

TECH TIP

CREATING CASH FLOW CURVE – P6 SCHEDULE & UNIFIER COST DATA ORACLE PRIMAVERA P6 & UNIFIER

To utilize dates from a P6 schedule to create a cash flow curve in Unifier based on cost business process data. This tech tip details the steps to do this.

The following example uses the Unifier base product Cost Controls application.

Pre-Requisite Set Up

Unifier:

1. Unifier project (shell) has been created using the base product shell template - this will include the default Data Mapping required in the schedule sheet.



These tech tips are offered free of charge in the spirit of sharing knowledge with others. They do not include technical support, should you have a problem with them. We are always interested in how they can be improved, please do not hesitate to email us your comments. These tips have been thoroughly tested by our consultants in a variety of environments. Please read these tech tips thoroughly and be sure that you understand them before trying to use them. We can not be responsible for issues that develop because of the configuration of your hardware, technical support consultants for a splication of the tech memos. If you are not sure, then we urge you to contact Oracle technical support or your local support consultant for assistance

2. Unifier CBS Cost Codes have been created in the cost sheet for the Unifier project.

Pro	ject Cost Sheet	
	Cost Code	Cost Item
1	⊡… <u>01-000</u>	Site Construction
2	<u>01-01A</u>	Site Design
3	<u>01-01B</u>	Site Excavation
4	⊡ <u>02-000</u>	Concrete & Masonry & Metal
5	<u>02-02A</u>	Concrete Work
6	<u>02-02B</u>	Masonry Work
7	<u>02-02C</u>	Metal Work
8	⊡ <u>03-000</u>	Wood & Plastic & Thermal
9	<u>03-03A</u>	Wood & Plastic Work
10	<u>03-03T</u>	Thermal Work

3. Cost sheet data has been populated using a base product cost business process. The example uses Budget Approvals and budgets two Cost Codes.

File Edit View Acti	ons Help			
Close Window				
Budget Approval	Bud	jet Approval		_
General				- ·
Record	I Number: BA-001	Creator:	Company Administrator	
	Title: Initial Budget - Summary Code 01	Creation Date:	05/08/2014 01:55 PM Local (GMT-8)	
Project	t Number: AP0001	Due Date:	05/15/2014 01:50 PM Local (GMT-8)	
Proje	ect Name: All Projects		Approved	
		Contract Reference:		-
💾 Task Details				
Record has been cl	osed. (Click here to view process details)			
	(<u></u> p,			
Line Items				
Current View: All			Show Currency in: Transaction Currency	· •
2 Item(s)	I	age 1 of 1	Display 100 👻 items	per page
No. A Cost Code		Description Spend Category	Amount	
001 01-01A 002 01-01B	Site Design 01-01 Site Excavation 01-01		250,000.00	<u>~</u>
002 01-01B	Site Excavation 01-01	8	250,000.00	
				-
•				
Grid Q Fine	d		Total Amount: \$ 50	00,000.00



Cost sheet view of the cost business process record. Two Cost Codes have budgets against them.

Pro	ject Cost Sheet		
	Cost Code	Cost Item	Budget Approval (Approved)
1	⊡- <u>01-000</u>	Site Construction	500,000.00
2	<u>01-01A</u>	Site Design	<u>250,000.00</u>
3	<u>01-01B</u>	Site Excavation	<u>250,000.00</u>
4	⊞ <u>02-000</u>	Concrete & Masonry & Metal	0.00
8		Wood & Plastic & Thermal	0.00

P6:

1. P6 Application Settings have been set with the correct Unifier environment settings - this creates the association between P6 and the Unifier environment.

rimavera Unifier —
Enter the Primavera Unifier URL and credentials to enable Primavera Unifier link to P6
Primavera Unifier URL
https://unifier.mycompany.com
Company Short Name
COMPANY
Authentication Code

2. Unifier Project Settings for the P6 schedule has been set in Project Preferences - this links the P6 schedule with the Unifier project.

