

# **Project Management (PS)**

This case study explains the project management process in detail and thus fosters a thorough understanding of each process step and underlying SAP functionality.

### **Product**

SAP S/4HANA 1809 Fiori 2.0 Global Bike

### Level

**Beginner** 

### **Focus**

**Project Management** 

### **Authors**

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### Version

3.3

### **Last Update**

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### **MOTIVATION**

In the Project Management it will be create a simple cost project, which will plan and control the development of an ultra-light racing bike.

The project will be structures using a work breakdown structure (WBS) and network activities. In the Execution phase we will post actual dates and actual costs on activities and WBS elements.

### **PREREQUISITES**

Before you use this case study, you should be familiar with navigation in the SAP system.

### **NOTES**

This case study uses the Global Bike data set, which has exclusively been created for SAP UA global curricula.



# Process Overview

**Learning Objective** Understand and execute an integrated project planning.

Time 140 Min.

**Scenario** To edit a complete project planning process, you will take different roles in Global Bike, e.g. Production Supervisor and Cost Accountant. Overall, you will be working in the Project Management (PS) and Financial Accounting (FI) departments.

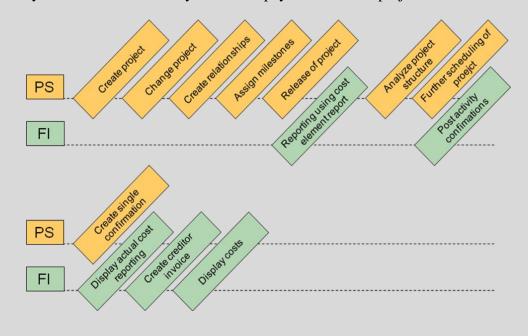
**Employees involved** Jun Lee (Production Supervisor)

Jermain Kumins (Shop Floor Worker 1) Silvia Cassano (Accounts Payable Specialist)

Jamie Shamblin (Cost Accountant)

At the beginning of your project you assign WBS elements, activities and milestones at Project Builder. Also, you assign milestones to your project.

In the last few steps, you create a creditor invoice for your business partner, who acts as an intermediary for the test driver and you have to pay for the entire project.



# Table of ContentsStep 1: Create Project4Step 2: Change Project8Step 3: Create Relationships10Step 4: Assign milestones14Step 5: Release of Project16Step 6: Reporting using cost element report17Step 7: Analyze Project Structure20Step 8: Further scheduling of Project22Step 9: Post activity confirmations26Step 10: Display actual cost reporting28Step 11: Create creditor invoice30Learning Snacks32



# Step 1: Create Project

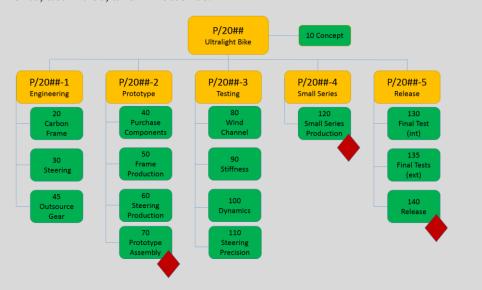
Task Create a new project.

Time 15 min

**Short Description** Use the SAP Fiori Launchpad to create a new project.

Name (Position) Jun Lee

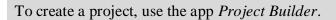
This is the Project structure of cost project P/20##, which consists of WBS elements, activities, and milestones.



We will use the project builder to create a project "Development of Ultralight Bike". The project consists of a work breakdown structure and network activities.

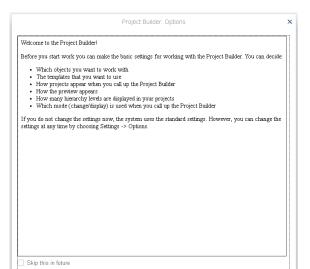
**Note** A Work Breakdown Structure (WBS) is a model of a project and shows the required project activities in a hierarchical form. The WBS forms the basis for all subsequent planning tasks in the project. Emphasis is placed on planning, analysis, description, control, monitoring of costs, basic dates, and the budget. Costs, dates, resources, and payments are planned using the activities extrapolated to specific WBS elements.

