Master LSCM

Course 2022-2023

Subject:

Project Management Practices

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Practice 3:

Project Monitoring and control with Microsoft Project

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Introduction

December 2022

This practice is about the most common aspects of monitoring and controlling a project.

Method

Note: The names of menus, options, tabs, etc., are in *italics*. In **bold** are marked the significant stages or relevant information in the planning process. Before starting work we will ensure that the redistribution of resources is assigned to manual (tab: *Resource/ Leveling options (Recurso/ Opicones de redistribución)*, option: *Redistribution (Redistribución: Manual)*.
Also, we need to set the Automatic programming of new tasks: *File/Options (Archivo/Opciones)*, option: *Schedule/New tasks created: Auto scheduled (Programación/ Opciones de programación de este Proyecto/ Nuevas tareas creadas: programada automáticamente)*).

1. Download the project file

The first thing to do is to download from Virtual Campus the Microsoft Project file that provides the initial configuration of the project. The name of the file is LAB Session 3 FINAL ACTIVITY(Jamia Begum). Content of this file can be seen in the *Gantt Chart (Diagrama de Gantt)* view.

2. General information of the project

In this chapter we check some general data of the project and its initial planning.

A) Name of the project: Sustainability Project – Sun Power Car
B) Working schedule: Monday to Friday: 9.00 to 13.00 , 15:00 to 19.00
C) Starting date: Wednesday, 4th of January, 2023
D) Ending date: Friday,16th June, 2023
E) Duration: 118 days
F) Resources needed for the project (change to the *Resource sheet* (*Hoja de recursos*)):
   - Work resources as described as it follows up:
   - Resources of the material type (don´t forget to choose *Material* in column *Type/ Tipo*): Not requested by this project

Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar
Project Manager	Work		PM		100%	£70.00/hr	£0.00/hr	£0.00	Prorated	Standard
Financial Manager	Work		SM		100%	£50.00/hr	£0.00/hr	£0.00	Prorated	Standard
Automobile Designer	Work		AD		100%	£50.00/hr	£0.00/hr	£0.00	Prorated	Standard
Automotive Engineer	Work		AE		200%	£60.00/hr	£0.00/hr	£0.00	Prorated	Standard
Mechine Technician	Work		MT		100%	£30.00/hr	£0.00/hr	£0.00	Prorated	Standard
Quality Engineer	Work		Q		100%	£50.00/hr	£0.00/hr	£0.00	Prorated	Standard
Hardware Engineer	Work		HE		100%	£70.00/hr	£0.00/hr	£0.00	Prorated	Standard
Software Engineer	Work		SE		100%	£80.00/hr	£0.00/hr	£0.00	Prorated	Standard

G) Costs (Change to the general view *Tracking Gantt (Gantt de seguimiento)* in order to see the table *Costs/ Costo*):

Resource Name	Cost	Baseline Cost	Variance	Actual Cost	Remaining
Project Manager	£47,600.00	£0.00	£47,600.00	£0.00	£47,600.00
Financial Manager	£15,200.00	£0.00	£15,200.00	£0.00	£15,200.00
Automobile Designer	£14,400.00	£0.00	£14,400.00	£0.00	£14,400.00
Automotive Engineer	£49,440.00	£0.00	£49,440.00	£0.00	£49,440.00
Mechine Technician	£6,000.00	£0.00	£6,000.00	£0.00	£6,000.00
Quality Engineer	£24,800.00	£0.00	£24,800.00	£0.00	£24,800.00
Hardware Engineer	£8,400.00	£0.00	£8,400.00	£0.00	£8,400.00
Software Engineer	£9,600.00	£0.00	£9,600.00	£0.00	£9,600.00

H) Are there any over allocated resources?

Yes ☐ No ■

3. Project Monitoring and control

Go to the view *Tracking Gantt* (*Gantt de seguimiento)* and select the table *Costs* (*Costo)* so it appears on the left side of the view.

