

MyModel

**Portfolio
Simulator
Data Load
Procedure**

3Q
Version 1

Purpose: Data Transformations from MS Excel to
Portfolio Simulator

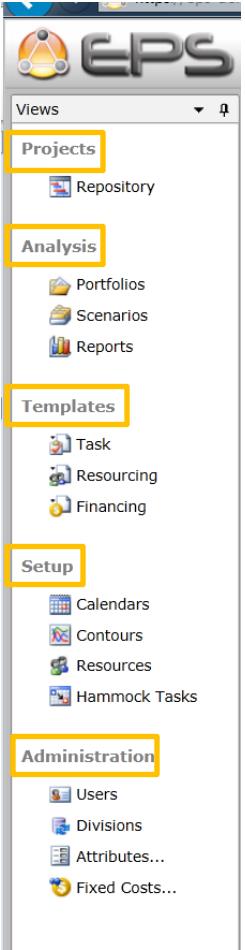
Brian P. Hogan

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1. Definitions

The following is a high-level overview of the Portfolio Simulator (EPS) model categories. There is also an excellent online help menu, so hit F1 on any page to open documentation for its contents.

	<p>Project Repository</p> <p>The Project Repository allows you to collect projects for your portfolio(s). You can import projects from other sources, or add new projects to the repository manually.</p> <p>This documentation details the importing of data from MS Excel.</p>
<p>Analysis</p>	<p>The Analysis functions of EPS allow you to build portfolios from the projects in the Project Repository. You can also create a variety of scenarios and analyze your portfolio and scenario simulation results by viewing the resulting reports.</p> <p>The following three Analysis options are available.</p> <ul style="list-style-type: none">• Portfolios – project collections• Scenarios – contains analysis options• Reports – simulated outcome reports
<p>Templates</p>	<p>Templates provide an easy way to apply risk factors, resources, and financial contours or characteristics to tasks, resources and financials based upon task names and/or attributes.</p> <p>These features will be used for mapping resources, testing different PTRS values, and updating cost (if applicable).</p>
<p>Setup</p>	<p>The Setup functions of EPS provide the ability for you to define specific calendars, contours, resources, and hammock tasks. ABC will be using resources and may define contours which are useful for spreading cost and revenue over a user defined time period.</p>
<p>Administration</p>	<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>MyModel will have setup Users and model Attributes, but Fixed Cost is not being used at this time.</p> <ul style="list-style-type: none">• ABC will have to decide on user read/write privileges. <p>Divisions will be important so each user can create a separate workspace to perform their desired analysis.</p>

2. Status Mode & Start Dates

It is critical to understand how project **start dates**, a project's task **start & finish dates**, a project's **status mode**, and a portfolio's "**status date**" affects how project tasks are based in the simulation engine. Different project task designs are going to require different settings. After reading the following, please setup a dummy project and experiment with each of the status mode settings and analyze outcomes in the output reports.

In general, most pharmaceutical models with task architecture at the milestone level, i.e. PreClinical, Phase I, Phase 2, and Registration would use the "calculate status" status mode.

ABC has a couple of special data load options – detailed in a later section.

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



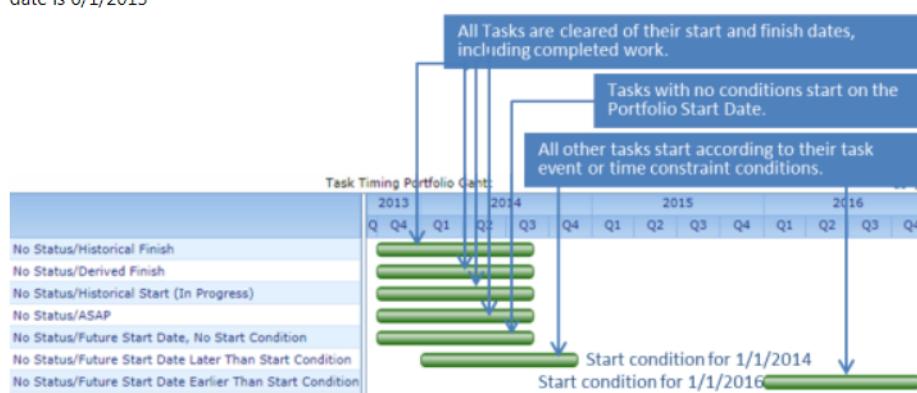
A Historical task is any task occurring before the Portfolio status date. A historical task's duration is dependent on its start and finish dates. Calculated tasks occur after the Portfolio status date and are calculated based on predecessors, duration, resources and other conditions.

There are several things to keep in mind when working with Historical tasks.

1. Financial data is not calculated for historical tasks.
2. EPS will not start recording resource work until the Portfolio status date. This means you cannot view any work completed by resources assigned to historical tasks.
3. If you are illustrating annual resource requirements, it is recommended that the status date be set to 1/1/[yr].
4. If a data set has incomplete start and finish dates for both historical and future tasks, generally models are built with only a project's current stage, i.e. all other historical stages are deleted. We push clients for current phase start dates, or do whatever is necessary to prepopulate them, or a project will start based on the following rule types:

Status Date Type: No Status

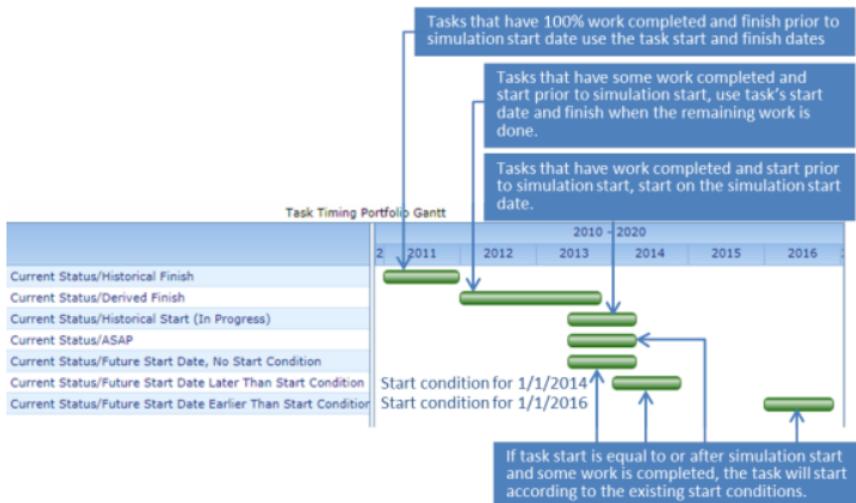
Status Mode Options	Descriptions
No Status - The Gantt chart below illustrates how the project/task start dates are calculated with a No Status mode setting and the Portfolio Start date of 10/1/2013. Project start date is 1/1/2011. Portfolio Status date is 6/1/2013	<ol style="list-style-type: none">1. All tasks are cleared of their start and finish dates, as well as work completed.2. Tasks with no conditions start on the "Start Date" (project start date).3. All other tasks start according to their task event and time constraint conditions > start date.



Status Date Type: Current Status

1. Simulates 'as is', using start/finish dates and work completed from the inputs.
2. Tasks that have 100% work complete and start\finish dates prior to the simulation start date would use the task dates and appear 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 was completed. In this case, the task's finish date 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. (The task's start date would be 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 (reset to 0%). The task will start according to its existing start conditions. (No additional time constraint conditions will be created.)

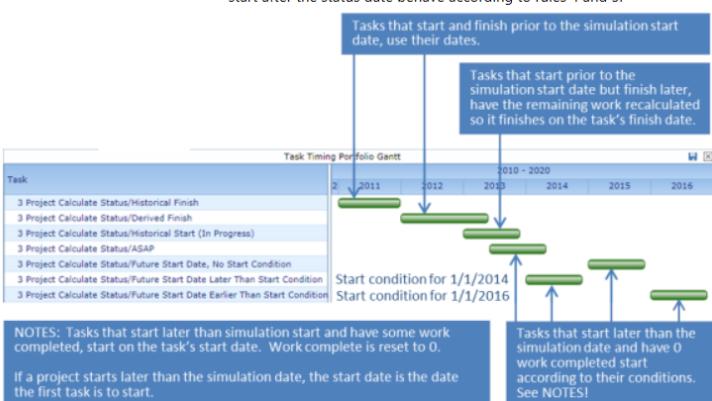
Current Status - The Gantt chart below illustrates how the project/task start dates are calculated with a Current Status mode setting. Project start date is 1/1/2011. Portfolio Status date is 6/1/2013



Status Date Type: Calculate Status

1. Uses start/finish dates that are 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 use those task dates and appear historically completed.
3. Tasks that have a start date prior to the simulation start date, but a finish date later the simulation start date, will start on the task's start date, and have its remaining work recalculated, so that it finishes on the task's finish date.
4. Tasks that have a start date later than the simulation start date, and no work complete, will start according to their conditions. **See #6.**
5. Tasks that have a start date later than the simulation start date, and % complete > 0, will get a can't 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 that have 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.

Calculate Status - The Gantt chart below illustrates how the project/task start dates are calculated with a Calculate Status mode setting. Project start date is 1/1/2011. Portfolio Status date is 6/1/2013



3. Data Assembly & Import Options: MS Excel Data Loader

Organizer Excel Workbook	Excel files – ABC team uses to copy & paste project data from source data. Contains VBA automation that extracts, translates, and loads data into EPS's specific input format. Can have 1 to n copies of this workbook. Project Phase 2 could include automation of data copy & paste.
Loader Excel Workbook	Excel file EPS imports project data from.

We will be using MS Excel VBA to transform data from a ABC source spreadsheet to the EPS MS Excel Import template (below), aka as the “Loader” file. It is important to become familiar with both worksheets. If there are other data fields discovered that the team wants to use in the Loader file, it can be automated.

In general ABC will not have to work directly in this file, but it is the file selected for data importing.

ID	Impl	Task Name	Level	Tracking				Base	Project_Unique	Project_Name	Current_Status	Survival_Term	Current_Phase	Stage_1	Stage_2	Stage_3	
				Start Date	Finish Date	Duration	Days										
1	2242(S1)		1	06/23/2009				2242	Anti II-23 mab	Stage_9	Template_2	11_10_2011					
2	Phase I		2	06/23/2009	1/1/2014	69	70	2242	Anti II-23 mab	Stage_9	Template_2	11_10_2011					
3	Phase II B		2		11/10/2011			2242	Anti II-23 mab	Stage_9	Template_2	11_10_2011					
4	Phase III		2					2242	Anti II-23 mab	Stage_9	Template_2	11_10_2011					
5	Registration		2					2242	Anti II-23 mab	Stage_9	Template_2	11_10_2011					
6	2376(S1)		1	10/31/2006				2376	H4 Antagonist	Stage_9	Template_1	10_31_2012					
7	PreClinical		2	10/31/2006	3/14/2008	100	70	2376	H4 Antagonist	Stage_9	Template_1	10_31_2012					
8	Phase I		2	03/14/2008	2/19/2010	100	71	2376	H4 Antagonist	Stage_9	Template_1	10_31_2012					
9	Phase II A		2	02/19/2010	10/31/2012	100	67	2376	H4 Antagonist	Stage_9	Template_1	10_31_2012					
10	Phase II B		2	10/31/2012				2376	H4 Antagonist	Stage_9	Template_1	10_31_2012					
11	Phase III		2					2376	H4 Antagonist	Stage_9	Template_1	10_31_2012					
12	Registration		2					2376	H4 Antagonist	Stage_9	Template_1	10_31_2012					
13	2109(S1)		1	03/23/2007				2109	TRPV1 Antagonist	Stage_8	Template_1	11_5_2009					
14	PreClinical		2	03/23/2007	8/9/2008	100	70	2109	TRPV1 Antagonist	Stage_8	Template_1	11_5_2009					
15	Phase I		2	08/09/2008	11/5/2009	100	43	2109	TRPV1 Antagonist	Stage_8	Template_1	11_5_2009					
16	Phase II A		2	11/05/2009				2109	TRPV1 Antagonist	Stage_8	Template_1	11_5_2009					
17	Phase II B		2					2109	TRPV1 Antagonist	Stage_8	Template_1	11_5_2009					
18	Phase III		2					2109	TRPV1 Antagonist	Stage_8	Template_1	11_5_2009					
19	Registration		2					2109	TRPV1 Antagonist	Stage_8	Template_1	11_5_2009					
20	2307(S1)		1	08/05/2008				2307	Anti-IL3 MoAb	Stage_8	Template_2	6_20_2013					
21	PreClinical		2	08/05/2008	6/30/2010	100	70	2307	Anti-IL3 MoAb	Stage_8	Template_2	6_20_2013					
22	Phase I		2	06/30/2010	6/20/2013	100	52	2307	Anti-IL3 MoAb	Stage_8	Template_2	6_20_2013					
23	Phase II A		2	06/20/2013				2307	Anti-IL3 MoAb	Stage_8	Template_2	6_20_2013					
24	Phase II B		2					2307	Anti-IL3 MoAb	Stage_8	Template_2	6_20_2013					
25	Phase III		2					2307	Anti-IL3 MoAb	Stage_8	Template_2	6_20_2013					
26	Registration		2					2307	Anti-IL3 MoAb	Stage_8	Template_2	6_20_2013					
27	2185(S1)		1	10/21/2008				2185	HCV-NS5B-NNI	Stage_8	Template_1	10_8_2012					
28	PreClinical		2	10/21/2008	4/22/2010	100	70	2185	HCV-NS5B-NNI	Stage_8	Template_1	10_8_2012					
29	Phase I		2	04/22/2010	10/8/2012	100	43	2185	HCV-NS5B-NNI	Stage_8	Template_1	10_8_2012					
30	Phase II A		2	10/08/2012				2185	HCV-NS5B-NNI	Stage_8	Template_1	10_8_2012					
31	Phase II B		2					2185	HCV-NS5B-NNI	Stage_8	Template_1	10_8_2012					
32	Phase III		2					2185	HCV-NS5B-NNI	Stage_8	Template_1	10_8_2012					

Spreadsheet	Purpose
<i>The columns in the spreadsheet above represent the fields aligning with those EPS. The goal is to populate as many of them as possible so data doesn't have to be manually entered project by project in EPS.</i>	
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 n resources assigned to it. ABC is not initially using this capability.
Resources	Simply the classification of model resource types, capacity, and their costs. ABC is not initially using this capability.
Contours	This spreadsheet is an excellent means in which to import financial data. In the latest EPS release a “countered” Fixed Cost category was created. This results in monthly, quarterly, or annual cost data to be quickly populated into the simulator and applied with Templates\Financing. See Contour section for more details. ABC is not initially using this capability.
Properties	Set the model's calendar options.