Fiori App





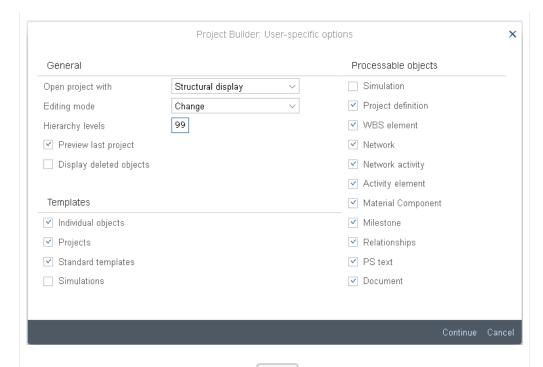
If the following pop up occurs *Project Builder: Options*, choose Set options



In the popup *Project Builder: User-specific options* enter for Hierarchy levels **99** and select **Preview last project**. Leave other fields as they are.

Confirm your entries by using the Continue button.

99



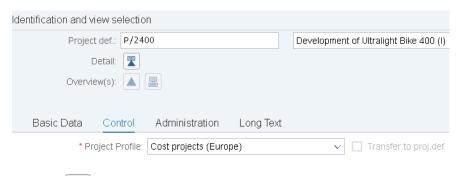
To create the project P/2###, select and choose **Project.** 

Project

**Note** Projects are tasks that have the following characteristics. Projects are usually complex and unique and involve a high degree of risk. They have precise targets that are agreed on between the contractor and the sold-to party. Projects are limited in duration and are cost and capacity intensive and involve several departments. They are subject to specific quality requirements and are of strategic significance for the business carrying them out. Projects are an integral part of the commercial processes of a business. Before you can control all the tasks that occur as part of project execution, you need a project-specific organizational form that should be in a position central to the user departments involved.

In the screen *Project Builder* enter in the field Project def. **P/2**###. Remember to replace ### with your three-digit number, e.g. 003 if your number is 003. For Text (unlabeled) enter **Development of Ultralight Bike** ### (**I**) and select in Project Profile **Cost projects** (**Europe**). Confirm your entries by pressing Enter.

P/2###
Development of
Ultralight Bike ###(I)
Cost projects (Europe)



Click on the WBS Element Overview icon to create new WBS elements. Fill in the following data in the Project Builder screen. Please notice that the

system will deduce the project number from the entry. Special characters such as double quotes can be configured in the SAP customizing menu.

WBS element	Description	PE	Acct
"	Development of Ultralight Bike		V
" 1	Engineering	$\overline{\mathbf{A}}$	$\overline{\mathbf{A}}$
" 2	Prototype	$\overline{\mathbf{A}}$	$\overline{\mathbf{A}}$
" 3	Testing	V	$\overline{\checkmark}$
" 4	Small series production		$\overline{\mathbf{A}}$
" 5	Release to mass production	V	$\overline{\mathbf{N}}$

Again, confirm your entries by pressing Enter.

**Note** Operative indicators such as the above ("PE" and "Acct") control whether the WBS elements can be used for cost planning (Planning Element) and cost account (Account Assignment possible) purposes.

The hierarchy graphic can be used to edit the project as well. Please note, that the derivation of WBS element structure has determined the hierarchy from the number of the WBS elements. Naturally this works only for numbers, which reflect a hierarchical order and are customized by a so-called number mask.

To derive the WBS structure the number of the WBS elements choose in the pull-down menu **More** ▶ **Project** ▶ **Derive structure** ▶ **Execute**. Go to the tab Responsibilities to assign responsible cost centers to all WBS elements.

Assign responsible cost centers to all WBS elements. Therefore, select the Tab Responsibilities and enter the following data.

WBS element	Resp.cost cntr
P/2###	EURD1000
P/2###-1	EURD1000
P/2###-2	EURD1000
P/2###-3	EUQM1000
P/2###-4	EUPR1000
P/2###-5	EUQM1000

Confirm your entries and save your project with

Click on the home icon

to return to the Fiori Launchpad overview.

Menu List



# Step 2: Change Project

Task Change the project.

Time 10 min

**Short Description** Use the SAP Fiori Launchpad to change the project form the task above.

Name (Position) Jermain Kumins

The project P/20## will be enhanced by network activities to detail the tasks of the WBS elements). Activities describe the process flow of the project. You can plan dates, resources and costs through network activities as well.

To change a project, use again the app *Project Builder*.

Fiori App



Click at . In the *Open Project* screen enter in Project Definition **P/2**### and choose .