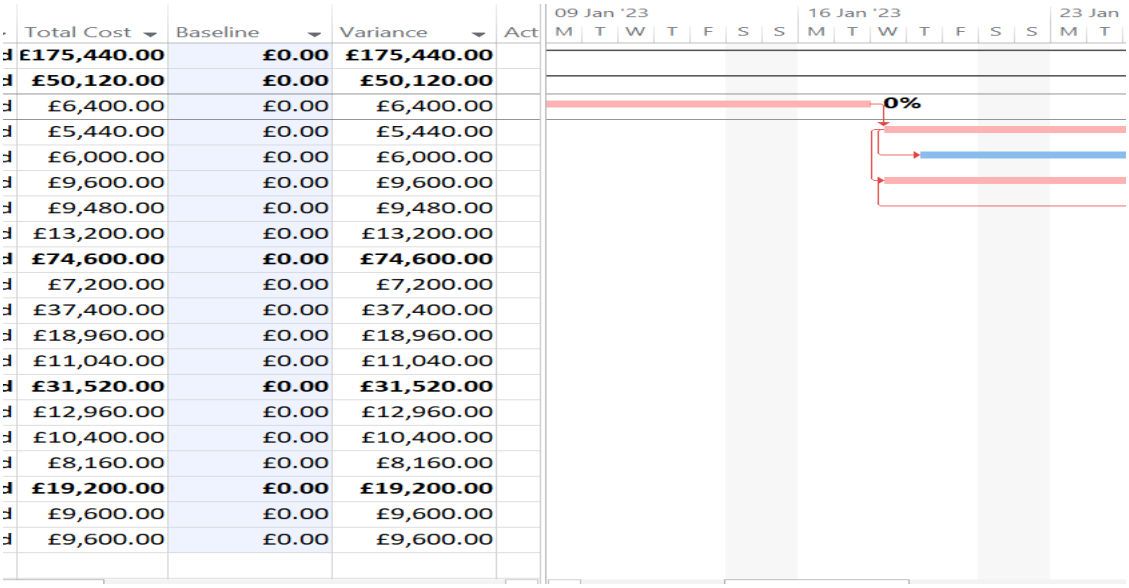
A) Establish the baseline

First, go to the tab *Project (Proyecto)* and choose the option *Set baseline (Establecer línea de base)*. Select the option *Set baseline (Establecer línea de base)*, select *Baseline (Línea de base)* and click on *OK*

1. **What changes can be seen in the current view (Gantt chart and Costs)? Briefly explain:**

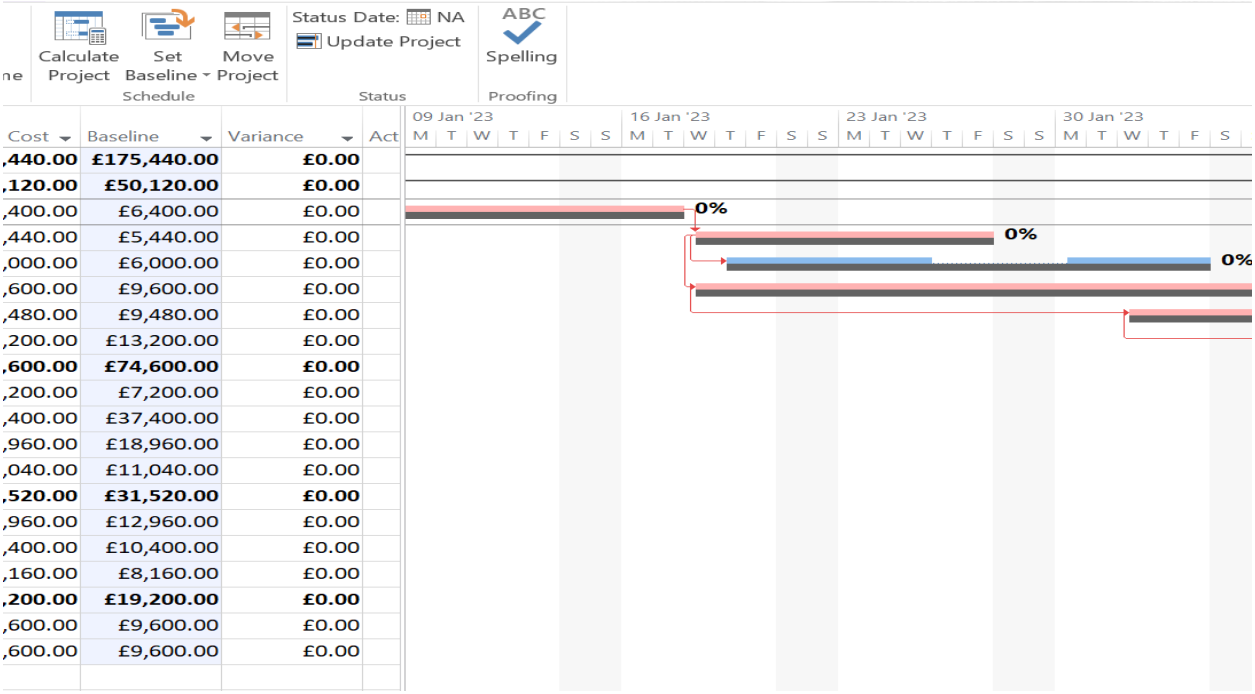
In Gantt Chart, there is another black line added below the task line for indicating Baseline, and a new column is added to show the baseline cos to help tracking the modifications doing upfront. The same for project duration.