	Primavera Unifier
Analytics Calculations <u>Contract Management</u> Defaults General Primavera Unifier Progress Reporter Services Team Member Interfaces	 Link project to a Primavera Unifier project Project Name Office Building Addition Two Schedule Sheet Office Building Add. Two Schedule Data Mapping P6 Integration Delete activities no longer in the P6 Schedule from Primavera Unifier Only send activities with CBS codes assigned



3. CBS Cost Codes (from the Unifier project's cost sheet) are assigned to Activities using the CBS column.

Activities of Office Building	Addition Two		
Actions - Edit - View -	2 🗣 🗙 🎦 🖓 🚷	🕹 🛍 🕮 🕈 🕯	▶ 🗢 🔶 👗 🖧 🖏 📗 🖻 🍸 🐻 📴 🗊 🖗 🟥
WBS / Activity	Activity Name	CBS	Select CBS
 Office Building Addit Site Construction 			Search
 SC1020 SC1030 SC1040 	Architect Civil Engineering/ALT Geotech	01-000~~01-01A 01-000~~01-01A 01-000~~01-01B	
 SC1050 Concrete 	General Construction S	01-000~~01-01B	❶—02-000 - Concrete & Masonry & Metal ❶—03-000 - Wood & Plastic & Thermal
CO1000	General Construction C General Conditions Ma	02-000~~02-02A	
Metals MT1000	General Conditions Met	02-000~~02-02C	
 Wood, Plastics an WPC1000 WPC1010 	General Construction Cable Television	03-000~~03-03A 03-000~~03-03A	
WPC1020 WPC1030	Exterior Signage Telephone Systems	03-000~~03-03A 03-000~~03-03A	ОК Сапсе

4. P6 schedule has been sent to Unifier.

Actions - Edit - View - 				ſwo	Addition	ilding A	ties of Office Bu	Activiti
Cancel Escape Intel CD3 Add > Add > Add > Intel 01-000~01 Dissolve Dissolve 01-000~01 ng / ALT 01-000~01 Assign Resource Assign Role uction S 01-000~01 Assign Role uction S 01-000~01 Perice Status Updates uction C 02-000~02 Release Exclusive Lock uction C 02-000~02 View Calendar ions Ma 02-000~02 View Calendar ions Met 02-000~02 Jump to next highlighted Ctri-Down uction Jump to previous highlighted Ctri-Down n Link Selected Activities n 03-000~03 Run e 03-000~03 erms View Service Status erms 03-000~03 Print Ctri-P uction-T 03-000~~03 Page Setup import/from Excel import/from Excel	1	4 n il =	2 🚷	Ъ	👌 🗣 🗶	80	Edit 🗸 View 🗸	Actions
Add Image: Constraint of the sector of t	Ea	CBS	ne					_
Number Delete Delete Delete Dissolve 01-000~~01 Assign Resource ng / ALT 01-000~~01 Assign Resource 01-000~~01 ng / ALT Assign Resource 01-000~~01 uction S Define Baselines uction S 01-000~~01 Review Status Updates uction C 02-000~~02 Release Exclusive Lock ons Ma 02-000~~02 View Calendar ions Ma 02-000~~02 Jump to next highlighted Ctri-Down uction r Jump to previous highlighted Ctri-Down uction Link Selected Activities n 03-000~~03 Run e 03-000~~03 Wiew Service Status erms 03-000~~03 Print Ctri-Po uction-T Print Ctri-Po uction-T Page Setup uction-T 03-000~~03	23-De				Escap			
Dissolve 01-000~~01 Assign Resource ng / ALT 01-000~~01 Assign Resource 01-000~~01 ution S 01-000~~01 Define Baselines ution S 01-000~~01 ution S 01-000~~01 Periew Status Updates ution C 02-000~~02 ution C 02-000~~02 Release Exclusive Lock ons Ma 02-000~~02 ution C 02-000~~02 View Calender ions Ma 02-000~~02 ution C 02-000~~02 Jump to next highlighted Ctri-Down ution C 03-000~~03 n Jump to previous highlighted Ctri-Down ution 03-000~~03 n Unk Selected Activities n 03-000~~03 n 03-000~~03 n Run ems 03-000~~03 ems 03-000~~03 n 03-000~~03 n Print Ctri-P ution-T 03-000~~03 n 03-000~~03 n Print Preview Page Setup ution-T 03-000~~03 n n n	23-De							
Dissolve ng / ALT 01-000~~01 Assign Role 01-000~~01 Define Baselines uction S 01-000~~01 Review Status Updates uction C 02-000~~02 Release Exclusive Lock uction C 02-000~~02 Open Dependent Projects ions Ma 02-000~~02 View Calendar uction r 02-000~~02 Jump to next highlighted Ctrl-Down uction r 03-000~~03 Jump to previous highlighted Ctrl-Dp n 03-000~~03 Run e 03-000~~03 emrs 03-000~~03 View Service Status erms 03-000~~03 erms 03-000~~03 Print Ctrl-P uction r 03-000~~03 erms 03-000~~03 Pint Preview Print Ctrl-P uction r 03-000~~03 erms 03-000~~03 Pint Preview Page Setup uction r 03-000~~03 uction r 03-000~~03 uction r 03-000~~03 uction r 03-000~~03 uction r uction r	23-D	01-000~~01-			Delete			
Assign Resource 01-000~~01 Assign Role uction S Define Baselines uction S Review Status Updates uction C Release Exclusive Lock uction S Open Dependent Projects ions Ma View Calendar uction S Jump to next highlighted Ctrl-Down Jump to previous highlighted Ctrl-Up In 03-000~~03 Run e View Service Status ems Print Ctrl-P Print Ctrl-P Print Ctrl-P Print Ctrl-P Print Preview uction-T Page Setup Import/Export	20-Ja		T IA \ n	n			Dissolve	Transfer Di
Assign Role uction S 01-000~~01 Define Baselines uction S 01-000~~01 Review Status Updates uction C 02-000~~02 Release Exclusive Lock uction C 02-000~~02 Open Dependent Projects ions Ma 02-000~~02 View Calendar uction r 02-000~~02 Jump to next highlighted Ctri-Down uction r 03-000~~02 Jump to previous highlighted Ctri-Down uction r 03-000~~03 Link Selected Activities n 03-000~~03 n Run e 03-000~~03 lems 03-000~~03 Print Ctri-P uction r 03-000~~03 lems 03-000~~03 Pint Preview Pint Preview uction r 03-000~~03 lems 03-000~~03 Pint Preview Page Setup uction r 03-000~~03 uction r 03-000~~03 Import/Export Import from Excel Import from Excel Import from Excel	17-Fe		91121	Ē			Assign Resource	S A
Define Baselines uction C 02-000~~02 Release Exclusive Lock uction C 02-000~~02 Open Dependent Projects ions Ma 02-000~~02 View Calendar ions Met 02-000~~02 Jump to next highlighted Ctri-Down uction Jump to previous highlighted Ctri-Down uction Link Selected Activities n 03-000~~03 Run e 03-000~~03 View Service Status terms 03-000~~03 Print Ctri-P uction-T Pint Preview uction-T 03-000~~03 Page Setup uction-T 03-000~~03	17-M		iction S	h			Assign Role	
Release Exclusive Lock ions Ma 02-00002 Open Dependent Projects ions Ma 02-00002 View Calendar ions Ma 02-00002 Imp to next highlighted Ctri-Down ions Met 02-00002 Jump to next highlighted Ctri-Down ions Met 03-00003 Imp to previous highlighted Ctri-Down ions 03-00003 ions 03-00003 Run ions ems 03-00003 ions 03-00003 Print Ctri-D ions ions 03-00003 Print Preview Page Setup ions 03-00003 ions 03-00003 Import/Export Import from Excel import from Excel	21-A						Define Baselines	
Open Dependent Projects ions Ma 02-000~~02 View Calendar ions Met 02-000~~02 E-mail Activity Details ions Met 02-000~~02 Jump to next highlighted Ctrl-Down uction 03-000~~03 Jump to previous highlighted Ctrl-Up uction 03-000~~03 Run e 03-000~~03 ems 03-000~~03 View Service Status terms 03-000~~03 ems 03-000~~03 Print Ctrl-P uction-T 03-000~~03 ems 03-000~~03 Pint Preview Print Preview uction-T 03-000~~03 uction-T Page Setup import/Export import from Excel import from Excel	21-Ap	02-000~~02	iction C	n.		tes	Review Status Updat	🛛 🧐 R
View Calendar ions Met 02-000~~02 E-mail Activity Details ions Met 02-000~~02 Jump to next highlighted Ctrl-Down uction 03-000~~03 Jum to previous highlighted Ctrl-Up uction 03-000~~03 Run • e 03-000~~03 View Service Status ems 03-000~~03 Print Ctrl-P uction-T 03-000~~03 Pint Preview uction-T 03-000~~03 Page Setup uction-T 03-000~~03	09-Ju					ock	Release Exclusive Lo	B R
E-mail Activity Details ions Met 02-000~~02 Jump to next highlighted Ctrl-Down uction 03-000~~03 Jump to previous highlighted Ctrl-Up uction 03-000~~03 Run • e 03-000~~03 View Service Status tems 03-000~~03 Print Ctrl-P ems 03-000~~03 Print Ctrl-P uction-T 03-000~~03 Page Setup uction-T 03-000~~03 Import/Export Import from Excel	09-Ju	02-000~~02	ons Ma	j.		jects	Open Dependent Pro	🔁 o
Jump to next highlighted Ctrl-Down Jump to previous highlighted Ctrl-Up Jump to previous highlighted Ctrl-Up Link Selected Activities n 03-000~~03 Run • View Service Status e Print Ctrl-P Print Preview ems Page Setup uction-T Import/Export Import from Excel	07-Ju						√iew Calendar	
Jump to previous highlighted Ctrl-Up uction 03-000~~03 Link Selected Activities n 03-000~~03 Run • 03-000~~03 View Service Status e 03-000~~03 Print Ctrl-Up uction-T 03-000~~03 Print Ctrl-Up uction-T 03-000~~03 Page Setup uction-T 03-000~~03 Import/Export Import from Excel	07-Ju	02-000~~02	ons Met	i			E-mail Activity Details	
Ink Selected Activities n 03-000~~03 Run e 03-000~~03 View Service Status lems 03-000~~03 Print Ctri-P uction-T 03-000~~03 Print Preview uction-T 03-000~~03 Page Setup mport/Export Import from Excel	18-Au			wn	Ctrl-Do	ted	Jump to next highligh	📑 🚛 Ju
Run • 03-000~~03 View Service Status tems 03-000~~03 Print Ctri-P uction-T 03-000~~03 Print Preview uction-T 03-000~~03 Page Setup uction-T 03-000~~03	18-Au	03-000~~03	iction	ի	Ctrl-U	hlighted	lump to previous hig	💼 J.
Image: Name Image: Name View Service Status Iems Print Ctri-P Print Preview Image: Name Page Setup Image: Name Import/Export Import from Excel	15-Se	03-000~~03	1	- u		es	ink Selected Activiti	hy Li
Print Ctri-P Print Preview uction-T Diage Setup Import/Export	22-86	03-000~~03		• •			Run	R
Import/Export uction-T 03-000~~03 Import/Export Import from Excel	29-Se	03-000~~03	ems	te		i	View Service Status	k v
Import/Export uction-T 03-000~~03 Import/Export Import from Excel	06-00				Ctrl-P		Print	PI
Page Setup Import/Export Import from Excel	06-0	03-000~~03	iction-T	ι			Print Preview	
Import/Export Import from Excel							Page Setup	
		from Excel	S Import	•			mport/Export	
		to Excel						
Create Import Template								
Send to Primavera Unifier		Primavera Unifier						



5. Check the P6 schedule data has been populated in the Unifier project's schedule sheet.

	Save 💾 Add 🔹 🔆 Delete 📑 II	🗄 Add 🔹 🔆 Delete 🚦 Indent 🚦 Outdent 📲 Gantt 🌌 Progress 🛄 Columns 🤍 Find 💿 Zoom In 💿 Zoom Out 🔶 Focus 🔯 Close Window											
Of	fice Building Add. Two Schedule												
								201	14				
ld	Activity Name	P6 Activity Nu	P6 CBS	Start date	Finish date	Jur	ı	Jul	Aug	Sep	Oct	Nov	
8	⊡- <u>Metals</u>			12/08/2014	01/16/2015							12/08/2014	
9	General Conditions Metals	MT1000	02-000~~02-02C	12/08/2014	01/16/2015							12/08/2014	
10	⊡- <u>Masonry</u>			11/10/2014	12/05/2014						11/10/2014	Mason	TV 12/
11	General Conditions Masonry	MA1000	02-000~~02-02B	11/10/2014	12/05/2014						11/10/2014	Genera	
12	⊡- <u>Concrete</u>			09/22/2014	11/07/2014				09/22/		Concrete	11/07/2014	
13	General Construction Concrete	CO1000	02-000~~02-02A	09/22/2014	11/07/2014				09/22/2		General Cons		ncret
14	Site Construction			05/26/2014	09/19/2014		Site C	onstruction		09/19	/2014		
15	General Construction Sitework	SC1050	01-000~~01-01B	08/18/2014	09/19/2014			08/18/201			ction Sitewor	k	
16	Geotech	SC1040	01-000~~01-01B	07/21/2014	08/15/2014	07/	21/2	Geot	ech 08/15/20)14			
17	Civil Engineering / ALTA Survey	SC1030	01-000~~01-01A	06/23/2014	07/18/2014	014	Civi	Engineering 07/18/20		vey			
18	Architect	SC1020	01-000~~01-01A	05/26/2014	06/20/2014	hitect 06	5/20/	2014					
•	•	4			•					1	1		Ĺ



Creating the Cash Flow Curve

- 1. In the Cost Manager of the Unifier project:
 - a. Select Cash Flow node.
 - b. Click New and select Detail Curves.

This will create the detail level the curve data will be based on.

- 2. In the General Tab:
 - a. Provide a name.
 - b. Select WBS (the curve will use the CBS Cost Codes).

User Mode 🖌 🔯	File Edit View Help
E-B Office Building Addition Two - H	🗊 New 🔹 🎦 Copy 🖆 Open 📓 Properties 🗟 Permission 📓 Summary 🔹 🔍 Find 🔿
Alerts	Cash Flow - Current View: All
⊡fiù uMail ≔fiù Mailbox	See Properties - Windows Internet Explorer
	General Curves Filter Options Schedule Summary
Gates	Name: Detail Curves *
Cost Manager	Description:
Cash Flow	
Funding	
Schedule of Values	
Document Manager	Rollup Status:
	Detail Level
Schedule Manager Schedule Manager	O Project / Shell
Project Delivery Cost Controls	© Summary WBS
Reports	WBS
	© Commitment
	Business Process:Select *
	Reference Elements: Select
	Base Commit Record: Select
	Time Scale:
	By: Month 🕶
	Format: MM YY 🔹
	Period Close Settings
	Enable auto snapshot on Select
	Cutoff spends Select
	Apply Spends to:
	The same month as the effective date
	The next month if after the cutoff date
	The previous month if on or before the cutoff date
	OK Cancel



- 3. In the Curves tab:
 - a. Click Add and select a curve. The curve selected in this example (baseline) is one of the default curve types (Baseline, Actuals, Forecast) from the Cost Controls application.
 - b. Click Ok to close window.

General	Curves	Filter	Options	Schedule	Summary
Name		Туре	Options		
Baseline Actuals Forecast	_	_			
Approved Shared Bu Baseline2 Actuals2	Budget Idget				
Add	Modify Rem	ove		Move Up	Move Down
		ОК	Cancel		

A distribution profile (curve type) will be assigned to each CBS Cost Code.

- 4. In the Distribution section:
 - a. Select 'Auto by default profile per WBS' radio button.
 - b. Click Details.



5. Select all the rows to take advantage of the Bulk Edit feature.

a. Click the Bulk Edit.

Details		
WBS Code	▲ WBS Item	Default Profile
03-03T	Thermal Work	
03-03A	Wood & Plastic Work	
02-02C	Metal Work	
02-02B	Masonry Work	
02-02A	Concrete Work	
01-01B	Site Excavation	
01-01A	Site Design	

There are four default profiles to pick from: Linear, S Curve, Front Loaded and Back Loaded.

- 6. In the example the S Curve is selected:
 - a. Select the desired row.
 - b. Click Select.





All WBS Code (Cost Code) rows now have the distribution profile S Curve.

7. Click Save will also close the window.

S Details		
WBS Code	 WBS Item 	Default Profile
03-03T	Thermal Work	S curve
03-03A	Wood & Plastic Work	S curve
02-02C	Metal Work	S curve
02-02B	Masonry Work	S curve
02-02A	Concrete Work	S curve
01-01B	Site Excavation	S curve
01-01A	Site Design	S curve

The curve now needs to know which cost data to use from the cost sheet and also how the distribution will be allocated over time (in months). This example the Budget amounts are used and distributed over date ranges from the schedule sheet. These date ranges look at the earliest Start Date and latest Finish Date for activities per assigned Cost Code.

- 8. In the Cost section:
 - a. Select Distribute amount from cost sheet column radio button.

b. Select the appropriate business process (with specific status). This example will use approved Budget Approval business process records.

- 9. In the Schedule section:
 - a. Select Use Dates from Schedule Sheet radio button.
 - b. Click Select.
 - c. Select Start Date for the From Date and Finish Date for the To Date.
 - d. Click OK to close the window.



CREATING CASH FLOW CURVE - P6 SCHEDULE & UNIFIER COST DATA

Name:	Baseline
Type:	Baseline
Distribut	
	Manual
	Auto by default profile per WBS Details.
	O Use data from Schedule Sheet Select.
Cost	
	Manually enter amounts for each period
	Auto distribute total amount across all periods
	Distribute amount from cost sheet column Budget Approval (Approved) -
Schedu	le
	Manual
	Use dates from Schedule Sheet Office Building Add. Two Schedule Select
	From Date
	Data element from schedule shee Start date -
	To Date
	Data element from schedule shee Finish date

The newly created baseline curve is listed.

10. Click OK to close the window.

General	Curves	Filter	Options	Schedule	Summary
Name		Туре			
Baseline		Baseline	9		A
1					
Add 🔻	Modify Remo			Move Up	Move Down
Add +	Remo			Move Op	MOVE DOWN
		01	Canaal		
		OK	Cancel		



CREATING CASH FLOW CURVE - P6 SCHEDULE & UNIFIER COST DATA

The cash flow curve window will automatically appear showing the example baseline curve. The rolled up summary budget amounts (per month) can be seen in the row in the bottom pane. The From and To Date represent the earliest Start and latest Finish Date of activities that have cost data assigned per Cost Code.



Selecting the row and clicking Open will bring up the details for the curve.

In this example there were two Cost Codes assigned to activities that had approved budget amounts. Note how each budget amount per Cost Code is distributed between the corresponding From and To Dates.

Number	Name	From Date	To Date	Profile	Total	Unassigned	05 14	06 14	07 14	08 14	09 14
01-01A	Site Design	05/26/2014	07/18/2014	S curve	250000.00	0.00	42500.00	165000.00	42500.00		
01-01B	Site Excavation	07/21/2014	09/19/2014	S curve	250000.00	0.00			42500.00	165000.00	42500.0
02-02A	Concrete Work	09/22/2014	11/07/2014	S curve	0.00	0.00					0.0
02-02B	Masonry Work	11/10/2014	12/05/2014	S curve	0.00	0.00					
02-02C	Metal Work	12/08/2014	01/16/2015	S curve	0.00	0.00					
03-03A	Wood & Plastic Work	01/19/2015	03/06/2015	S curve	0.00	0.00					
03-03T	Thermal Work	03/09/2015	04/10/2015	S curve	0.00	0.00					
				Total	500000.00	0.00	42500.00	165000.00	85000.00	165000.00	42500.0