P/2###

Use the Overview icon. Choose the Activity Overview icon. Enter the following data:

		Normal dura-	Work in	
Activity	Description	tion in days	hours	Work center
0010	General concept	10	80	DVLP1000
0020	Engineering of carbon frame	5	40	DVLP1000
0030	Engineering of steering fork	2	20	DVLP1000
0040	Purchasing of components	1	5	PROC1000
0050	Production of carbon frame	2	30	ASSY1000
0060	Production of steering fork	1	10	ASSY1000
0070	Prototype assembly	8	60	ASSY1000
0800	Wind channel test	1	8	INSP1000
0090	Stiffness test	1	6	INSP1000
0100	Testing acceleration dynamics	1	5	INSP1000
0110	Testing steering precision	1	8	INSP1000
0120	Small series production	10	100	ASSY1000
0130	Final test (internal)	5	50	INSP1000
0140	Release to mass production	1	3	INSP1000

Confirm your entries by pressing Enter.

In the Branch to the activity overview of external activities create more activities. To do so use the *Ext Processing* tab. In the Activity field enter **0045** and activate the **Service** Field and enter **Outsourcing gear** in Description. Confirm your entries by pressing Enter.

0045 Service Outsourcing gear

**Note** Use an externally processed activity to specify the necessary services to be provided by other companies to complete the activity. Carry out external processing through the purchasing department. Service activities are also used to procure services externally.

Use an internally processed activity to determine the output to be provided by machines or personnel to complete the activity. Evaluate the capacities of the various work centers involved, reschedule these capacities as necessary, and distribute the work among employees.

In the Service Specification: Ext. Specs f. Task List Maintain screen enter in the first line 10, in the field short text Engineering, choose for Quant. 1, for Unit EA and in Gross price 2000.

In the second line enter 20, for the short text enter Ext. production, choose 1 for Quant., EA for Unit and enter Gross price 3000.

Line	D	 Short Text	Quantity	Un	Gross Price
<u> 10</u>		Engineering	1	EA	2000
<u>20</u>		Ext. production	1	EA	3000

Confirm your entries with Enter. Go back to the *Project Builder: Project P/2###* screen by pressing once.

On the *Prim. Costs* Tab enter for Activity **0135**, enter **Performance test by professional drivers** in Description, for Amount **10000** and **741000** for Cost Elem.

Confirm your entries, by pressing Enter. Use the Save icon save your entries, confirm any messages.

Click on the home icon to return to the Fiori Launchpad overview.

10 Engineering 1 EA 2000

20 Ext. production 1 EA 3000

0135 Performance test by professional drivers 10000 741000



# Step 3: Create Relationships

**Task** Create the relationship structure.

Time 15 min

**Short Description** Use the SAP Fiori Launchpad to create the relationship structure.

Name (Position) Jermain Kumins

So far, the activities are all assigned to the top WBS element. In addition, there are no relationships between activities, i.e. activities so far begin all to the same time. This will be changed now.

To create the relationships, use the app *Project Builder*.



Fiori App

Click at . In the *Open Project* screen enter in Project Definition **P/2**### and choose .

P/2###

In the structure tree on the left side, double click on Development of

Ultralight Bike Development of Ultralight Bike . Press the Activity Overview Icon.

Enter the following values:

Activity	WBS Element
0010	P/2###
0020	P/2###-1
0030	P/2###-1
0040	P/2###-2
0050	P/2###-2
0060	P/2###-2
0070	P/2###-2
0080	P/2###-3
0090	P/2###-3

0100	P/2###-3
0110	P/2###-3
0120	P/2###-4
0130	P/2###-5
0140	P/2###-5

Confirm your entries with Enter.

**Note** The activities in a project describe the various steps and the work involved in them. In the Project Builder, you can create activities for WBS elements, meaning that the activities are assigned to the WBS elements and that the planned and actual data for the activities can be aggregated at the WBS element level. Activities are linked to each other by means of relationships, and this linking results in a chronological activity sequence.

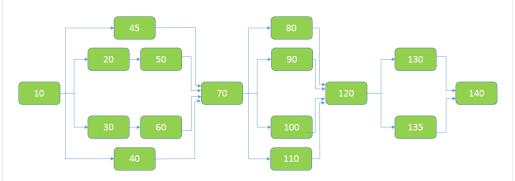
Activities also form the basis for planning the following quantity structures:

- Dates
- Costs
- Resources
- Material requirements

In the following we create the relationship structure as shown in the screen below. You can do this in the network graphic. In practice network graphic is not a good way to edit networks with more than about 10 activities, as you lose the overview.