Before Setting Baseline:



Total Cost	Baseline	Variance	Act
£175,440.00	**£0.00**	**£175,440.00**	
£50,120.00	**£0.00**	**£50,120.00**	
£6,400.00	£0.00	£6,400.00	
£5,440.00	£0.00	£5,440.00	
£6,000.00	£0.00	£6,000.00	
£9,600.00	£0.00	£9,600.00	
£9,480.00	£0.00	£9,480.00	
£13,200.00	£0.00	£13,200.00	
£74,600.00	**£0.00**	**£74,600.00**	
£7,200.00	£0.00	£7,200.00	
£37,400.00	£0.00	£37,400.00	
£18,960.00	£0.00	£18,960.00	
£11,040.00	£0.00	£11,040.00	
£31,520.00	**£0.00**	**£31,520.00**	
£12,960.00	£0.00	£12,960.00	
£10,400.00	£0.00	£10,400.00	
£8,160.00	£0.00	£8,160.00	
£19,200.00	**£0.00**	**£19,200.00**	
£9,600.00	£0.00	£9,600.00	
£9,600.00	£0.00	£9,600.00	

After Setting Baseline:



Cost	Baseline	Variance	Act
,440.00	**£175,440.00**	**£0.00**	
,120.00	**£50,120.00**	**£0.00**	
,400.00	£6,400.00	£0.00	
,440.00	£5,440.00	£0.00	
,000.00	£6,000.00	£0.00	
,600.00	£9,600.00	£0.00	
,480.00	£9,480.00	£0.00	
,200.00	£13,200.00	£0.00	
,600.00	**£74,600.00**	**£0.00**	
,200.00	£7,200.00	£0.00	
,400.00	£37,400.00	£0.00	
,960.00	£18,960.00	£0.00	
,040.00	£11,040.00	£0.00	
,520.00	**£31,520.00**	**£0.00**	
,960.00	£12,960.00	£0.00	
,400.00	£10,400.00	£0.00	
,160.00	£8,160.00	£0.00	
,200.00	**£19,200.00**	**£0.00**	
,600.00	£9,600.00	£0.00	
,600.00	£9,600.00	£0.00	

B) Control of actual and remaining values for tasks and allocations

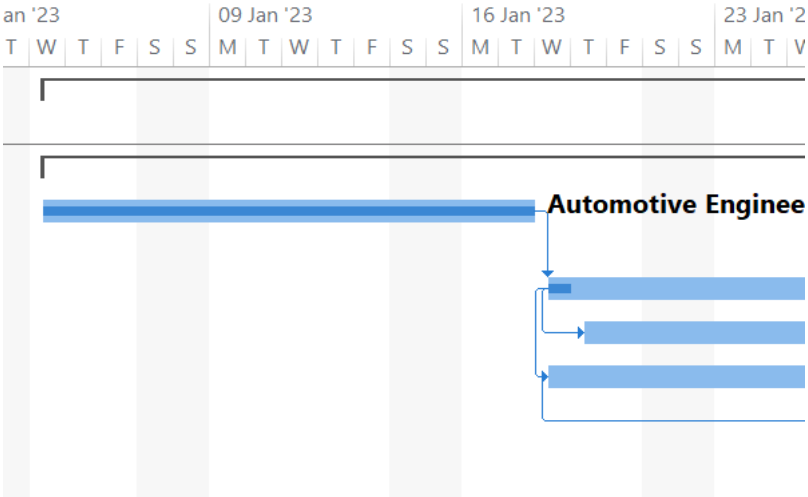
In this part we introduce the real values of the work for the tasks and for the resource allocation of each individual task and we examine its effects.