4. Data Assembly & Import Options – MS Excel Data Organizer.xls

The “Organizer” workbook contains VBA automation that translates project data into a format for importing into EPS. There are data manipulation options a user needs to master but nothing too complicated. Users copy and paste source data, update stage names, cycle times and survival parameters. Additional automation can be implemented to help with the initial copy and paste of source data but currently it is a manual process.

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. Users can define all field names as desired.
Stage ID and Controls	Define the stage names that will be built in the model. Also set between 1 to 4 data load options customized for ABC.
Scenario ID	Define the scenario names to be loaded.
Cycle Time	Define cycle time parameters.
PTRS – Scenario 1 & 2	Define stage survival parameters.
Error Log	Projects that are missing dates, or have date field exceptions, are ignored and recorded on this spreadsheet so they can be corrected by an analyst.

Worksheet: Data

Enter User Defined Stage Names >>>																		
THESE COLUMNS CAN NOT BE MOVED																		
Unique ID	Attribute	Stage	Survival	Attribute	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Attribute	Attribute	Attribute
Project_Unique_ID	Project_Name	Current Stage	Survival_Template	Current_Phase_Start_Date	Stage_1	Stage_2	Stage_3	Stage_4	Stage_5	Stage_6	Stage_7	Stage_8	Stage_9	Stage_10	Stage_11	MTA	Site	External_Status
3351	CCR6 Antagonist	Stage_2	Template_1	6/20/2012	1/23/2012	6/20/2012	9/26/2014									IMM	External	EC
2324	N-Type Ca An	Stage_3	Template_1		6/20/2011											NS	External	EC

- Row 8 defines the data element for each column. MyModel does not recommend changing the current format of the columns, but this is a flexible tool and it could be changed.
- Columns C to G define a project, its current stage, and template. Every project must have a current stage and project template assigned. This can be done with VLOOKUPS in a scrap worksheet.
- Columns H to R are the date columns. There are a number of date rules explained on the “Stage ID and Controls” worksheet. In general, please have the date data formatted as month / day / year.
- Columns S+ are the project attribute columns. Attributes can be added and subtracted as desired.
 - If attributes are added / subtracted, the “exact” name needs to be updated to EPS \ Administration \ Attributes so the values are imported correctly.
 - Attributes with < > ? | # \ / . invalid characters and must be cleaned before importing.
 - All projects are brought in with a “unique” numeric stage ID from 1 to 11. This is useful for mapping additional scenario data when working in EPS.
- Source project data is copied and pasted into these fields.
- Do not leave any “blank” rows between the data sets as the import stops when a blank row is reached.
 - This is useful if testing data and only want to import a few projects at a time.
- Templates 1, 2, 3 and 4 are defined on the Cycle Time and PTRS worksheets. Only enter values = template_1, template_2, template_3 or template_4. Template names are generic and users are responsible for mapping correctly. Ex: Small Molecule = template_1**

Worksheet: Stage ID and Controls

A	B	C	D	E	F	G	H	I	J	K	L
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.

In Pharma useful if blending a Discovery (early stages) and Development (late stages) model.

LOAD HISTORICAL Stages ? Yes Either enter "Yes" or leave

ONLY LOAD BUSINESS DATES No Either enter "Yes" or leave

In Pre-H2L w No Start Date; Median Days from H2L Start Date 183

In Pre-H2L w No Start Date; Enter # random Days 100

In Pre-H2L w No Start Date; Enter # random Days:

Uses RandBetween function to randomly pick # of days between 1 and value entered.

Start date is then calculated based on Today's Date - # of Random Days

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 date is <= today's date, i.e. whatever day the data is loaded.

- Col C: update the desired stage name.
- Col 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.
- Col E: client information on any other internal naming convention

Data Load Options:

1. Load Historical Stages?
 - 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.
2. Only Load Business Dates?
 - 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.
 - d. HOWEVER, a project in its current stage will have the exact number of days calculated to its next stage if the next stage's date is <= today's date, i.e. whatever day the data is loaded.
3. In Pre-H2L w No Start Date; Enter Median Days from H2L Start Date
 - 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.
 - c. MyModel appreciates this is not random, but this was requested by ABC.
4. In Pre-H2L with no start date; Enter Number of Random Days
 - 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.
5. Other Date Rules (any projects with ones are noted in "Error Log" worksheet)
 - 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.

Worksheet: Scenario ID

A	B	C	E	F
1	Scenario ID	Scenario Long Name	Scenario Short Name	
2	Scenario 1	Baseline	S1	
3				
4				
5	HoganBP: Name of scenario as viewed in both EPS Portfolios & Output Reports.			
6				
7	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.			
8				
9	Simply change the names before importing.			
10				
11				
12				
13				

- Col B: Define the scenario name assigned as an attribute. This is useful if multiple sets of projects are brought in with different data changes.
 - The “scenario ID” attribute can be used to help parse data into different scenario buckets.
 - EPS \ Analysis \ Portfolios \ 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.

Worksheet: Cycle Time

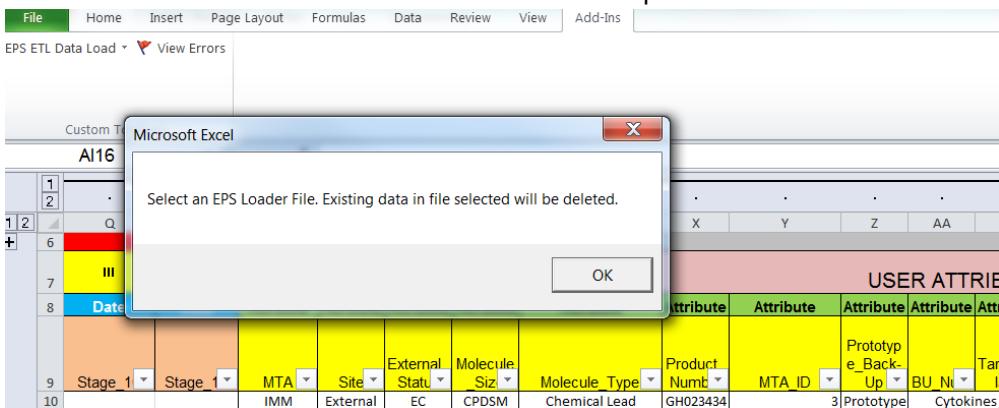
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	
Cycle Time		TEMPLATE_1: Small				TEMPLATE_2: Large				TEMPLATE_3				TEMPLATE_4				
1	Stage	Min	Avg	St. Dev	Max	Min	Avg	St. Dev	Max	Min	Avg	St. Dev	Max	Min	Avg	St. Dev	Max	CLIENT STAGE NAME
4	AD/Hit ID	14	17	0.5	21	14	17	0.5	18									AD/Hit ID
5	H2L	9	12	0.5	16	9	12	0.5	29									H2L
6	LO	8	11	0.5	15	8	11	0.5	15									LO
7	LLO	9	12	0.5	16	9	12	0.5	13									LLO
8	NME Declaration																	NME Declaration
9	PreClinical	8.5	11.5	0.5	15.5	13.8	16.8	0.5	32									NME
10	Phase I	17.6	20.6	0.5	24.6	21.8	24.8	0.5	34									Phase I
11	Phase IIA	16.2	19.2	0.5	23.2	23	26	0.5	29									Phase IIA
12	Phase IIB	15.5	18.5	0.5	22.5	12.8	15.8	0.5	18									Phase IIB
13	Phase III	36.7	39.7	0.5	43.7	42.5	45.5	0.5	65									Phase III
14	Registration	8.9	11.9	0.5	15.9	8.5	11.5	0.5	17									Registration
15	Notes:																	
16	Data in months																	
17	This data is for populating “override” or variable distribution columns in EPS.																	
18	The average and standard deviation columns will build a Lognormal distribution																	
19	L(mean, standard deviation)																	
20	If stan. Deviation is not known a value of 1 or 2 is sufficient for mock data																	
21																		
22																		
23	Template names are “generic.” Ensure to update each project with its correct template based on desired attribute criteria																	

- Enter cycle time parameters for four templates.
- Average values are updated to “planned” cycle time values.
- Override or variable cycle time, are built with Lognormal distributions, L(mean, standard deviation).
 - Min and max values are used to bound sampled values in the Lognormal.
- Template names are “generic.” There are only four possible templates and users are responsible for applying the correct template to a project.
- Generally only one digit beyond a decimal is needed for modeling purposes.
- All data is in months (unless specific date rules applied then cycle time unit is in Days)

5. Import Data Process

The data loading process is straightforward. The following details and illustrates the step sequence. It is recommended to have spreadsheet open while walking through the steps..

- a) Copy & paste source project data into the “Data” worksheet in the “Data Organizer”
 - b) Update any field names, on row 9, if changed or new.
 - c) Ensure each project has a unique ID.
 - d) Use VLOOKUPS, on a random worksheet, to populate for each project:
 1. Current Stage
 2. Survival Template
 3. Current Phase Date Value
 - e) Perform an Excel search & replace to remove invalid characters: # ? | \ < > @ &
 - f) Ensure all dates are formatted as dates.
 - g) Set if a project type is Discovery or Development in column AH
 - h) Future Projects:
 1. Update number of starts in column AI.
 2. Update time between starts in column AJ.
 - i) Update Scenario ID values.
 - j) Update Cycle Time values.
 - k) Update PTRS values.
 - l) Once satisfied with data integrity, select the Add-Ins Button \ EPS ETL Data Load
 1. Search for the “Loader” file & hit “OK”.
 2. The tool will inform you if there are any issues.
 3. **Inspect the “Error Log” before importing data into EPS.**
 4. Ensure to name the Loader.xls file as desired per the data it contains.



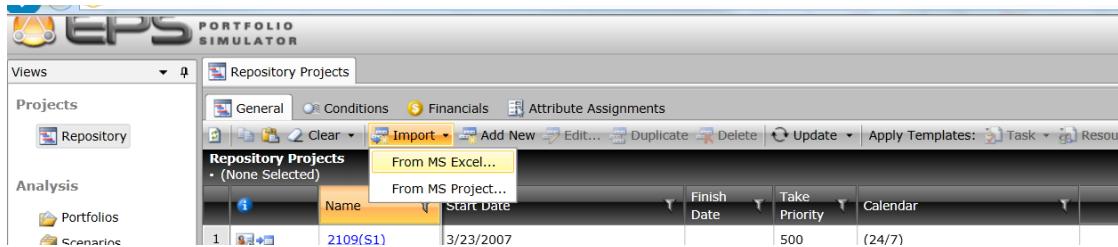
Once the file loading is complete you can either view or close the data in the Loader file.

C14		Registration																				
1	2	A	B	C	D	H	I	R	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU
		ID	Impl	Task Name	Level	Tracking			Survival Con													
		Start Date	Finish Date	Base	Duration	Project_Unique	Project_Name	Current_Status	Survival_Term	Current_Phase	Stage_1	Stage_2	Stage_3	Stage_4	Stage_5	Stage_6	Stage_7	Stage_8	Stage_9	Stage_10	Stage_11	Stage_12
3	1	2242(S1)	1	06/23/2009		2242	Anti-IL-23 mab	Stage_9	Template_2	11_10_2011									8_1_2006	6_23_2009		
4	2	Phase I	2	06/23/2009	1/1/2014	69	2242	Anti-IL-23 mab	Stage_9	Template_2	11_10_2011								8_3_2006	6_23_2009		
5	3	Phase II B	2	11/10/2011		70	2242	Anti-IL-23 mab	Stage_9	Template_2	11_10_2011								8_3_2006	6_23_2009		
6	4	Phase III	2			71	2242	Anti-IL-23 mab	Stage_9	Template_2	11_10_2011								8_3_2006	6_23_2009		
7	5	Registration	2			82	2242	Anti-IL-23 mab	Stage_9	Template_2	11_10_2011								8_1_2006	6_23_2009		
8	6	2376(S1)	1	10/31/2006		2376	H4 Antagonist	Stage_9	Template_1	10_31_2012									10_31_2006	3_14_2008	2_19_2	
9	7	PreClinical	2	10/31/2006	3/14/2008	100	2376	H4 Antagonist	Stage_9	Template_1	10_31_2012								10_31_2006	3_14_2008	2_19_2	

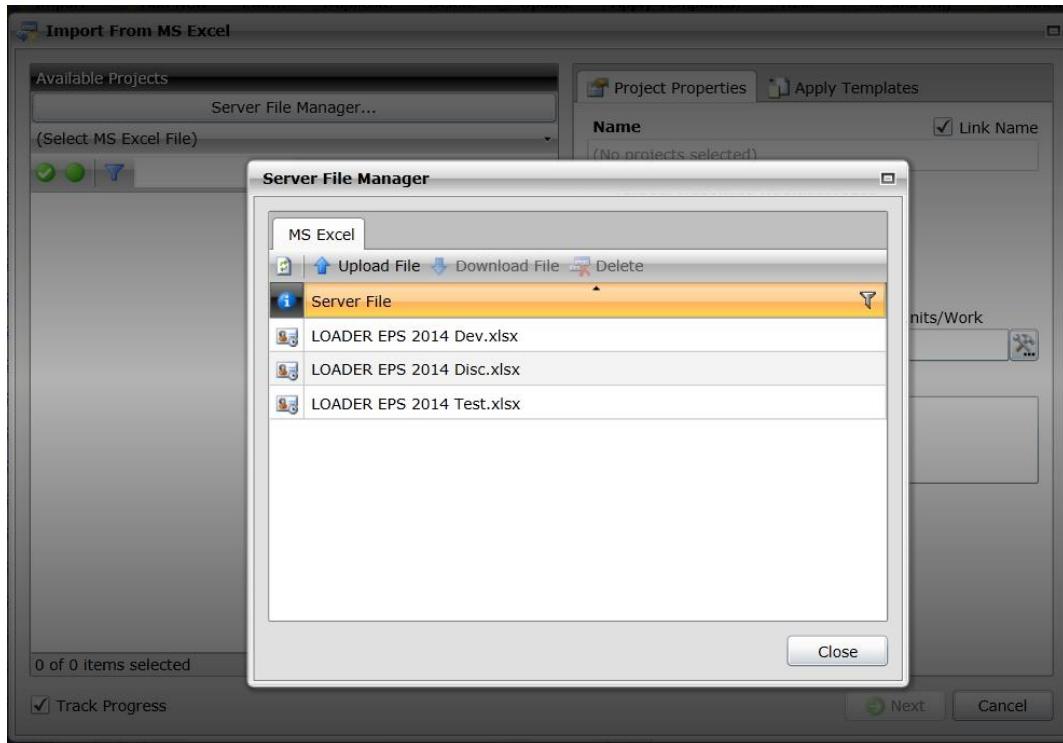
It is recommended to perform a second search & replace in the Loader file for any invalid characters. Generally replacing an invalid character with an underscore “_” is sufficient.

Import Data Process – Cont.

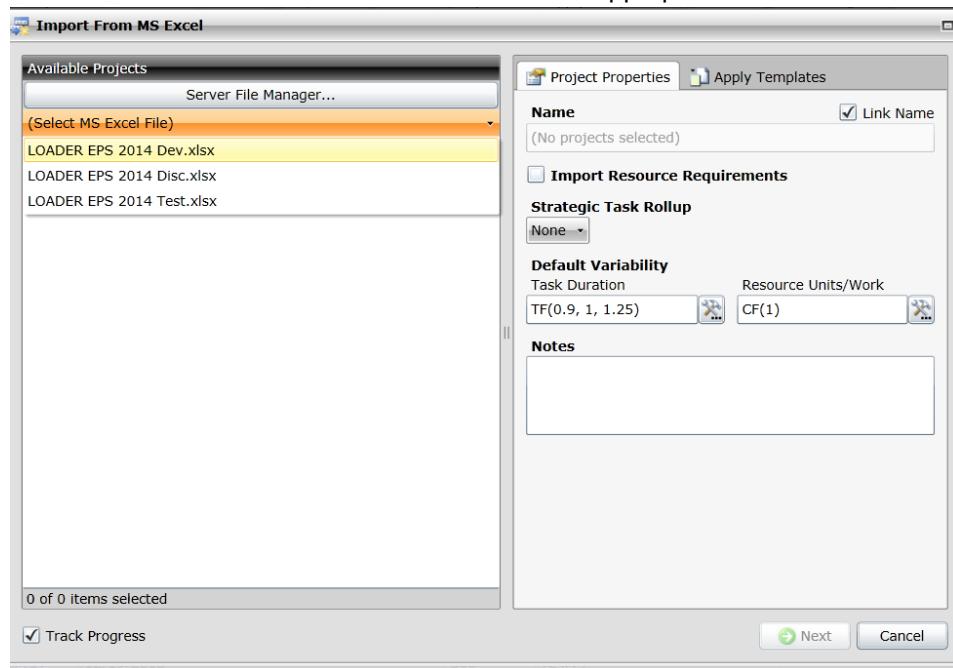
- m) Open EPS.
- n) Select Projects \ Repository \ MS Excel Import.



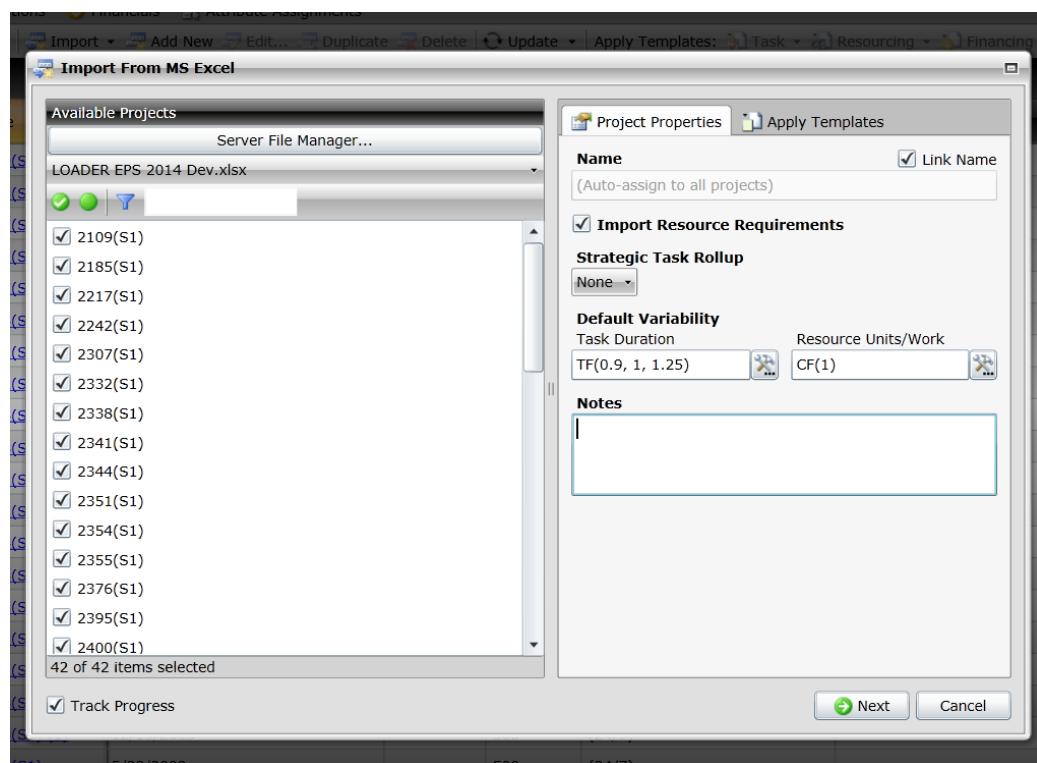
- o) Select the “Server File Manager” once the Import from MS Excel dialogue box is open.
 - 1. Select the “upload file” menu and search for the Loader.xls file.
 - 2. If older files appear in this list they can be deleted if not needed.
 - 3. Select “Close” once the file has been loaded.



- p) Select “Select MS Excel File” and then select the appropriate loader file.



- q) Select the “checkbox” to quickly select all projects.
 r) Check the “import resource requirements” if configured.
 s) The “default variability” would apply task variability in the event any task didn’t have a value.
 t) Select Next.



- u) For the most part all of the attributes will be automatically mapped to the correct attribute name in EPS.
- v) Review the list and ensure none of the attributes are blank.
- w) Project Attributes are at the parent level while Task Attributes are at the stage level.
 - 1. Task attributes are necessary for additional scenario creation data mapping & reporting
- x) After selecting “Ok” the tool will provide any data errors. Generally it would be “invalid characters” not previously scrubbed.
 - 1. MyModel recommends working line by line, as provided in a dialogue box, to find and correct the invalid characters.
 - 2. Bad characters should also be fixed in the source data to limit future rework

Import From MS Excel

Map Attributes

Source Attribute	EPS Project Attribute	EPS Task Attribute
BU_Num		BU_Num
Current_Phase_Start_Date	Current_Phase_Start_Date	
Current_Stage	Current_Stage	
CURRRENT_STATUS		CURRRENT_STATUS
DAS_vs_CS		
Disc_or_Dev	Disc_or_Dev	
DISC_Project_Status		DISC_Project_Status
Indications		Indications
Last_Active_Phase		
Molecule_Size	Molecule_Size	
Molecule_Type	Molecule_Type	
MTA	MTA	
MTA_ID		MTA_ID
Product_Number		Product_Number
Project_Name	Project_Name	
Project_Underline_ID	Project_Underline_ID	

Track Progress

6. Import Inspection

The following is a view of all loaded projects. Select two or three different projects and ensure that their data values and attributes are all correct. MyModel has performed extensive validation on its data import technology, but it is highly recommended one inspect 2 to 3 projects, at random, to ensure data integrity.

This screenshot shows the EPS Portfolio Simulator interface. The left sidebar contains navigation links for 'Views', 'Projects' (with 'Repository' selected), 'Analysis' (with 'Portfolios', 'Scenarios', and 'Reports'), and 'Templates' (with 'Task' and 'Resourcing'). The main window title is 'Repository Projects'. It features tabs for 'General', 'Conditions', 'Financials', and 'Attribute Assignments'. Below the tabs is a toolbar with buttons for 'Clear', 'Import', 'Add New', 'Edit...', 'Duplicate', 'Delete', 'Update', and 'Apply Templates'. A sub-header 'Repository Projects' with '(None Selected)' indicates no items are currently selected. The main area is a table with columns: Name, Start Date, Finish Date, Take Priority, and Calendar. Six rows of data are listed:

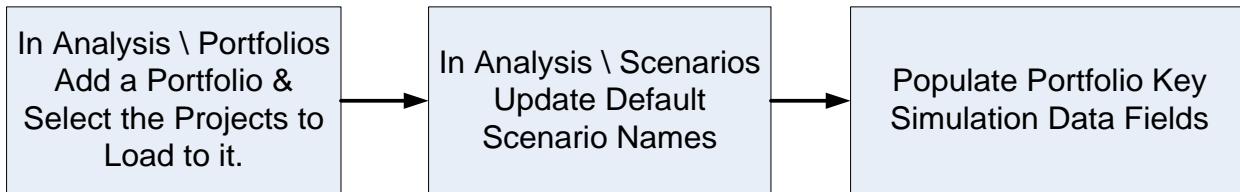
	Name	Start Date	Finish Date	Take Priority	Calendar
1	2109(S1)	3/23/2007		500	(24/7)
2	2185(S1)	10/21/2008		500	(24/7)
3	2217(S1)	10/22/2008		500	(24/7)
4	2242(S1)	6/23/2009		500	(24/7)
5	2307(S1)	8/5/2008		500	(24/7)
6	2324(S1)	6/20/2011		500	(24/7)

The following is a detailed project view (click on a project to open this view).

This screenshot shows the EPS Portfolio Simulator interface, similar to the previous one but focused on tasks. The left sidebar includes 'Views', 'Projects' (with 'Repository' and 'Tasks' selected), 'Analysis', and 'Templates'. The main window title is 'Repository Project Tasks'. It has tabs for 'General', 'Resource Requirements', 'Conditions', 'Financials', and 'Attribute Assignments'. The toolbar includes 'Add New', 'Edit...', 'Delete', 'Show', 'Apply Templates', and buttons for 'Task', 'Resourcing', and 'Financing'. A sub-header 'Repository Project' with '2109(S1)' indicates the selected project. The main area is a table with columns: Name, Start Date, Finish Date, Survival %, Plan Duration, Override Duration, and Duration Time Unit. Six rows of data are listed:

	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

7. Model Analysis



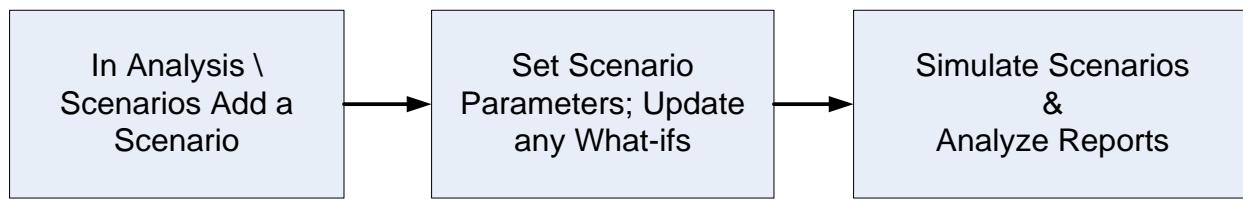
In the Analysis \ Portfolios tab, select “Add New” to create a portfolio. A portfolio can have any collection of projects. Below we see Portfolios for “each” project type and data combined. When the “Add New” button is selected, a dialogue box will help expedite project selection via attribute filtering, etc.

The screenshot shows the EPS PORTFOLIO SIMULATOR software interface. On the left, there's a sidebar with 'Views' dropdown, 'Projects' section (Repository), and 'Analysis' sections (Portfolios, Scenarios, Reports). The main area is titled 'Portfolios' with a sub-section '(None Selected)'. It contains a table with three rows:

	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

FIELD KEY	
A	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.
B	Run Length – Enter the number of years the simulation will run; generally, 5 to 10 years.
C	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.
D	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.
E	APR – the rate at which financials change per future simulated year.

Build a Scenario



In the Analysis \ Scenarios tab default scenarios and names for each portfolio are automatically created. MyModel strongly recommends updating default names to help one clearly understand what the scenario contains. Shown below are a couple of examples.

- The “Baseline” scenario is the baseline portfolio 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.

	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	Excludes Mars	Plan	Plan	1	<input checked="" type="checkbox"/>	All Unconstrained	Work-Based	5.5

Changed Date Scenario: Viewing: Scenarios \ What-ifs \ General view:

- Illustrates projects start being forced to start 1/1/2020 – all subsequent stage dates recalculated

	Name	Start Date	Take Priority
1	2109(S1)	1/1/2020	500
2	2354(S1) (1)	1/1/2020	500
3	2400(S1) (1)	1/1/2020	500
4	2965(S1) (1)	1/1/2020	500
5	2964(S1) (1)	1/1/2020	500
6	3705(S1) (1)	12/3/2013	500

Exclude Project Scenario: Viewing: Scenarios \ What-ifs \ General view:

- Illustrates projects being excluded from a scenario analysis
- Used to help address portfolio flow & resource loading issues

The screenshot shows a software interface for managing scenarios and what-ifs. On the left, there's a navigation tree with categories like Projects, Analysis, Templates, and Reports. Under Analysis, Scenarios is expanded, and What-Ifs is selected. The main area is titled "Scenario what-ifs" and shows a table of projects under "Dev_Base". The first column, "Exclude", contains checkboxes. The second column, "Name", lists project IDs. The third column, "Start Date", shows dates. The fourth column, "Take Priority", shows priority values. A red box highlights the "Exclude" column for rows 1 through 4.

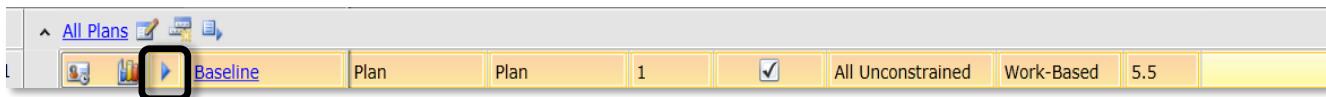
	Exclude	Name	Start Date	Take Priority
1	<input checked="" type="checkbox"/>	2109(S1) (1)	1/1/2020	500
2	<input type="checkbox"/>	2354(S1) (1)	1/1/2020	500
3	<input checked="" type="checkbox"/>	2400(S1) (1)	1/1/2020	500
4	<input checked="" type="checkbox"/>	2965(S1) (1)	1/1/2020	500
5	<input type="checkbox"/>	2964(S1) (1)	1/1/2020	500
6	<input type="checkbox"/>	3705(S1) (1)	12/3/2013	500
7	<input type="checkbox"/>	2341(S1) (1)	11/22/2013	500

Build a Scenario – Cont.

In the Analysis \ Scenarios tab default scenarios and names for each portfolio are automatically created. Names are changed by a user to suit the intended analysis work.

FIELD KEY							
A	Task Durations – Plan durations are non-variable and follow a project plan's dates. "Over-rides" are variable distributions.						
B	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.						
C	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 analyses on a model.						
D	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.						
E	Resource Allocation Mode – "All Unconstrained" results in a simulation providing as many resources as needed when a portfolio 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.						
F	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.						
G	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.						

Select the **blue arrow** button to simulate scenarios!



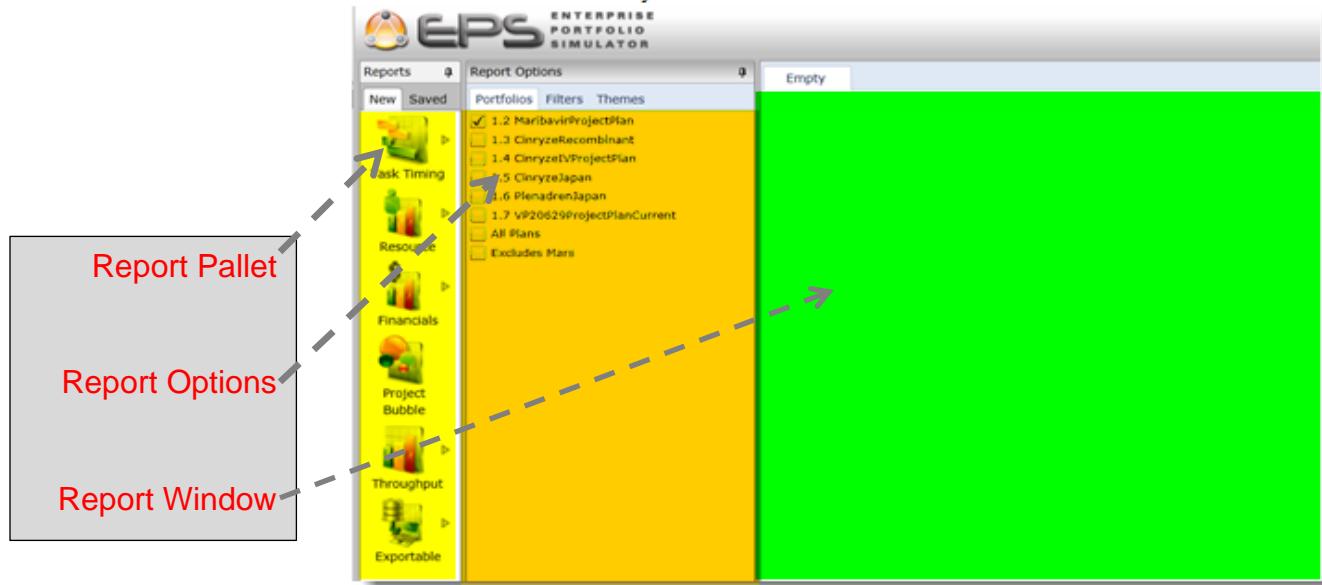
Analyze Results

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. In the “Saved” view section are a number of reports MyModel already generated for the team. By going into this tab they can be clicked on.

The next window called “Reporting Options” has three sections:

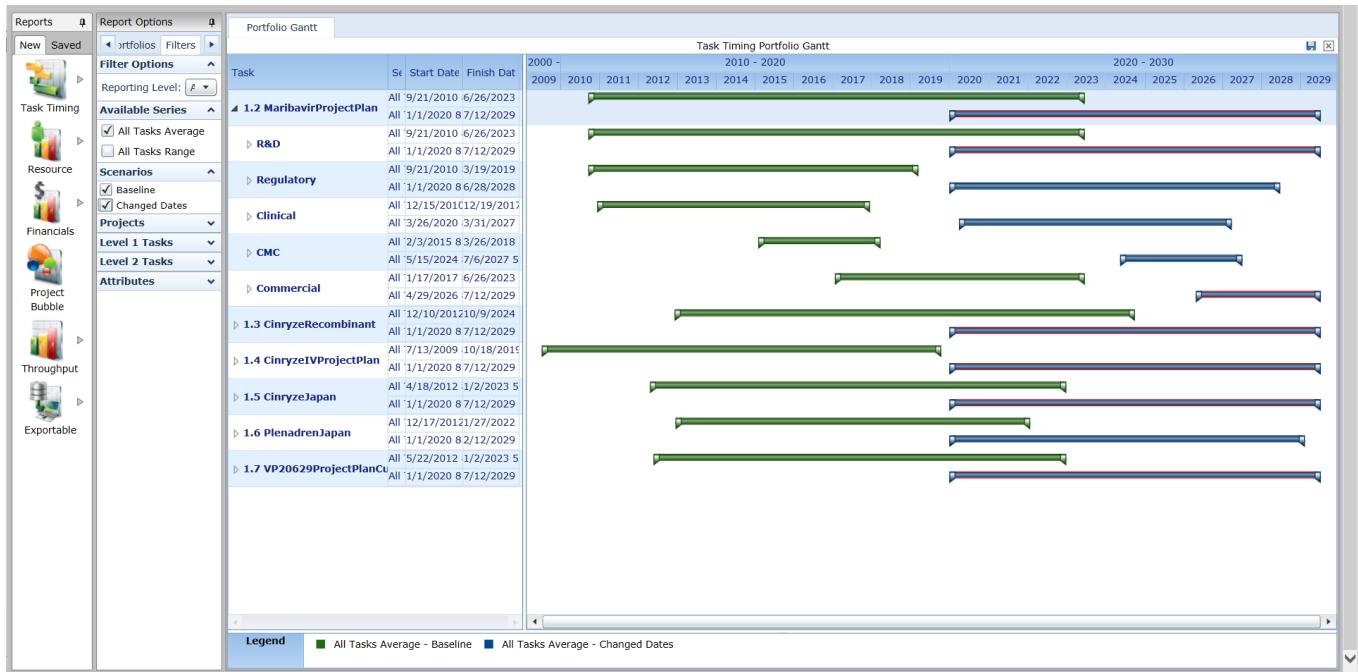
- **Portfolios** – users select which portfolios will be available in the “Filters” view
- **Filters** – this window has the report query view where users select / deselect portfolios
- **Themes** – MyModel recommends it is always set to “Summer” as it results in solid color bars & lines



REPORT CATEGORIES	
A	Task Timing – All three reports are used for assessing project Gantt perspectives, tasks' start and finish probability (if survival is used), 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.
B	Resource – The “Unit Time Series” report illustrates resources required over time.
C	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.
D	Project Bubble – This report does a nice job comparing cost, revenue, and risk. If projects have PTRS applied, this report is excellent to work with.
E	Throughput – The Time Series and Histogram reports will be found useful as they detail total counts of milestone stages completed.
F	Exportable – This data-driven report supports pivot table analysis. We are not currently using this report.

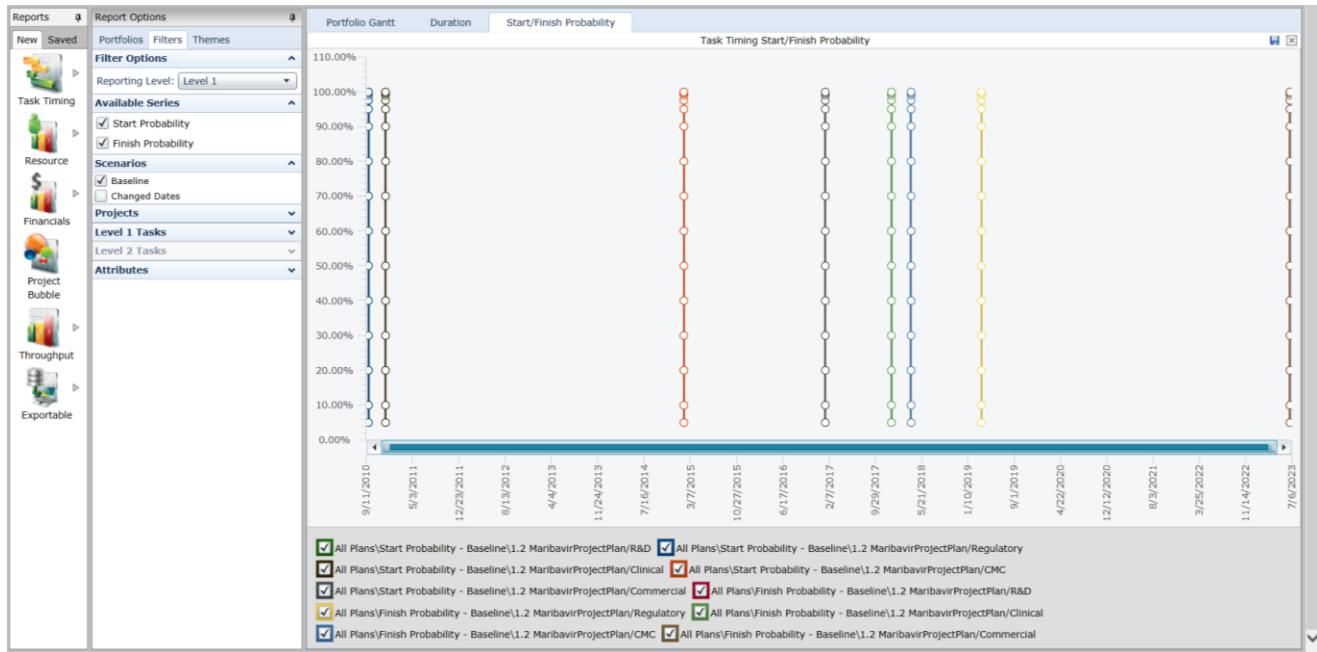
Views

Throughput: Gantt



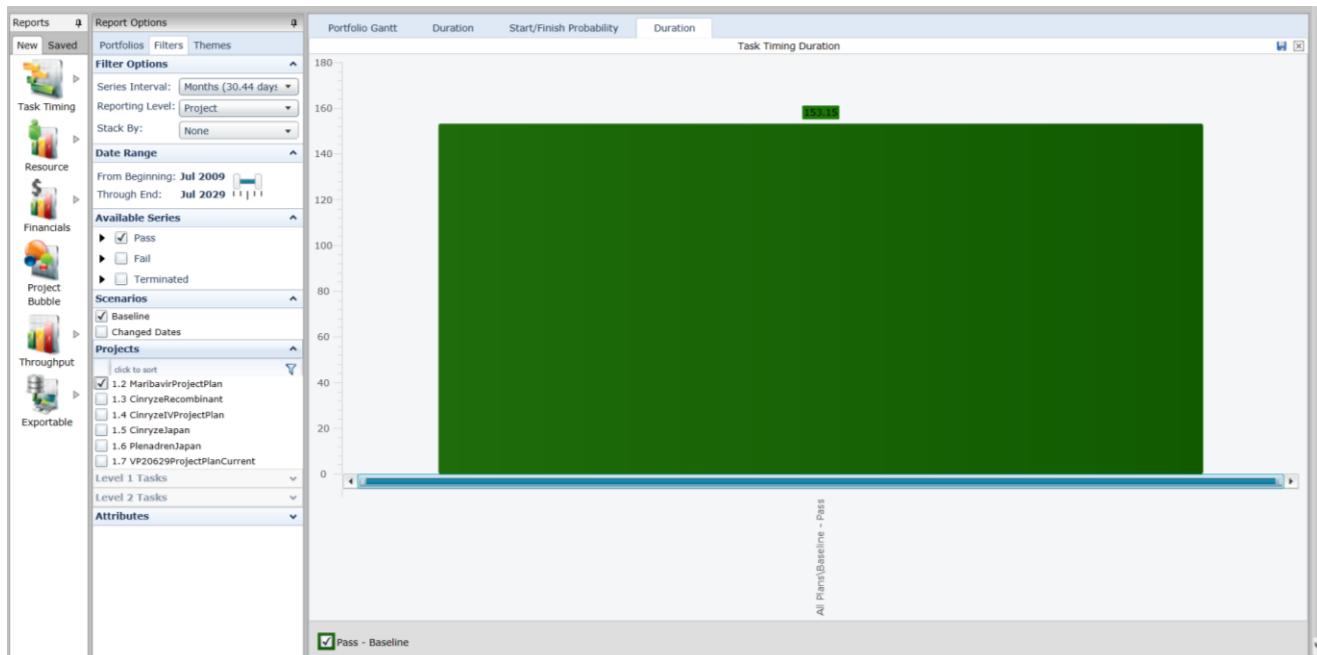
- The Gantt report does an excellent job detailing the project plans start and finish times.
- Above we see the comparison of change dates Scenario to the baseline line plan. For each plan see it shifted to the right when it was asked to start 1/1/2020 in the What-If Scenario window.
- The MyModel team used this report extensively to check dates matched to those in the original project plans.

Throughput: Start / Finish Probability



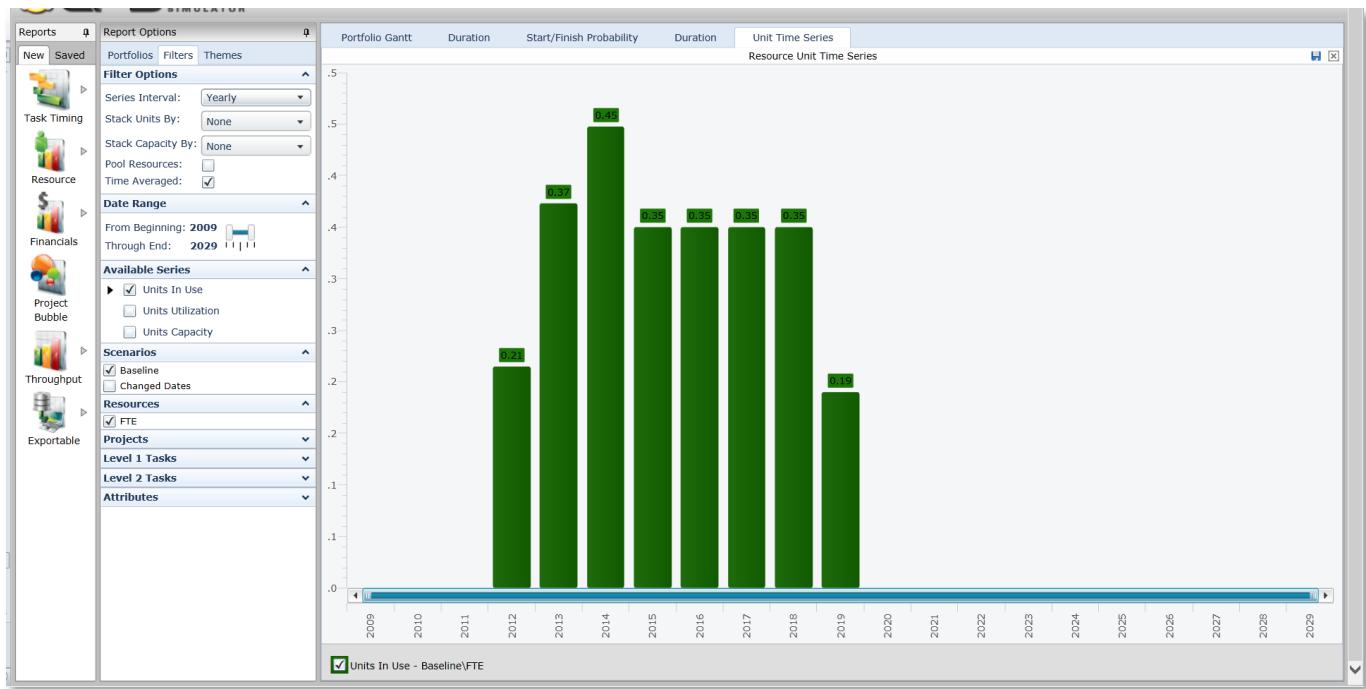
- This illustrates the date spread from project tasks start to projects tasks finish. When a model is run without variability it is not as useful unless tasks have a cycle time distribution for a start date.

Throughput: Duration



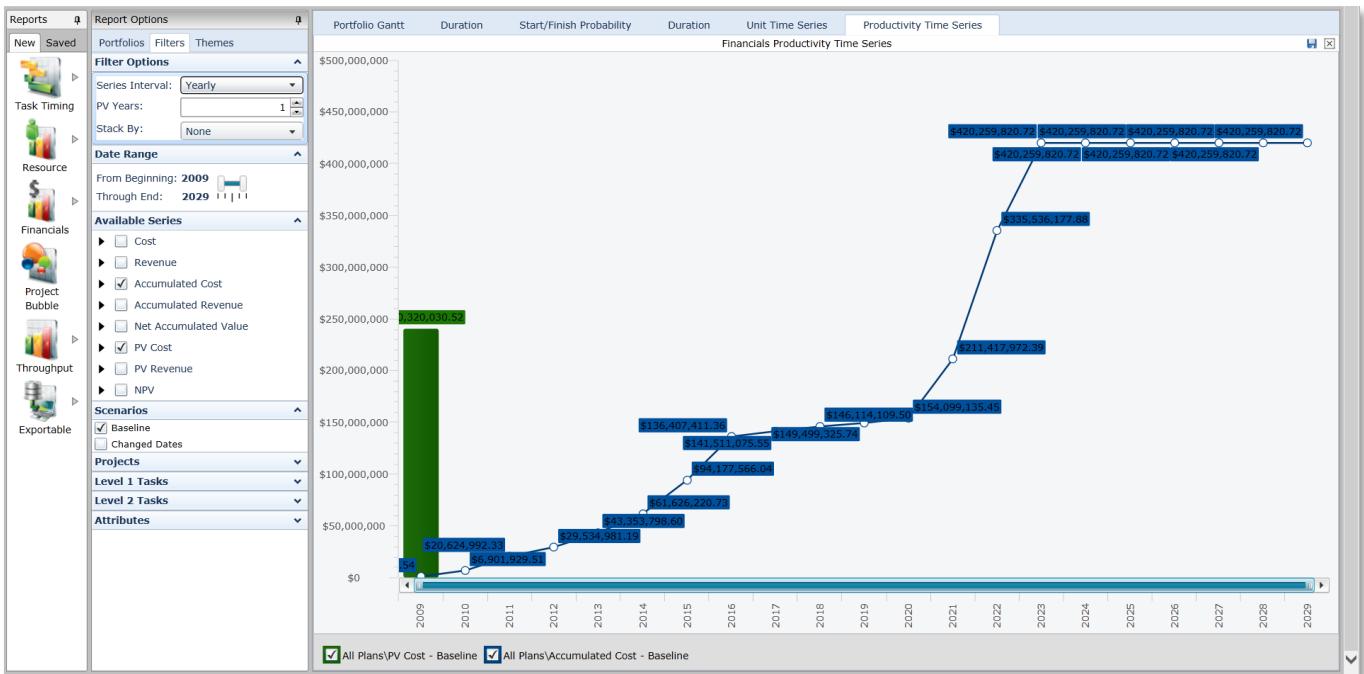
- Duration reports provide a count in terms of days or months the total time a project required to complete.
- When running multiple scenarios this report can be very helpful in visualizing project plan changes and their net effect on total project completion time.

Resource: Unit Time Series



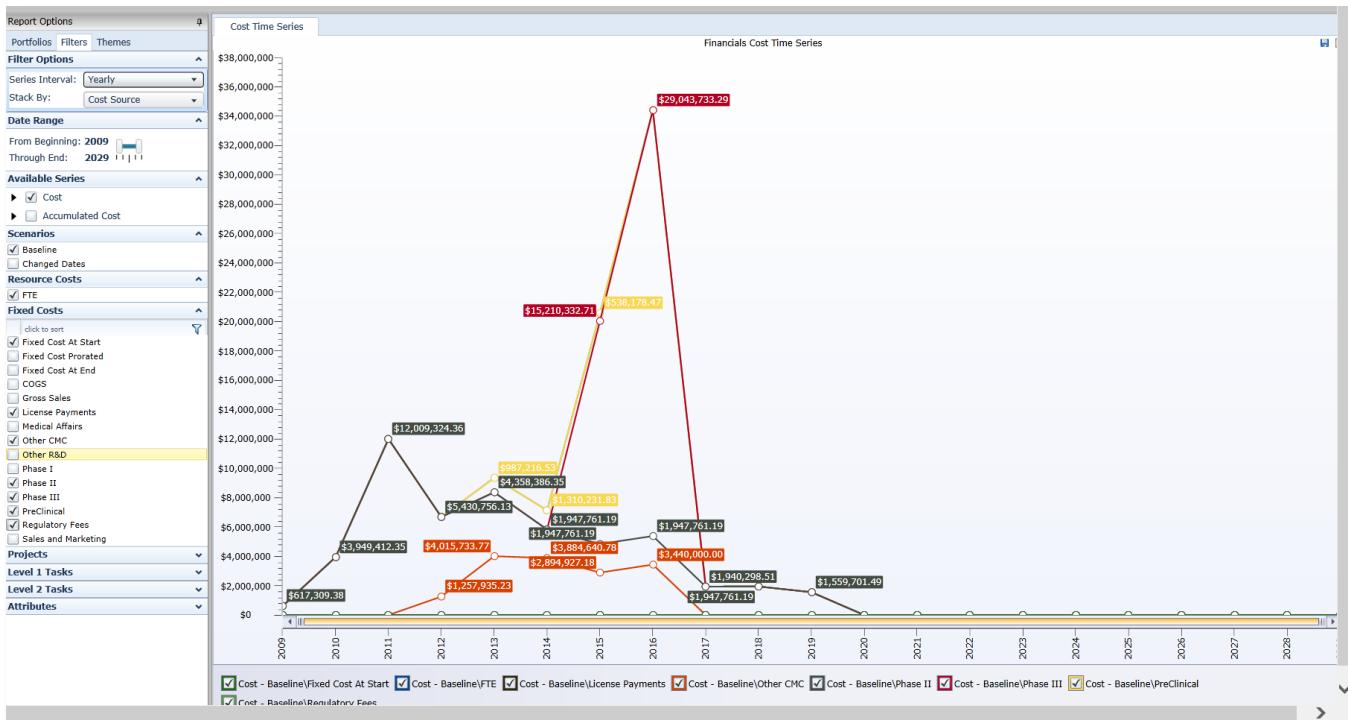
- Resource Units are the total number of people required during a project's execution.
- This report can stack resource requirements across projects, by stage, and the like.
- Resources can also be “pooled” resulting in aggregated resource counts across resource work types.

Financials: Productivity Time Series



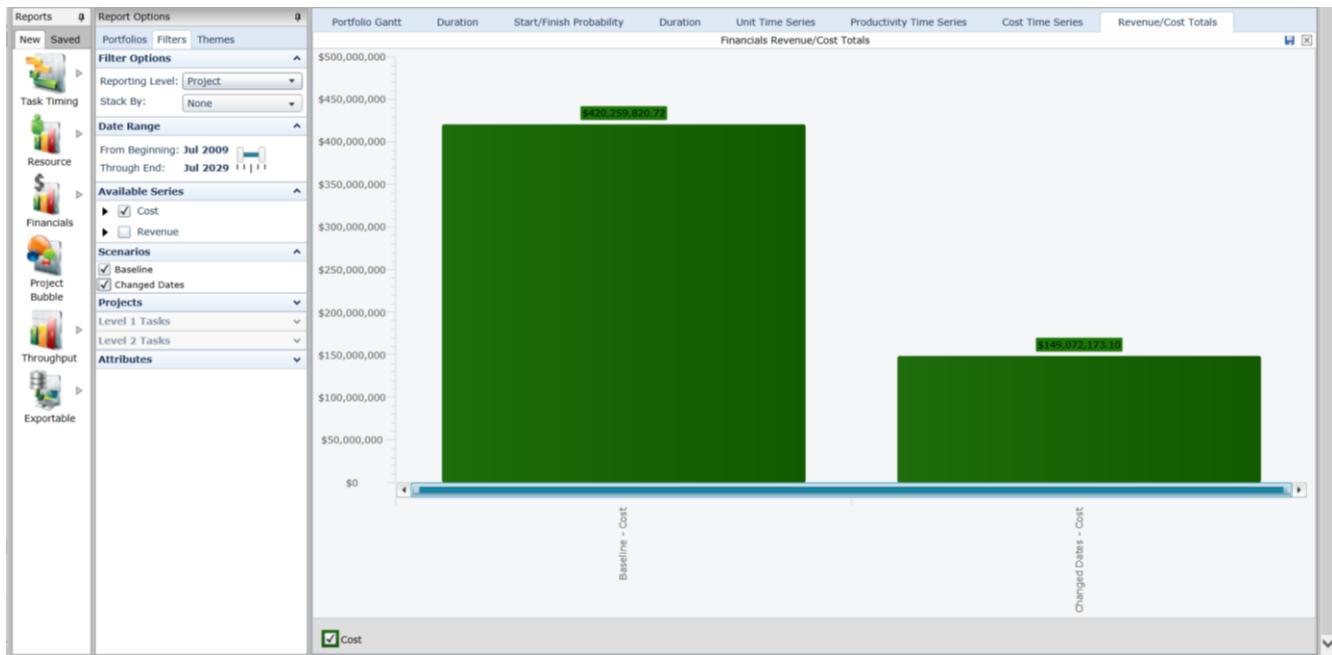
- The productivity report illustrates accumulated revenue, cost, and present value and net present value calculations. Users can select the # of present value years that need to be displayed.
- Users can compare and contrast scenarios, generate per project views, and the like.
- Right click on the graphs to toggle point labels.

Financials: Cost Time Series



- This cost report specifically focuses on cost and accumulated costs, but can drill down into user-defined cost categories if they have been created for the model analysis.
- The graphic above illustrates costs stacked by cost category group.

Financials: Revenue / Cost Totals



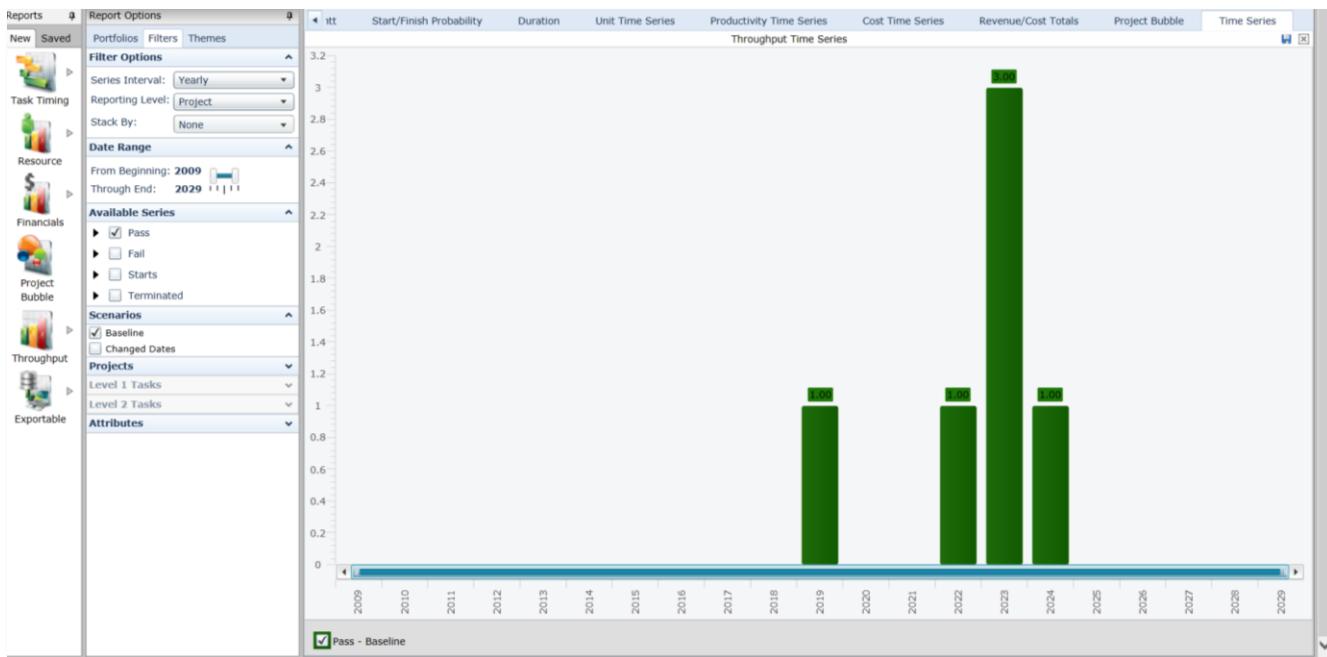
- By cost or revenue, one can illustrate the total costs per portfolio, or project, across scenarios.

Project Bubble



- When working with PTRS this report will compare cost time revenue with a bubble position being dependent upon its final simulated PTRS score.
- The above is an example as current projects don't have any PTRS scores so the reports is nonsensical

Throughput: Time Series



- The focus of the throughput reports is to count portfolio stage gate totals at key milestones.
- Alternatively they can illustrate total yield in relation to time; analyze data in terms of pass, fails, & starts.

8. Data Mapping via Templates

Templates are a way to quickly change key project data such as survival, cycle time, resource requirements, and cost. This functionality is used to map additional data that was not able to be brought in via the MS Excel Loader workbook.

There is an attribute called "Stage_Number" and all stages have a numeric attribute assigned. Stage_1 has a value of "1" and Stage_1 = Pre-H2L.

The following methodology applies to template mapping for Task, Resourcing, or Financing.

- Select "Add New" and name the data mapping profile.
- Select "Add New" in the "Task Template" Section to insert a blank line.
 - Populate the field values with the data that is to be changed or mapped.
 - Below we see different survival and cycle time values being assigned for stages 1 to 4.
 - Please note a complex set of attributes can be used to parse and select which projects will have data mapped to them.
 - Enter "attribute name" [Boolean] {another other value} for complex formulas

The screenshot shows the EPS PORTFOLIO SIMULATOR software interface. On the left, there's a sidebar with 'Views' (Tasks, Projects, Analysis, Templates, Setup), 'Repository' (Projects, Analysis, Templates, Setup), and 'Task Templates' (Profile, Task Attributes). The 'Task Attributes' section shows a table with one row: Name (Data Map Phase Duration) and Stage_Number (1). Below this is the 'Task Templates' section, which contains three rows of data:

	Survival %	Override Duration	Task Name Contains	Stage_Number
1	65	T(2, 3, 4)		1
2	65	T(7, 8, 9)		2
3	70	T(3, 4, 5)		3

Once a template is created, it is mapped in the Project's Repository Window.

Simply select all the projects (upper right box – highlighted) and then in the "apply template" field select which template to apply.

The screenshot shows the 'Repository Projects' window. On the left, there's a sidebar with 'Views' (General, Conditions, Financials, Attribute Assignments), 'Projects' (Repository), 'Analysis' (Portfolios, Scenarios, Reports), 'Templates' (Task, Resourcing, Financing), and 'Setup'. The main area shows a table of 'Repository Projects' with columns: Name, Start Date, Finish Date, Take Priority, and Calendar. The first row (Name: 2109(S1)) is highlighted with a red box. To the right, there's a toolbar with 'Apply Templates' dropdowns for Task, Resourcing, and Financing, and a checkbox for 'Data Map Phase Duration'. A status bar at the bottom right says '1 of 1 items selected' and 'Apply'.

9. Attribute Configuration

Select Administration \ Attributes to define Project and Task Attributes. Models come with attributes defined but in the event a new attribute needs to be added and imported with the Loader they must also be created in the Attributes table. Please ensure to use the same name as the Loader's name so it will map seamlessly.

Note: MyModel uses underscores to address issues that can arise with too many spaces being entered

The screenshot shows the SIMULATOR application interface. On the left is a navigation tree with categories like Projects, Analysis, Templates, Setup, and Administration. In the center, a grid titled 'Repository Projects' lists 19 items, each with a small icon, a unique ID, a name, a start date, and a finish date. Overlaid on the grid is a modal dialog box titled 'Attribute Settings'. This dialog has tabs for Project, Task, Resource, and a selected 'Text' tab. It lists 10 attributes, each with a checkbox labeled 'Enabled' and an 'Alternate Name'. The attributes are:

Enabled	Alternate Name
<input checked="" type="checkbox"/>	Text1 Project_Unique_ID
<input checked="" type="checkbox"/>	Text2 Project_Name
<input checked="" type="checkbox"/>	Text3 Current_Stage
<input checked="" type="checkbox"/>	Text4 Survival_Template
<input checked="" type="checkbox"/>	Text5 Current_Phase_Start_Date
<input checked="" type="checkbox"/>	Text6 Disc_or_Dev
<input checked="" type="checkbox"/>	Text7 Future_Projects_Num_Starts
<input checked="" type="checkbox"/>	Text8 Future_Projects_TBS
<input type="checkbox"/>	Text9 Stage_4
<input type="checkbox"/>	Text10 Stage_5

At the bottom right of the dialog are 'OK' and 'Cancel' buttons.

10. Future Project Creation

The Loader “does not” fully create future projects. It builds them in the Project Repository and then the user updates the “Additional Occurrences” and “Occurrence Frequency” field for the correct values in the Portfolio \ Projects Window.

Steps:

1. Build the future project profile in the builder setting the correct stage start date & time period
2. Name each project as it is most understandable
3. Update the Future project # of start attributes
4. The following is an example and these project will import and update with all other defined projects
5. Import the projects into EPS

THESE COLUMNS CAN NOT BE MOVED											USER ATTRIBUT		
6	Enter User Defined Stage Names >>>					ADHID	H2L	LO	LLO	N M E	at	Attribute	Attribute
7	Unique ID	Attribute	Stage	Survival	Attribute	Date	Date	Date	Date	St ag e	Future_Prot ojects Num_Stat	Future_Prot ojects TBS	
8	Project_Unique_ID	Project_Name	Current_Stage	Survival_Template	Current_Phase_Start Date	Stage_1	Stage_2	Stage_3	Stage_4	Stage	Future_Projects Num_Stat	Future_Projects TBS	
9	Future_1	Future_PreH2L	Stage_1	Template_1	1/1/2014	1/1/2014					8	3	
10	Future_2	Future_H2L	Stage_2	Template_1	1/1/2014		1/1/2014				1	3	
11	Future_3	Future_LO	Stage_3	Template_1	1/1/2014			1/1/2014			1	3	
12	Future_4	Future_LLO	Stage_4	Template_1	1/1/2014				1/1/2014		1	3	

6. Update the project's into a desired Portfolio in the Analysis section
 - a. Update the Additional Occurrences field
 - b. Update the Occurrence Frequency
7. Discussion:
 - a. Below we see the 4 future projects imported.
 - b. We increased from 8 to 24 the additional occurrences for PreH2L because we would like to have 8 arrive every quarter. 3 months divided by 8 is 0.375 months. Thus we will have 8 projects arrive every quarter for 3 quarters. Obviously the quantity could be increased to profile as many future years as desired.
 - c. For the other stages we have 3 projects each arriving 3 months apart, ie 1 per quarter
 - d. *In terms of profiling multiple years some clients prefer to have a future projects for each year with the Additional Occurrences profiles for that given year.*

#	Name	Repository Project	Status Mode	Start Date	Additional Occurrences	Occurrence Frequency
1	Future_PreH2L	Future_1(S1)	Calculate Status	1/1/2014	24	0.375 mon
2	Future_H2L	Future_2(S1)	Calculate Status	1/1/2014	3	3 mon
3	Future_LO	Future_3(S1)	Calculate Status	1/1/2014	3	3 mon
4	Future_LLO	Future_4(S1)	Calculate Status	1/1/2014	3	3 mon

11. Resource Algorithm Updating

Resources are updated via the data mapping capability in the Templates \ Resourcing section in EPS. This is a very powerful and flexible means to update resource requirements quickly across all programs.

In EPS go to Templates \ Resourcing and “Add New” to create a Profile. There can be as many profiles as desired each with distinct requirements that can be applied independently or in “addition to” other profiles.

Steps:

1. Select “Add New” under “Resource Templates”
2. Select “Task Attributes” and an attribute to help map data to a desired project or stage
 - a. Stage_Number or Stage_Name map directly to a project task’s stage
3. Select “Add New” in the profile of a desired resourcing template
 - a. Enter Resource
 - b. Enter Resource Requirements to be mapped to projects

The screenshot shows the EPS application window with the 'Templates' category selected in the left sidebar. In the main area, the 'Resourcing Templates' tab is active. A 'Profile' section is displayed with a table containing one row: 'Name' (Apply Resources) and 'Task Attributes' (Stage_Number). Below this, another 'Resourcing Templates' section shows a table with three rows of resource assignments. The first row is for 'Disc Scientist' with 'Fixed' units of 0.15, 'Plan Units' of T(0.1, 0.15, 0.2), and 'Stage_Number' of 1. The second row is for 'Disc Scientist' with 'Fixed' units of 3.2, 'Plan Units' of U(0.05, 0.01), and 'Stage_Number' of 2. The third row is for 'Disc Scientist' with 'Fixed' units of 0.1, 'Plan Units' of U(0.1, 0.12), and 'Stage_Number' of 3. Two red boxes highlight the 'Add New' button in both the top toolbar and the 'Template Data' section of the second table.

4. In Project's \ Repository
 - a. Once a template is created, it is mapped in the Project's Repository Window.

Simply select all the projects (upper right box – highlighted) and then in the “apply template” field select which template to apply. In this case select a “resourcing” template.

The screenshot shows the EPS application window with the 'Projects' category selected in the left sidebar. In the main area, the 'Repository Projects' section is active. A table lists nine projects, each with a small icon and a name like '2109(S1)', '2185(S1)', etc. A red box highlights the 'Select All' checkbox at the top of the table. To the right, there are several buttons: 'Task', 'Resourcing', 'Financing', and a checked checkbox labeled 'Data Map Phase Duration'. At the bottom right, a message says '1 of 1 items selected' and 'Apply'.

12. Import Validation

The following details template data import business rules and their imported data outcomes. Based on the following four projects:

C	D	E	F	G	H	I	J	K	L	M	
6										THESE COLUMNS CAN NOT BE MOVED	
7	Enter User Defined Stage Names >>					AD/Hit ID	H2L	LO	LLO	NME Declaration	NME
8	Unique ID	Attribute	Stage	Survival	Attribute	Date	Date	Date	Date	Date	Date
9	Project_Unique_ID	Project_Name	Current_Stage	Survival_Template	Current_Phase_Start_Date	Stage	Stage_2	Stage_3	Stage_4	Stage	Stage
10	3351	CCR6 Antagonist	Stage_2	Template_1	6/20/2012	1/23/2012	6/20/2012	9/26/2014			
11	2324	N-Type Ca An	Stage_3	Template_1	6/20/2011			6/20/2011			
12	2760	CHIKV Inhibit	Stage_1	Template_1	1/0/1900						
13	2334	GPR120 (Meta)	Stage_3	Template_1	1/0/1900	10/15/2008		9/24/2014	9/7/2015	3/21/2016	3/21/2016
14											

- a) Load historical Stages = yes; Only Load Business Dates = Yes; calculate date if missing stage date.
- 3351: all dates loaded correctly with exact # of days calculated.
 - 2324: only created stages from LO forward, as no dates in prior stages.
 - 2760: model randomly calculated a start date for AD/ Hit ID since no date provided.
 - 2334: all dates loaded correctly and stage 1 and 2 deleted as since stage 2 was skipped

A	B	C	D	E	F	G	H	I	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
1	3351(S1)		1		01/23/2012																
2	AD-Hit ID		2		01/23/2012	6/20/2012	63		149.00	149.00	149	149.00	149.00	149.00	149.00	149.00	149.00	149.00	149.00	149.00	
3	H2L		2		01/23/2012	9/26/2014	73		828.00	828.00	828	828.00	828.00	828.00	828.00	828.00	828.00	828.00	828.00	828.00	
4	LO		2		01/26/2014				11.00	8.00	L(11 0,5)	15.00	11.00	8.00	L(11 0,5)	15.00	11.00	8.00	L(11 0,5)	15.00	
5	LLO		2						76	12.00	9.00	L(12,0,5)	16.00	12.00	9.00	L(12,0,5)	16.00	12.00	9.00	L(12,0,5)	16.00
6	NME Milestone		2						100												
7	PreClinical		2						65	11.50	8.50	L(11 5,0,5)	15.50	11.50	8.50	L(11 5,0,5)	15.50	11.50	8.50	L(11 5,0,5)	15.50
8	Phase I		2						44	20.60	17.60	L(20 6,0,5)	24.60	20.60	17.60	L(20 6,0,5)	24.60	20.60	17.60	L(20 6,0,5)	24.60
9	Phase IIA		2						43	19.20	16.20	L(19 2,0,5)	23.20	19.20	16.20	L(19 2,0,5)	23.20	19.20	16.20	L(19 2,0,5)	23.20
10	Phase IIB		2						67	18.50	15.50	L(18 5,0,5)	22.50	18.50	15.50	L(18 5,0,5)	22.50	18.50	15.50	L(18 5,0,5)	22.50
11	Phase III		2						68	39.70	36.70	L(39 7,0,5)	43.70	39.70	36.70	L(39 7,0,5)	43.70	39.70	36.70	L(39 7,0,5)	43.70
12	Registration		2						83	11.90	8.90	L(11 9,0,5)	15.90	11.90	8.90	L(11 9,0,5)	15.90	11.90	8.90	L(11 9,0,5)	15.90
13	2324(S1)		1		06/20/2011																
14	LO		2		06/20/2011				77	11.00	8.00	L(11 0,5)	15.00	11.00	8.00	L(11 0,5)	15.00	11.00	8.00	L(11 0,5)	15.00
15	LLO		2						76	12.00	9.00	L(12,0,5)	16.00	12.00	9.00	L(12,0,5)	16.00	12.00	9.00	L(12,0,5)	16.00
16	NME Milestone		2						100												
17	PreClinical		2						65	11.50	8.50	L(11 5,0,5)	15.50	11.50	8.50	L(11 5,0,5)	15.50	11.50	8.50	L(11 5,0,5)	15.50
18	Phase I		2						44	20.60	17.60	L(20 6,0,5)	24.60	20.60	17.60	L(20 6,0,5)	24.60	20.60	17.60	L(20 6,0,5)	24.60
19	Phase IIA		2						43	19.20	16.20	L(19 2,0,5)	23.20	19.20	16.20	L(19 2,0,5)	23.20	19.20	16.20	L(19 2,0,5)	23.20
20	Phase IIB		2						67	18.50	15.50	L(18 5,0,5)	22.50	18.50	15.50	L(18 5,0,5)	22.50	18.50	15.50	L(18 5,0,5)	22.50
21	Phase III		2						68	39.70	36.70	L(39 7,0,5)	43.70	39.70	36.70	L(39 7,0,5)	43.70	39.70	36.70	L(39 7,0,5)	43.70
22	Registration		2						83	11.90	8.90	L(11 9,0,5)	15.90	11.90	8.90	L(11 9,0,5)	15.90	11.90	8.90	L(11 9,0,5)	15.90
23	2760(S1)		1		09/09/2014																
24	AD-Hit ID		2		09/09/2014				63	17.00	14.00	L(17 0,5)	21.00	17.00	14.00	L(17 0,5)	21.00	17.00	14.00	L(17 0,5)	21.00
25	H2L		2						73	12.00	9.00	L(12,0,5)	16.00	12.00	9.00	L(12,0,5)	16.00	12.00	9.00	L(12,0,5)	16.00
26	LO		2						77	11.00	8.00	L(11 0,5)	15.00	11.00	8.00	L(11 0,5)	15.00	11.00	8.00	L(11 0,5)	15.00
27	LLO		2						76	12.00	9.00	L(12,0,5)	16.00	12.00	9.00	L(12,0,5)	16.00	12.00	9.00	L(12,0,5)	16.00
28	NME Milestone		2						100												
29	PreClinical		2						65	11.50	8.50	L(11 5,0,5)	15.50	11.50	8.50	L(11 5,0,5)	15.50	11.50	8.50	L(11 5,0,5)	15.50
30	Phase I		2						44	20.60	17.60	L(20 6,0,5)	24.60	20.60	17.60	L(20 6,0,5)	24.60	20.60	17.60	L(20 6,0,5)	24.60
31	Phase IIA		2						43	19.20	16.20	L(19 2,0,5)	23.20	19.20	16.20	L(19 2,0,5)	23.20	19.20	16.20	L(19 2,0,5)	23.20
32	Phase IIB		2						67	18.50	15.50	L(18 5,0,5)	22.50	18.50	15.50	L(18 5,0,5)	22.50	18.50	15.50	L(18 5,0,5)	22.50
33	Phase III		2						68	39.70	36.70	L(39 7,0,5)	43.70	39.70	36.70	L(39 7,0,5)	43.70	39.70	36.70	L(39 7,0,5)	43.70
34	Registration		2						83	11.90	8.90	L(11 9,0,5)	15.90	11.90	8.90	L(11 9,0,5)	15.90	11.90	8.90	L(11 9,0,5)	15.90
35	2324(S1)		1		09/24/2014																
36	LO		2		09/24/2014	9/7/2015	77		348.00	348.00	348	348.00	348.00	348.00	348.00	348.00	348.00	348.00	348.00	348.00	
37	LLO		2			09/07/2015	3/21/2016	76	196.00	196.00	196	196.00	196.00	196.00	196.00	196.00	196.00	196.00	196.00	196.00	
38	NME Milestone		2			03/21/2016	3/21/2016	100	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
39	PreClinical		2			03/21/2016	3/21/2016	65	11.50	8.50	L(11 5,0,5)	15.50	11.50	8.50	L(11 5,0,5)	15.50	11.50	8.50	L(11 5,0,5)	15.50	
40	Phase I		2						44	20.60	17.60	L(20 6,0,5)	24.60	20.60	17.60	L(20 6,0,5)	24.60	20.60	17.60	L(20 6,0,5)	24.60
41	Phase IIA		2						43	19.20	16.20	L(19 2,0,5)	23.20	19.20	16.20	L(19 2,0,5)	23.20	19.20	16.20	L(19 2,0,5)	23.20
42	Phase IIB		2						67	18.50	15.50	L(18 5,0,5)	22.50	18.50	15.50	L(18 5,0,5)	22.50	18.50	15.50	L(18 5,0,5)	22.50
43	Phase III		2						68	39.70	36.70	L(39 7,0,5)	43.70	39.70	36.70	L(39 7,0,5)	43.70	39.70	36.70	L(39 7,0,5)	43.70
44	Registration		2						83	11.90	8.90	L(11 9,0,5)	15.90	11.90	8.90	L(11 9,0,5)	15.90	11.90	8.90	L(11 9,0,5)	15.90

	C	D	E	F	G	H	I	J	K	L	M
6	THESE COLUMNS CAN NOT BE MOVED										
7	Enter User Defined Stage Names >>>					AD/HIT ID	H2L	LO	LLO	NME Declaration	NME
8	Unique ID	Attribute	Stage	Survival	Attribute	Date	Date	Date	Date	Date	Date
9	Project_Unique_ID	Project_Name	Current_Stag	Survival_Template	Current_Phase_Start_Da	Stage	Stage_2	Stage_3	Stage_4	Stage	Stage
10	3351	CCR6 Antagonist	Stage_2	Template_1	6/20/2012	1/23/2012	6/20/2012	9/26/2014			
11	2324	N-Type Ca An	Stage_3	Template_1	6/20/2011			6/20/2011			
12	2760	CHIKV Inhibit	Stage_1	Template_1	1/0/1900						
13	2334	GPR120 (Meta)	Stage_3	Template_1	1/0/1900	10/15/2008		9/24/2014	9/7/2015	3/21/2016	3/21/2016
14											

- b) Load historical Stages = no; Only Load Business Dates = Yes; calculate date if missing stage date.
- a) 3351: current stage loaded forward with all dates calculated.
 - b) 2324: only created stages from LO forward as no dates in prior stages.
 - c) 2334: current stage loaded forward with all dates calculated.

Row	Task Name	Level	Roll-up Chi	Future Occurrences	Tracking		Survival	Passed Cycle Time (Duration)			Failed Cycle Time (Duration)			Cycle Ti		
					# St	TBS		Start Dat	Finish Da	Ba	Estimate	Min	Distributi	Max		
1	3351(S1)	1						06/20/2012								
2	H2L	2						06/20/2012	9/26/2014	73	828.00	828.00	828.00	828.00	828.00	
3	LO	2						09/26/2014		77	11.00	8.00 L(11.0,5)	15.00	11.00	8.00 L(11.0,5)	15.00
4	LLO	2								76	12.00	9.00 L(12.0,5)	16.00	12.00	9.00 L(12.0,5)	16.00
5	NME Milestone	2								100						
6	PreClinical	2								65	11.50	8.50 L(11.5,0,5)	15.50	11.50	8.50 L(11.5,0,5)	15.50
7	Phase I	2								44	20.60	17.60 L(20.6,0,5)	24.60	20.60	17.60 L(20.6,0,5)	24.60
8	Phase IIA	2								43	19.20	16.20 L(19.2,0,5)	23.20	19.20	16.20 L(19.2,0,5)	23.20
9	Phase IIB	2								67	18.50	15.50 L(18.5,0,5)	22.50	18.50	15.50 L(18.5,0,5)	22.50
10	Phase III	2								68	39.70	36.70 L(39.7,0,5)	43.70	39.70	36.70 L(39.7,0,5)	43.70
11	Registration	2								83	11.90	8.90 L(11.9,0,5)	15.90	11.90	8.90 L(11.9,0,5)	15.90
12	2324(S1)	1						06/20/2011								
13	LO	2						06/20/2011		77	11.00	8.00 L(11.0,5)	15.00	11.00	8.00 L(11.0,5)	15.00
14	LLO	2								76	12.00	9.00 L(12.0,5)	16.00	12.00	9.00 L(12.0,5)	16.00
15	NME Milestone	2								100						
16	PreClinical	2								65	11.50	8.50 L(11.5,0,5)	15.50	11.50	8.50 L(11.5,0,5)	15.50
17	Phase I	2								44	20.60	17.60 L(20.6,0,5)	24.60	20.60	17.60 L(20.6,0,5)	24.60
18	Phase IIA	2								43	19.20	16.20 L(19.2,0,5)	23.20	19.20	16.20 L(19.2,0,5)	23.20
19	Phase IIB	2								67	18.50	15.50 L(18.5,0,5)	22.50	18.50	15.50 L(18.5,0,5)	22.50
20	Phase III	2								68	39.70	36.70 L(39.7,0,5)	43.70	39.70	36.70 L(39.7,0,5)	43.70
21	Registration	2								83	11.90	8.90 L(11.9,0,5)	15.90	11.90	8.90 L(11.9,0,5)	15.90
22	2334(S1)	1						09/24/2014								
23	LO	2						09/24/2014	9/7/2015	77	348.00	348.00	348.00	348.00	348.00	348.00
24	LLO	2						09/07/2015	3/21/2016	76	196.00	196.00	196.00	196.00	196.00	196.00
25	NME Milestone	2						03/21/2016	3/21/2016	100	0.00	0.00	0.00	0.00	0.00	0.00
26	PreClinical	2						03/21/2016		65	11.50	8.50 L(11.5,0,5)	15.50	11.50	8.50 L(11.5,0,5)	15.50
27	Phase I	2								44	20.60	17.60 L(20.6,0,5)	24.60	20.60	17.60 L(20.6,0,5)	24.60
28	Phase IIA	2								43	19.20	16.20 L(19.2,0,5)	23.20	19.20	16.20 L(19.2,0,5)	23.20
29	Phase IIB	2								67	18.50	15.50 L(18.5,0,5)	22.50	18.50	15.50 L(18.5,0,5)	22.50
30	Phase III	2								68	39.70	36.70 L(39.7,0,5)	43.70	39.70	36.70 L(39.7,0,5)	43.70
31	Registration	2								83	11.90	8.90 L(11.9,0,5)	15.90	11.90	8.90 L(11.9,0,5)	15.90

- c) Load historical Stages = no; Only Load Business Dates = no
- d) 3351: current stage loaded and exact number of days calculated as finish date < today's date
 - e) 2334: current stage loaded but exact days not calculated because finish date > today's date

Row	Task Name	Level	Roll-up Chi	Future Occurrences	Tracking		Survival	Passed Cycle Time (Duration)			Failed Cycle Time (Duration)			Cycle Ti	
					# St	TBS		Start Dat	Finish Da	Ba	Estimate	Min	Distributi	Max	
1	Phase III	2			68				39.70	36.70 L(39.7,0,5)	43.70	39.70	36.70 L(39.7,0,5)	43.70	
2	Registration	2			83				11.90	8.90 L(11.9,0,5)	15.90	11.90	8.90 L(11.9,0,5)	15.90	
12	2334(S1)	1			09/24/2014										
13	LO	2			09/24/2014	9/7/2015	77		11.00	8.00 L(11.0,5)	15.00	11.00	8.00 L(11.0,5)	15.00	
14	LLO	2			09/07/2015	3/21/2016	76		12.00	9.00 L(12.0,5)	16.00	12.00	9.00 L(12.0,5)	16.00	
15	NME Milestone	2			3/21/2016	3/21/2016	100								
16	PreClinical	2			03/21/2016		65		11.50	8.50 L(11.5,0,5)	15.50	11.50	8.50 L(11.5,0,5)	15.50	
17	Phase I	2			44				20.60	17.60 L(20.6,0,5)	24.60	20.60	17.60 L(20.6,0,5)	24.60	
18	Phase IIA	2			43				19.20	16.20 L(19.2,0,5)	23.20	19.20	16.20 L(19.2,0,5)	23.20	
19	Phase IIB	2			67				18.50	15.50 L(18.5,0,5)	22.50	18.50	15.50 L(18.5,0,5)	22.50	
20	Phase III	2			68				39.70	36.70 L(39.7,0,5)	43.70	39.70	36.70 L(39.7,0,5)	43.70	
21	Registration	2			83				11.90	8.90 L(11.9,0,5)	15.90	11.90	8.90 L(11.9,0,5)	15.90	
24															

13. New Division Setup

Divisions can be duplicated copying all attributes, templates, and associated data. In the event a new division has to be setup the following data tables can be copied and pasted to help hook up the associated data loader. Copy the following into Administration \ Attributes.

Attributes – Project:

Project_Unde_ID
Project_Name
Current_Stage
Survival_Template
Current_Phase_Start_Date
Disc_or_Dev
Future_Projects_Num_Starts
Future_Projects_TBS

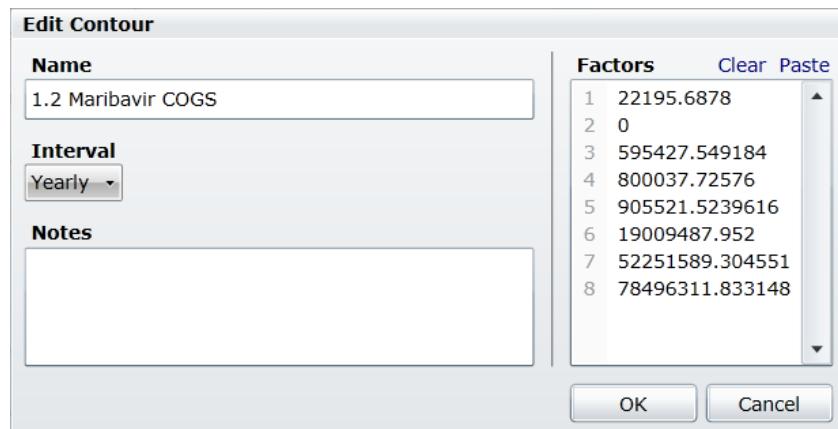
Attributes – Task:

Stage_1
Stage_2
Stage_3
Stage_4
Stage_5
Stage_6
Stage_7
Stage_8
Stage_9
Stage_10
Stage_11
Site
External_Status
Product_Number
MTA_ID
Prototype_Back-Up
BU_Num
Target_Class
Indications
DAS_vs_CS
CURRENT_STATUS
Last_Active_Phase
DISC_Project_Status
Scenario_ID
Stage_Name

14. Cost Contours

ABC could use the following if they want to model project and stage cost – not implemented

Contours are a simple way to apply a series of numbers to a single task in an EPS project. Contours can be applied to revenue, cost, or resources. EPS uses the bin value in the contour table and changes bins based on time advancing in either monthly, quarterly, or annual increments



SPREADSHEET KEY	
A	Contour Name – Combination of project name + [space] + EPS financial category name
B	Time Interval – can be set to monthly, quarterly or yearly
C	Factor Interval # or bin – distinct values applied when simulation clock advances to the next time interval
D	Factor – the financial amount. If years are skipped a bin with a zero value should be included else data will accumulate a year earlier than expected

Additional rules & explanations:

1. One can copy and paste a data column into a contour in EPS using CTRL + V (the right click method does not work). If there was existing data in the contour window when the new data is pasted it will append the other data and not over-ride it.
2. Data values must be in an Excel column. If you try to paste data copied across rows all of it will be applied inside a single bin which is nonsensical.
3. One can never have a negative number in a contour.
4. Changing a work contour's bin value to zero will eliminate tasks when the project is calculated. Tasks with work contours will be ignored in every time period that has a zero for a bin value.
5. Multiple contours can be imported at one time using the EPS Excel Builder. However they must be imported as a dummy project.

Cost Contours – Cont.

Typically clients will organize their financial data annually by cost categories. Some clients are going to have to consolidate cost categories at EPS can only handle a max of 30 Fixed Cost fields.

In the Project Name column we have a Project ID + Project Name + Fixed Cost Name. When multiple projects are being imported, each contour across all projects require a unique name so the financial data can be mapped using the Templates \ Financing data mapping capability.

Project Name	EPS Category	2013	2014	2015	2016	2017
1.2 COGS	COGS	7399	0	198476	266679	
1.2 Gross Sales	Gross Sales					
1.2 License Payments	License Payments					
1.2 Medical Affairs	Medical Affairs					
1.2 Other CMC	Other CMC					
1.2 Other R&D	Other R&D					
1.2 Phase I	Phase I					
1.2 Phase II	Phase II					

Populated table values would be seen here

The consulting team currently doesn't have any data transformation widgets, so the data from a populated table above has to be manually transformed into the following view in the "Contours" spreadsheet of the EPS Excel Portfolio Builder.xls workbook. Below we see total cost by year interval in the factor column.

A	B	C	D
Contour Name	Time Interval	Interval #	Factor
1.2 COGS	Years	1	7,399
		2	-
		3	198,476
		4	266,679
		5	301,841
		6	6,336,496
		7	17,417,196
		8	26,165,437
1.2 I	Gross Sales	1	1003103.533
		2	1248000
		3	1984758.497
		4	2666792.419
		5	3018405.08
		6	63422578.44
		7	175130518.2
		8	264367831.2

SPREADSHEET KEY	
A	Contour Name – Combination of project name + [space] + EPS financial category name
B	Time Interval – we will always be using years
C	Interval # – we will have a row and sequential value always starting at 1 and ending at the last year interval data point. In this case we have eight years of data thus eight interval #s
D	Factor – the financial amount. If years are skipped a bin with a zero value should be included else data will accumulate a year earlier than expected
E	Project Name – data not imported but is useful to help sort the data to fix any errors

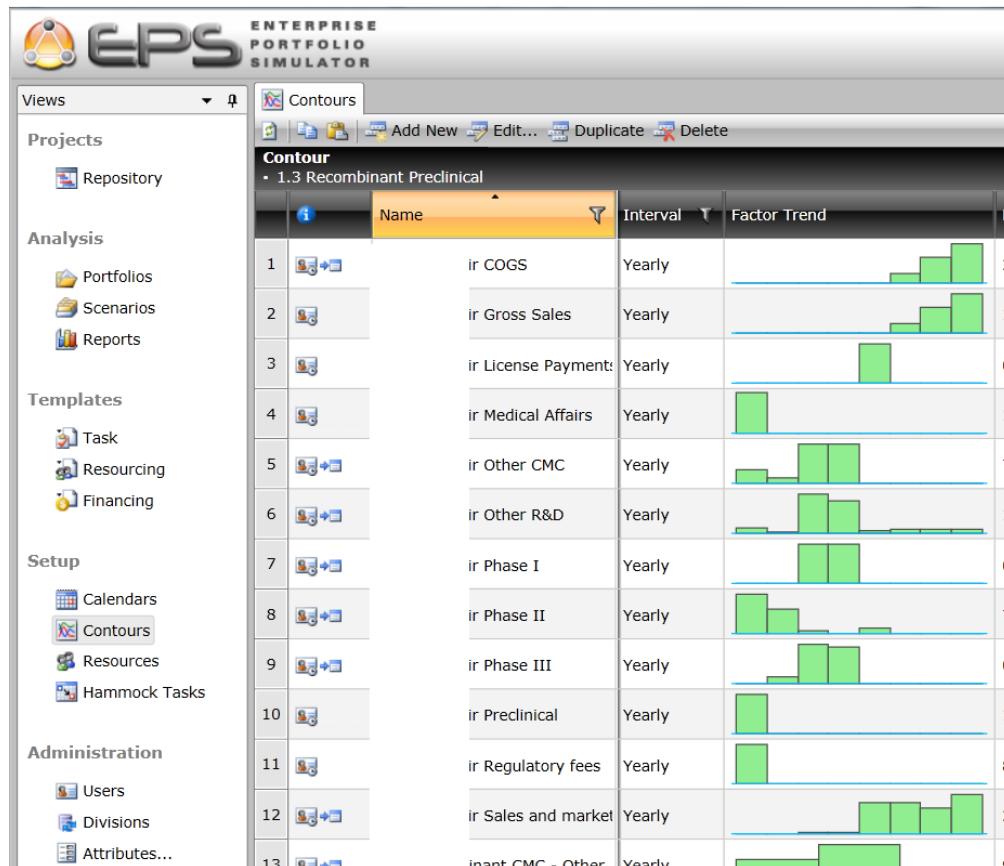
Contours – Cont.

On the “Task Information” worksheet in the EPS Excel Portfolio Builder the following needs to be added so a dummy project and all the contours will import into whatever Division an analysis is being worked on.

Contours are IMPORTED SEPARATELY in a separate “Loader” workbook.

	A	B	C	D	E	F	G
1	ID	Template	Task Name	Level	Roll-up Children	Future Occurrences	
2						# Starts	TBS
3	1		Contour Project Import	1 N		1 0	
4	2		Task	2 N			

An EPS imported Contour View:



15. Cost Contour Mapping (via applying templates) and its Configuration

The Templates \ Financing organizes the matrix of which cost contour is going to be applied to which project and attribute value. The data is organized by a combination of Fixed Cost category names and 2 attributes: "Finance Attribute" and "Project Name".

In the graphic below we see the Fixed Cost fields, e.g. Medical Affairs, other CMC, other R&D, etc. Essentially decisions are made on what cost category is important for analyzing models. Some teams would group certain cost data together.

HOW IS A DATA MAP BUILT?

- | | |
|---|--|
| A | Add New – select this from the menu to insert a new record |
| B | EPS Financial Category Naming apply – MyModel used the format of taking a project name + financial category name to be the unique name of a financial category for any given Fixed cost. Apply these names, ensuring they match the data from Contour file created, to each of the Fixed Cost fields. Row 7 above is a good example. |
| C | Cost Fields – Client defined cost category names their financial data is assembled into. |
| D | Apply Attribute Mapping Name – in order to ensure a cost contour is applied to its specific task update the Finance Attribute – Task Level with values from the Project plan. Then update the Project Name – Task Level attribute to ensure it matches the project. |

b) "Finance Attribute" (red circle above) is updated in a MS Project Plan Text attribute.

c) "Project Name" (red circle above) is updated with a project's name. The naming convention is whatever format naming convention is desired.

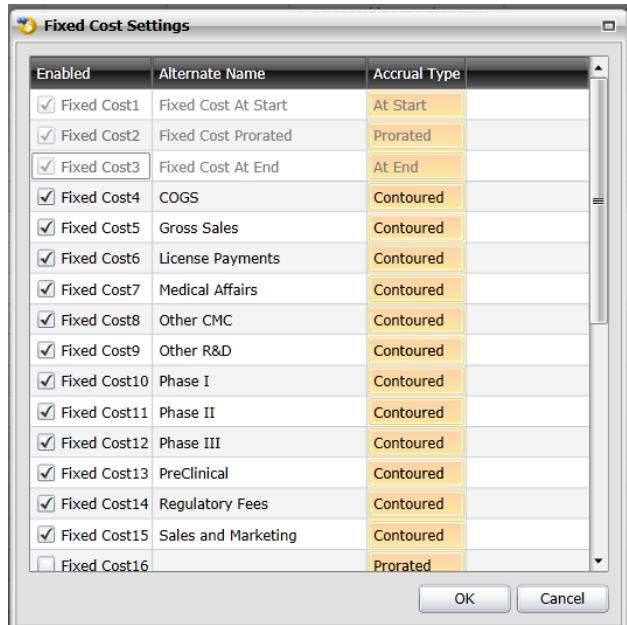
Cost Contour Mapping (via applying templates) and its Configuration – Cont.

In the Projects \ Repository \ Tasks \ Financials tab we see the resulting cost contours applied at a task level. Financial data will be generated based on a project's task when its task start date is reached in the simulator. Every 12 months the simulator will increment the contour's factor and start accruing the next years cost value.

Below (circled in red) are all the the cost fields that the cost contours were mapped to via Templates \ Finance.

	Name	Yearly Revenue	Revenue Contour	Fixed Cost At Start	Fixed Cost Prorated	Fixed Cost At End	COGS	Gross Sales	License Payments	Medical Affairs	Other CMC	Other R&D
1	R&D											
2	R&D Activities											
3	Regulatory											
4	IND Filing											
5	EoP2 Meeting											
6	EU (national) scientific advice											
7	BLA Prep											
8	BLA submission											
9	Advisory committee meeting (t)											
10	Approval (standard)											
11	Approval (priority)											
12	Technology Development_CMC											
13	Phase 1 Drug Product Develop											
14	Nonclinical											
15	Nonclinical Studies											
16	Clinical											
17	Phase 1											
18	Phase 2											
19	Phase 3											
20	Commercial											

Fixed Costs names are defined in the Administration \ Fixed Costs tab. A maximum of 30 fields are available. Please note for each Fixed Cost, the "Accrual Type" is "Contoured." This means the Project's \ Repository \ Tasks \ Financials tab fields will accept a Cost Contour name instead of a numeric value. Other settings specify how costs are accrued during a simulation; at the start of a project task, evenly over a project task, or at a project task's end.



You cannot map two costs to the same attribute. Essentially, each subsequent cost with the same attribute value replaces a prior mapped value. USE UNIQUE NAMES to avoid this issue!