Furthermore, network graphic is possible only for SAPGUI (for Windows). For this reason, we edit relationships in a tabular way (which is the productive way for large networks).

The Graphic shows the network for development of ultra light racing bike.



The following example will show to enter the relationships between activities 10, 20 and 50. Please use the same procedure to create all relationships of the image above.

As you can see in the image above as well as in the snippet below, activity number 20 is the successor of activity number 10. In addition, activity number 50 is the successor of number 20. Please keep in mind that only

direct relationships between two activities will be created. For example, no relationship between activity 10 and 50 will be entered.

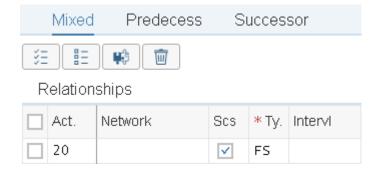


Click on your activity 10 in the structure tree on the left side



Overview button.

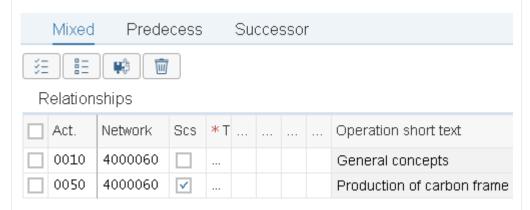
Since we only care about the activities 10, 20 and 50, we will only enter **20** in activity and mark it as successor by selecting the **Scs** flag. However, please keep in mind that you are supposed to create the relationships to 30, 40 and 45 in the same way later on.



Confirm your entries by pressing enter.

Please open the relationship overview for activity 20 as you did for activity 10. In this screen you can see that activity 10 was automatically added as a predecessor (flag Scs isn't selected).

Please enter activity **50** and mark it as successor of activity 20 by selecting the **Scs** flag and confirm your entries by pressing enter.



You may open the relationship overview of activity 50 to verify that activity 20 was added as predecessor.

20 Scs

50 Scs

Now populate each activity with its successors (as described in the network plan above) in the same manner. Please make sure to select Scs for each direct successor of the actual activity.

Use the Save icon Save to save your entries. Click on the home icon to return to the Fiori Launchpad overview.



# Step 4: Assign milestones

Task Assign milestones to activities.

Time 10 min

**Short Description** Use the SAP Fiori Launchpad to assign milestones to activities.

Name (Position) Jermain Kumins

In the following step, we assign texts (e.g. a functional specification) to the project. We assign milestones to activities, in order to indicate important project stages.

To create the relationships, use again the app *Project Builder*.

Fiori App



Click at . In the *Open Project* screen enter in Project Definition **P/2**### and choose

P/2###

**Note** Important project stages can be indicated and described by project milestones. Milestones are assigned either to WBS elements or to activities of the project and fulfill information and documentation purposes but can trigger business processes such as progress reporting or milestone billing in the case of sales projects. In the following we create three milestones, assigned to activities 0070, 0120, and 0140.

To assign a milestone to activity 0070 place your cursor on

Prototype assembly 40

4000060 0070

activity 0070 at the structure

tree on the left side. Use the . Milestone Overview icon. For Usage please enter **00004** and by Description enter **Completion: prototype**. Confirm your entries with Enter.

00004 Completion: prototype

Go to the milestone detail data. For this click on Completion: prototype.



Complete the milestone data there. In the field Usage enter **00004**. Select **Trend analysis**, **Progress analysis** and **Offset to fin**. Leave other fields as they are and confirm your entries with Enter.

00004 Trend analysis Progress analysis Offset to fin

Now assign two other milestones to activities 0120 and 0140 analogously. Make sure not to assign these milestones to the same activity 0070 or, worse, to change the milestone which you just created. Finally, you should be able to display three milestones in the structure tree on the left side.

To do so, use the following data:

For the activities 0120 enter for Usage **00005** and in Description enter **Completion: small series**. Select **Trend analysis**, **Progress analysis** and **Offset to fin**.

For the activities 0140 enter for Usage **00006** and in Description enter **Completion: release**. Select **Trend analysis**, **Progress analysis** and **Offset to fin**.

Use the icon Save to save your entries.