On Wednesday, 18th of January 2023, according to the planning, all tasks of the first phase are supposed to have ended. However, what really happened is the following:

- The task 1-1(setting Product Vision) is actually finished as planned.
- For the task 1-2(Research Market) the work that was done until this point is the following:
  - Project Manager (PO): 3h out of 32h planned
  - Financial Manager (FM): 6 h out of 64h planned

2			**Concept and Design**	**908 hrs**	**42 d**	**1/23**	**3**	**14%**	**129 hrs**
3	✓		Setting Product Visior	120 hrs	10 d	1/23	3	100%	120 hrs
			Project Manager	*0 hrs*		*1/23*	*3*	*100%*	*0 hrs*
			Financial Manager	*0 hrs*		*1/23*	*3*	*100%*	*0 hrs*
			Automotive Engine	*40 hrs*		*1/23*	*3*	*100%*	*40 hrs*
			Quality Engineer	*80 hrs*		*1/23*	*3*	*100%*	*80 hrs*
4			Research Market	96 hrs	8 da	1/23	3	9%	9 hrs
			Project Manager	*32 hrs*		*1/23*	*3*	*9%*	*3 hrs*
			Financial Manager	*64 hrs*		*1/23*	*3*	*9%*	*6 hrs*

The Task Progress also can be seen in the Gantt Chart as a darker-shaded blue line:



In order to introduce this information we do the following:

First, we go to the view *Task Usage/ Uso de Tareas* and choose the view of the table *Work/ Trabajo*. Now we can see the planned work, the real work, the remaining work and the percentage of the work that has been completed for every task and assigned resource. Note, that the total of work hours of a task corresponds to the sum of the hours of work of the assigned resources.

Now we modify the details shown in the grid on the right half of the view. For this we go to the menu *Format (Formato)* and select *Details / Actual work (Detalles y trabajo real).* Now the project shows the rows *Work and real work (Trabajo y Trabajo real)* for every task and allocation on the right side of the screen.

2. **In order to end task 1-1(setting Product Vision) following its planning, assign 100% in the column *%work compl (% trabajo compl.)* on the left part of the screen. Explain the resulting effect on the current view (for the left and right half of the screen):**

Before assigning 100%:

No Actual work has been done.

Start	Finish	% Work Comple	Details	T	W	T	F	S	S
Fri 23/12/22	**Fri 16/06/23**		Work		16h	16h	16h		
			Act. Wo						
Fri 23/12/22	**Thu 02/03/23**		Work		16h	16h	16h		
			Act. Wo						
Fri 23/12/22	Tue 17/01/23		Work		16h	16h	16h		
			Act. Wo						
Fri 23/12/22	*Fri 23/12/22*		Work						
			Act. Wo						
Fri 23/12/22	*Fri 23/12/22*		Work						
			Act. Wo						
Wed 04/01/23	*Tue 10/01/23*		Work		8h	8h	8h		
			Act. Wo						
Wed 04/01/23	*Tue 17/01/23*		Work		8h	8h	8h		
			Act. Wo						
Wed 18/01/23	*Fri 27/01/23*		Work						
			Act. Wo						
Wed 18/01/23	*Fri 27/01/23*		Work						
			Act. Wo						
Wed 18/01/23	*Fri 27/01/23*		Work						
			Act. Wo						
Thu 19/01/23	Fri 03/02/23		Work						
			Act. Wo						
Mon 30/01/23	*Fri 03/02/23*		Work						

After assigning 100%:

Actual work has been done as planned Work

Task Name	Work	Duration	Start	Finish	% Work Complet	Details	W	T	F	S	S	09 Jan '23 M	T	W
Sustainability Project-Su	**3,032 hrs**	**118 days**	**04/01/23**	**5/06/23**	**4%**	Work	16h	16h	16h			16h	16h	8h
						Act. Wo	16h	16h	16h			16h	16h	8h
Concept and Design	**908 hrs**	**42 days**	**04/01/23**	**2/03/23**	**13%**	Work	16h	16h	16h			16h	16h	8h
						Act. Wo	16h	16h	16h			16h	16h	8h
Setting Product Visior	120 hrs	10 days	04/01/23	7/01/23	100%	Work	16h	16h	16h			16h	16h	8h
						Act. Wo	16h	16h	16h			16h	16h	8h
Project Manager	*0 hrs*		*04/01/23*	*4/01/23*	*0%*	Work	0h							
						Act. Wo								
Financial Manager	*0 hrs*		*04/01/23*	*4/01/23*	*0%*	Work	0h							
						Act. Wo								
Automotive Engine	*40 hrs*		*04/01/23*	*0/01/23*	*100%*	Work	8h	8h	8h			8h	8h	
						Act. Wo	8h	8h	8h			8h	8h	
Quality Engineer	*80 hrs*		*04/01/23*	*7/01/23*	*100%*	Work	8h	8h	8h			8h	8h	8h
						Act. Wo	8h	8h	8h			8h	8h	8h
Research Market	96 hrs	8 days	18/01/23	7/01/23	0%	Work								

3. For task1-3(Define Customers), we enter 60 hours in the column *Actual* (*Real).* Explain the resulting effect on the current view (for the left and right half of the screen):

Before Entering Hours:

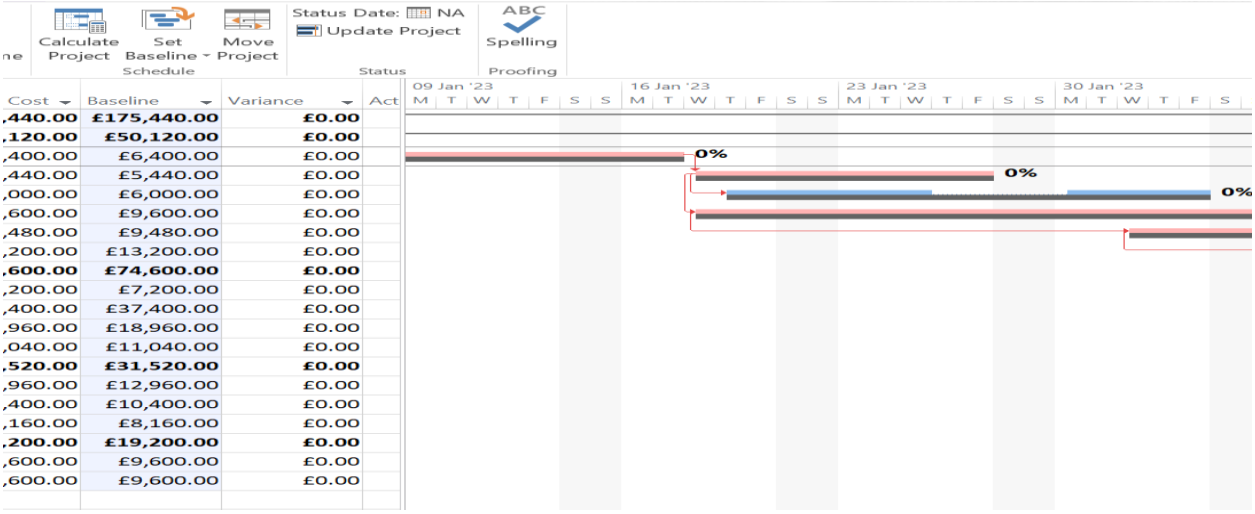
						Act. Wo		6h							
	Define Customers	100 hrs	10 d	1/23 3	0%		Work			4h	4h			4h	4h	4h
							Act. Wo									
	Project Manager	*40 hrs*		*1/23 3*	*0%*		Work			0h	0h			0h	0h	0h
							Act. Wo									
	Financial Manager	*40 hrs*		*1/23 3*	*0%*		Work			0h	0h			0h	0h	0h
							Act. Wo									
	Automotive Engine	*20 hrs*		*1/23 3*	*0%*		Work			4h	4h			4h	4h	4h
							Act. Wo									
	3D Designing	180 hrs	15 d	1/23 3	5%		Work		12h	12h	12h			12h	12h	12h

After Entering Actual Hours in the Task-Define Customers:
The Actual hours for all resources allocated for this task has been calculated

5	Define Customers	100 hrs	10 d	1/23 3	60%	60 hrs	Work			4h	4h			4h	
							Act. Wo			4h	4h			4h	
	Project Manager	*40 hrs*		*1/23 3*	*50%*	*20 hrs*	Work			0h	0h			0h	
							Act. Wo			0h	0h			0h	
	Financial Manager	*40 hrs*		*1/23 3*	*50%*	*20 hrs*	Work			0h	0h			0h	
							Act. Wo			0h	0h			0h	
	Automotive Engine	*20 hrs*		*1/23 3*	*100%*	*20 hrs*	Work			4h	4h			4h	
							Act. Wo			4h	4h			4h	
6	3D Designing	180 hrs	15 d	1/23 3	5%	9 hrs	Work		12h	12h	12h			12h	

4. **Change to the view *Gantt de seguimiento (Tracking Gantt)*. Explain the observed changes on this view:**

In Gantt Chart,it's showing the critical path as red lines and baselines as black lines

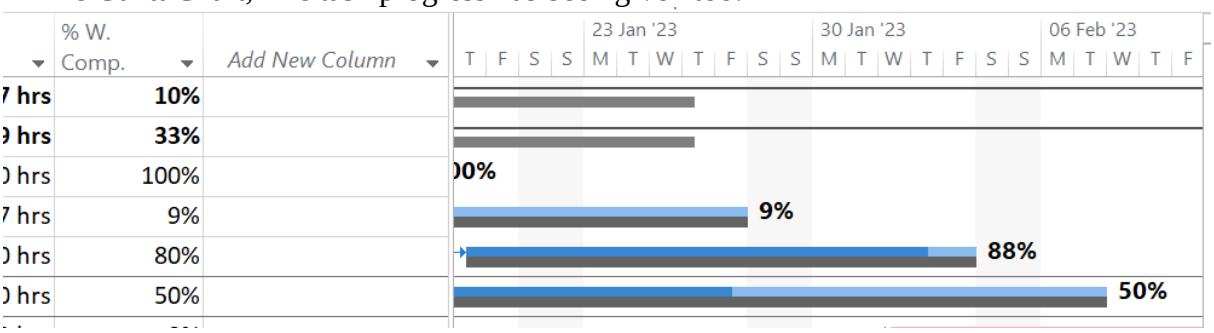


5. **We go back to the previous view *(Task usage/ Uso de tareas)*. For task 1-4(3D Designing), we enter 60 hours of work of the Automobile Designer(AD) in the column *Actual (Real)* and 30 hours for the Automotive Engineer (AE) on the actual view *(Task usage/ Uso de tareas)*, and for the view *Gantt de seguimiento (Tracking Gantt)*:**

The percentage of Work Complete(50%) has been calculated automatically in Task Usage Chart.

	Task Mode	Task Name	Work	D	% Work Complete	Actual Work	Add New Column
6		3D Designing	180 hrs	15 d	50%	90 hrs	
		Automobile Design	*120 hrs*		*50%*	*60 hrs*	
		Automotive Engine	*60 hrs*		*50%*	*30 hrs*	

In The Gantt Chart, The task progress has been given too:



Occasionally, it is possible that the distribution of work that shows us Microsoft Project in a case like the previous one, doesn't conform to the reality. The project manager is interested in performing the monitoring with a greater level of detail in terms of temporal distribution of labor resources allocated to the various tasks.

C) Tracking of actual work time for tasks and allocations

Tracking the work for tasks and allocations involves entering data in the temporary grid on the right half of the view *Task usage (Uso de tareas),* just as it is configurated at this moment. