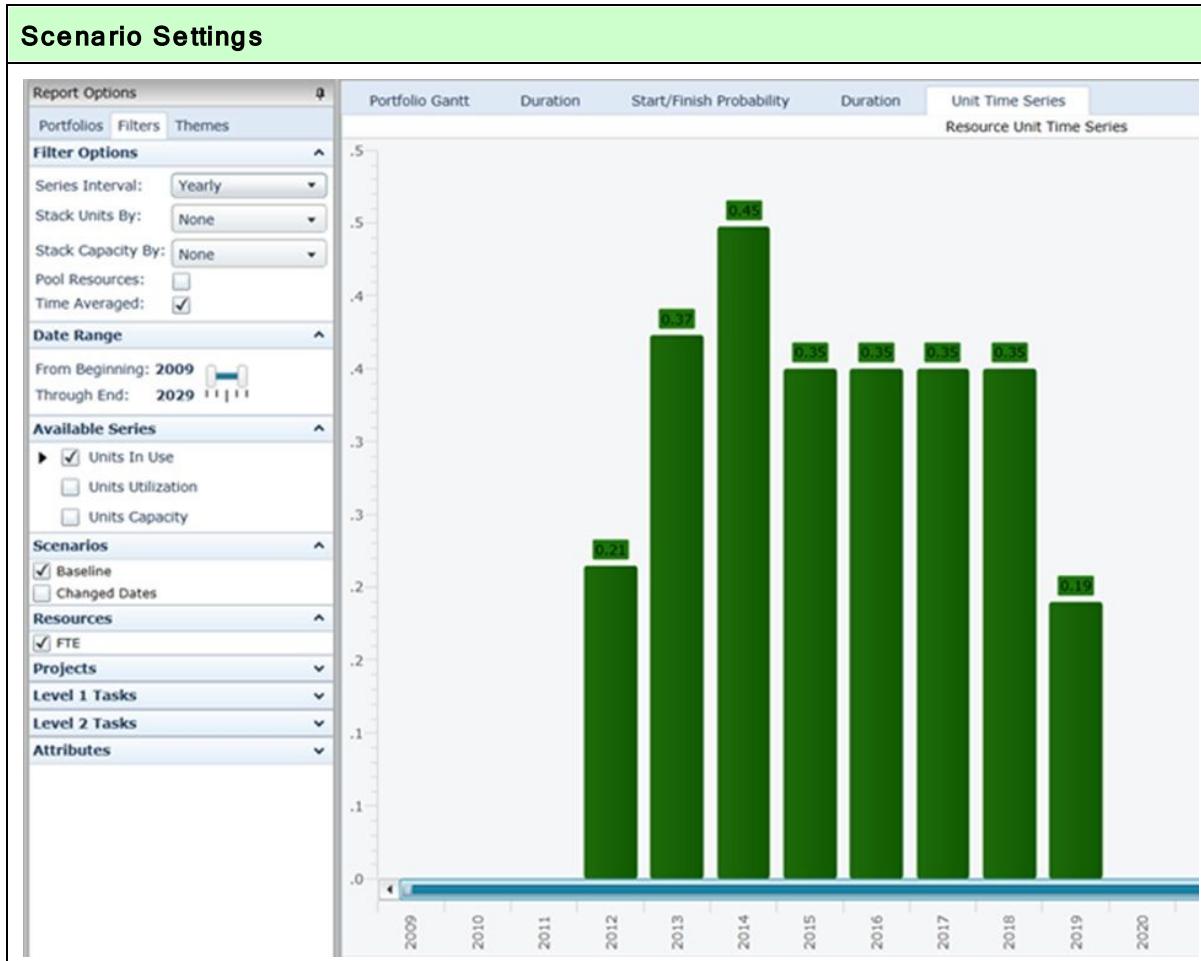
Duration reports provide a count in terms of days or months the total time a project required to complete.



6.3 Resource Time Series

Resource Units are the total number of people required during a project's execution.

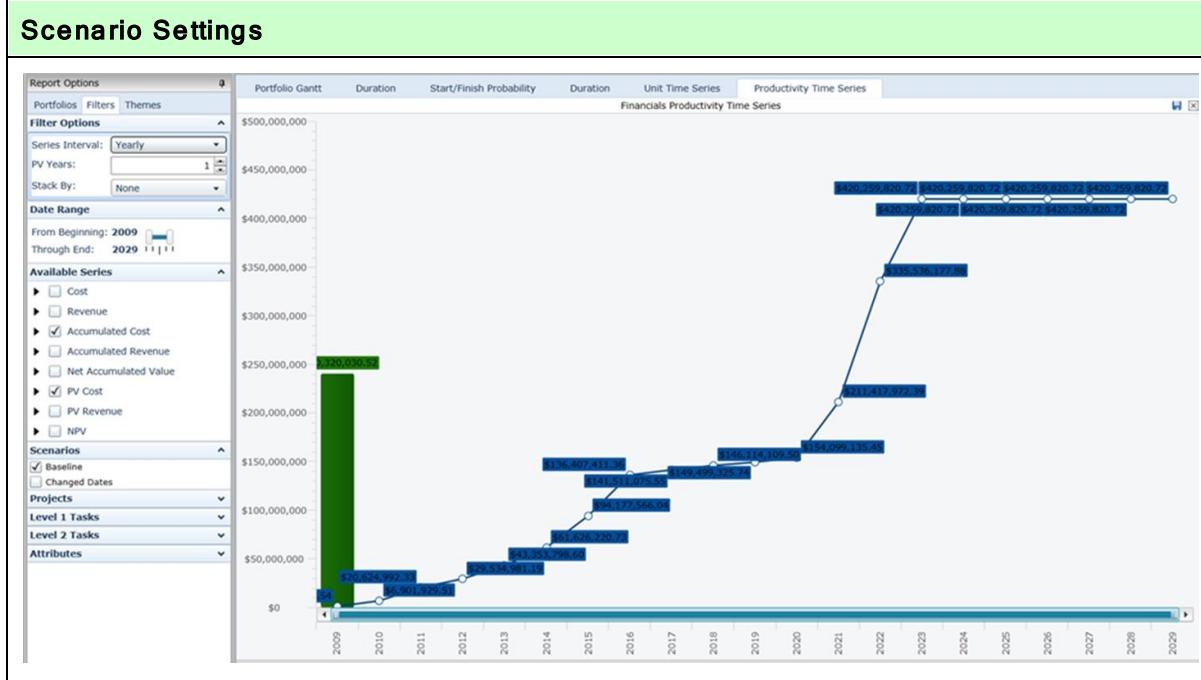
Resources can be “pooled” resulting in aggregated resource counts by resource work types.



6.4 Financials Productivity

The productivity report illustrates accumulated revenue, cost, and present value and net present value calculations.

Select the # of present value years to display.



6.5 Project Bubble

Bubbles compare cost, time, and revenue with a bubble position dependent upon its final resulting probability of success score.