Click on the home icon icon to return to the Fiori Launchpad overview.

00005 Completion: small series Trend analysis Progress analysis Offset to fin

> 00006 Completion: release Trend analysis Progress analysis Offset to fin



# Step 5: Release of Project

Task Release of the Project.

Time 5 min

**Short Description** Use the SAP Fiori Launchpad to release the project.

Name (Position) Jun Lee

The project will be released. The release of the WBS elements and / or activities of the project are a precondition for the posting of actuals, in the execution phase of the project. In productive environments and for large projects, only those elements will be released which are to be executed in the near future. The release of higher-level WBS elements will also release subordinate WBS elements and / or assigned activities. In the exercises we release the project definition, thereby releasing all WBS elements and activities of the project.

To release the project, use the app *Project Builder*.

Fiori App



In the Project Builder screen choose your project P/2### by double click. Choose Menu More ▶ Edit ▶ Status ▶ Release to release your project.

P/2### Menu bar



Use the Save icon Save to save your entries.



Click on the home icon to return to the Fiori Launchpad overview.



# Step 6: Reporting using cost element report

**Task** Reporting using cost element report.

Time 10 min

**Short Description** Use the SAP Fiori Launchpad to report by using cost element report.

Name (Position) Silvia Cassano

By structuring the project using network activities, you have built a quantity structure with internal and external services, which can be totaled as planned costs. When releasing the activities, they are automatically calculated. From now on, planned costs can be evaluated specific to controlling periods (normally months) and specific to calculate elements. The evaluation can be done on a specific activity, but also aggregated to WBS elements and the whole project.

whole project.			
To report, use the app <i>Pr CO Area Currency</i> .	roject Costs – Actual/Comm	nitment/Total/Planne	$d\ in$ Fiori App
If required, enter in database	Project Costs Actual/Commitment/  Doase <b>GL01000</b> and confirm	with Continue.	GL01000
-	Enter profile	×	
* Da	atabase prof.: GL01000		
	Contin	ue Cancel	

Enter in the selection screen for Project P/2###, in the Controlling Area choose **EU00**, for Plan Version **0**. Enter the **current year** for From fiscal year and in To fiscal year enter the **next year**. By From period enter **1** and in to period enter **12**. Please delete all other field entries.

P/2### EU00 0 current year next year 1

	Project Management Selections (Other DB profile: GL01000)		
	Project:	P/2400	
	Sales document:		
	WBS element:		
	Network/order:		
	Activity:		
	Materials in network:		
	\$6-KOKRS:	EU00	
	\$6-VERP:	0	
	\$6-GJAHV:	2018	
	\$6-GJAHB:	2019	
	\$6-PERBV:	1	
	\$6-PERBB:	12	
The project w	vill usually last until the next year (corre	esponding to the	
network activ	rity durations and their relationships). Si	ince a part of planned	
costs will be	assigned to the next year, you would on		
costs when se	electing only the current year. Use the E	xecute icon Execute	

**Note** For the network activities you specified work centers and the amount of work (in units of hours). As for the primary cost activities you entered the costs directly. These costs are determined by network costing and will be displayed as aggregated costs for WBS elements and for the project definition. The servicing activity resulted in a purchase requisition for the purchasing department, which is displayed as commitment (value type, which displays a future obligation)

Where do the planned costs result from, which are displayed in the report?

What is the reason for the "commitments" value?

Follow the path: More Settings Options. Then, select the Expert

Mode indicator. Use and then click on popups.

The selected data was saved

Return to the Fiori Launchpad by using the Back icon.

Expert Mode



# Step 7: Analyze Project Structure

Task Analyze the project structure.

Time 5 min

**Short Description** Use the SAP Fiori Launchpad to analyze the project structure.

Name (Position) Jermain Kumins

Using the structure information system, you can analyze the project structure as well as dates, costs and revenues (plan and actuals) of one or many projects. The structure information system does not only display data, but you can edit the project from there or post activity confirmations.

To analyze the project structure, use the app Structure Overview.

Fiori App

Structure Overview

If required, enter in the PS Info Profile filed **GL01000** and confirm with Enter.

GL01000

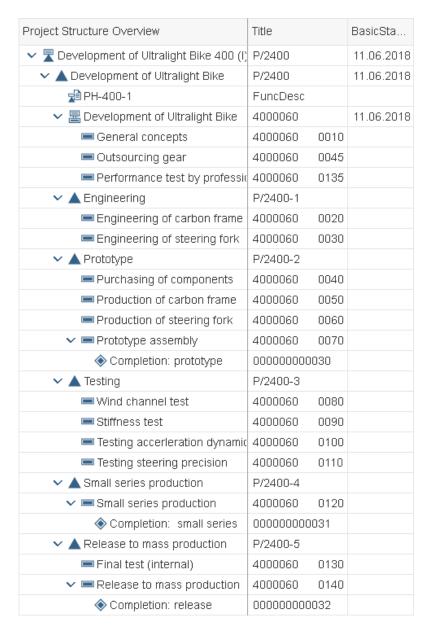
In the selection screen enter for Project P/2### and leave the other fields as

P/2###

Page 20

they are. Use Execute for the report.

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Please notice that you can analyze the project structure as well as dates and costs (plan, actual) using this report. You can always refresh the report

Refresh , in order to show changed data.

Please write down the network number which is the one in front of your activity numbers.

Return to the Fiori Launchpad by using the home icon.



# Step 8: Further scheduling of Project

Task Further scheduling of the Project.

Time 10 min

**Short Description** Use the SAP Fiori Launchpad for further scheduling of the project.

Name (Position) Jun Lee

In our project, dates have been already planned by the scheduling of network activities. Network scheduling works in principle using the durations of the activities and their relationships. The scheduled dates of the activities are aggregated to the WBS elements (to which the activities are directly assigned). They can be further aggregated within the work breakdown structure (i.e. to the higher level / top level WBS elements).

To change your project using the app *Project Builder*.

Fiori App



Open your project by double click on your Project P/2###.

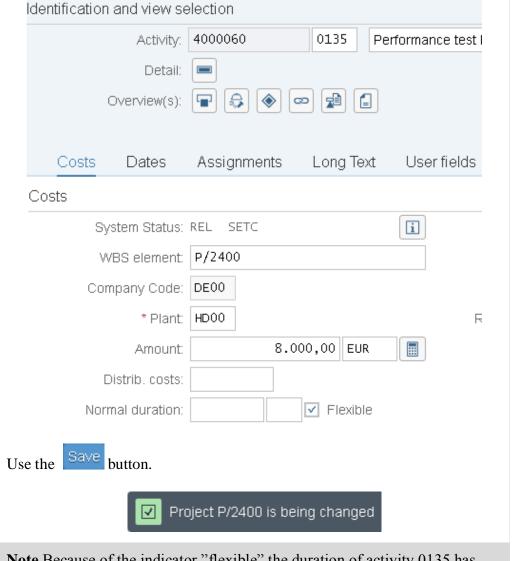
P/2###

Project Structure: Description	Identification
🗸 Development of Ultralight Bike 400	P/2400

To decrease the planned costs and make the duration of the activity flexible, double click on activity 0135.

Change the Amount in **8000** and select **Flexible**. Leave the other fields as they are.

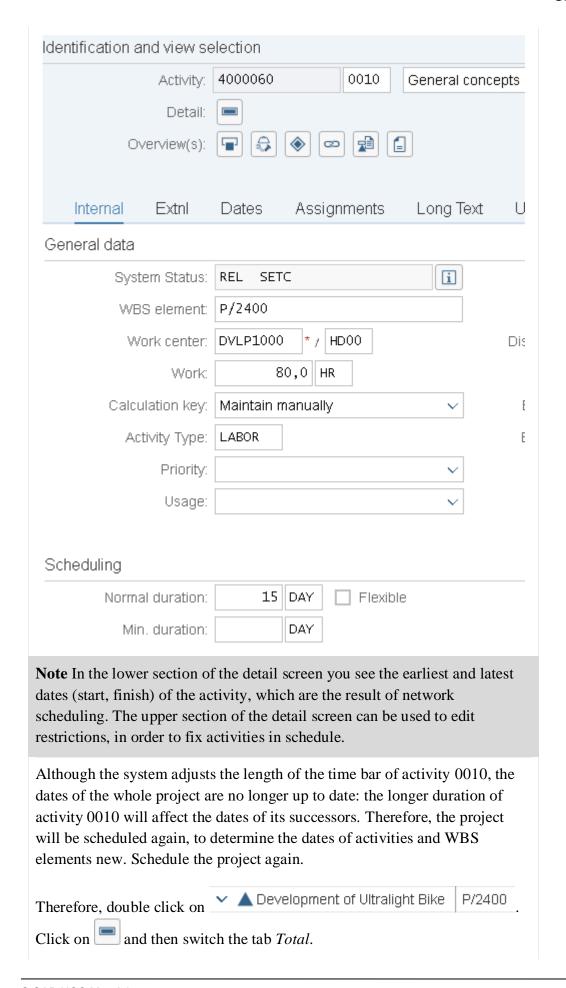
8000 Flexible

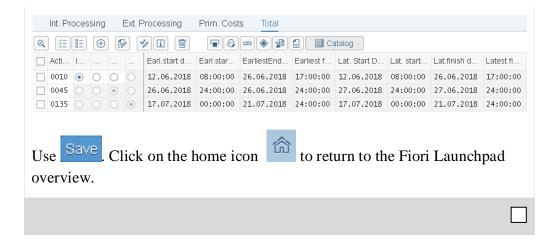


**Note** Because of the indicator "flexible" the duration of activity 0135 has been linked to the duration of activity 0130, since both activities are "parallel" and activity 0130 has a longer duration. The planned costs of activity 0135 have decreased to 8 000 and are equally distributed over the (flexible) duration of the activity.

Double click at activity 0010. Change the normal duration into 15 days.

15







# Step 9: Post activity confirmations

**Task** Post activity confirmations for your project.

Time 10 min

**Short Description** Use the SAP Fiori Launchpad to post activity confirmations for your project

Name (Position) Jamie Shamblin

In the execution phase we post actuals (actual dates, actual costs, material movements, capacity utilization) to the project. A prerequisite for the posting of actuals is always the release of the associated project object. We have already released the entire project.

To post activity confirmations, use again the app *Project Builder*.

Fiori App

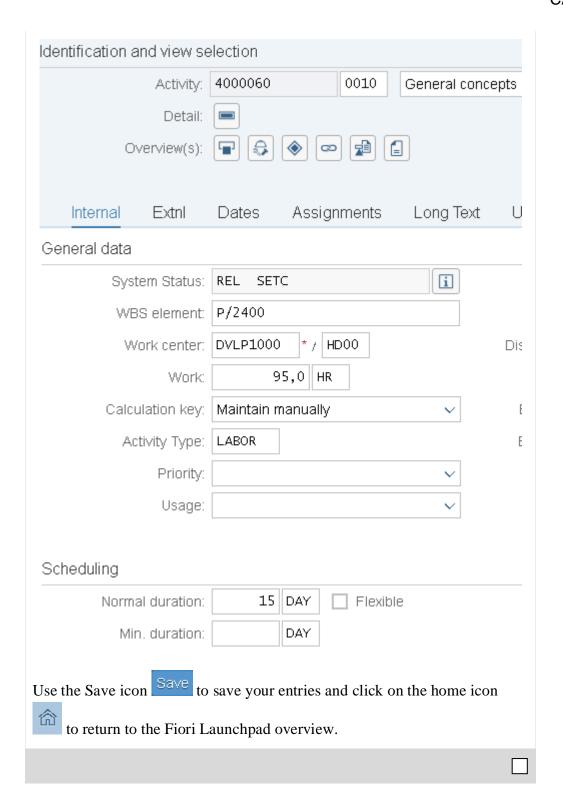


Double click on your project Development of Ultralight Bike P/2400 and select there your activity 0010 on the left side

General concepts 4000060 0010

At the tab *Internal* change, the working hours from 80 to 95.

95



12

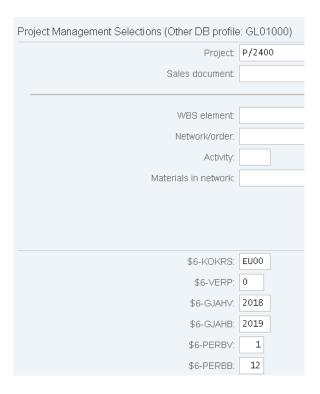


# Step 10: Display actual cost reporting

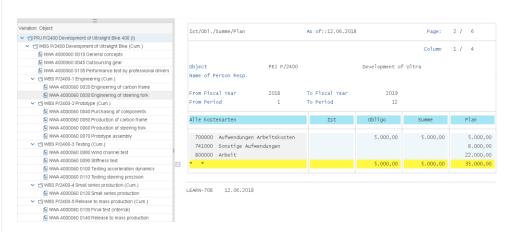
Time 5 min **Task** Display the actual cost reporting. **Short Description** Use the SAP Fiori Launchpad to display the actual cost reporting. Name (Position) Silvia Cassano The actual costs will be analyzed using the cost element report. To report, use the app Project Costs - Actual/Commitment/Total/Planned in Fiori App CO Area Currency. Project Costs Actual/Commitment/... Continue GL01000 If required, enter in database GL01000 and confirm with Enter profile X \* Database prof.: GL01000 Continue Cancel Enter in the selection screen for Project P/2###, in the Controlling Area P/2### EU00 choose EU00, for Plan Version 0. Enter the current year for From fiscal year and in To fiscal year enter the **next year**. By From period enter **1** and in current year next year

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to period enter **12**. Please delete all other field entries. Click on



If required enter a variant name and fill the description field with a name you want. Choose Save and execute again.



You see the used cost elements of the different activities.

Which cost element is used in the activity 0045 Outsourcing gear?

Click on the home icon to return to the Fiori Launchpad overview.



# Step 11: Create creditor invoice

Task Create a creditor invoice.

Time 5 min

**Short Description** Use the SAP Fiori Launchpad to create a creditor invoice.

Name (Position) Jamie Shamblin

Before the general release for mass production, the ultralight racing bikes are tested by professional bikers. After testing the professionals send an invoice to the enterprise for their service. This leads to further actual costs in the project execution.

To create a creditor invoice, use the app Create Incoming Invoices.

Fiori App



If required enter **DE00** for Company Code.

DE00

In the following screen, enter for Vendor 114000, choose the today's date for the Invoice and enter for Amount 9700. In the text field enter Invoice for performance testing.

114000 today's date 9700 Invoice for performance testing

Select the box Calculate Tax and choose A1 (19% output tax) in the drop-down menu.

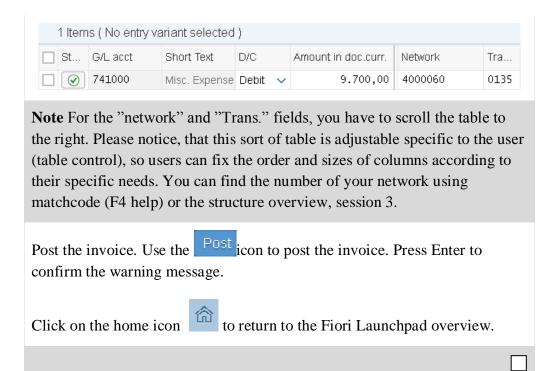
Calculate Tax A1 (19% output tax)

If you get the following warning message, press Enter.



For G/L acct enter **741000** and \* in the Amount in doc.curr. field. Leave the Tax code blank and enter for Network **Your network** and for Trans. No choose **135**.

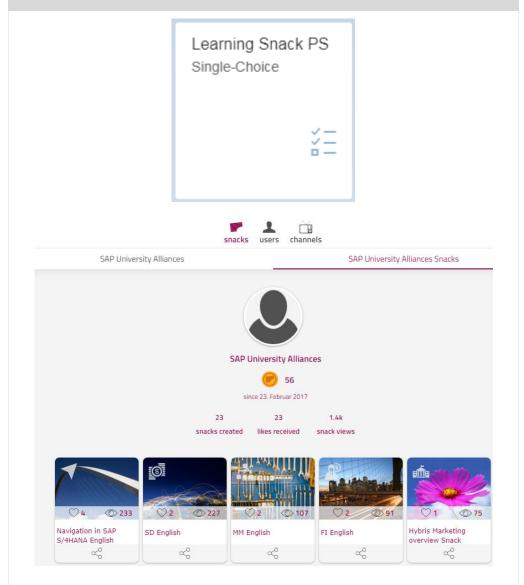
741000 \* Your network 135



# Learning Snacks

In order to test and consolidate your knowledge use the app *Learning Snack PS*.

Fiori App



You see all the snacks for the individual case studies. Select the Snack *PS English* and answer all fourteen questions.

### Note

If you do not see any Apps, you need to change the language on the page Learning Snacks. Therefore click on the current language right next to *change language* and choose **English**.



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Learning Snack

When you have answered all the questions you will receive a success message and your placement.

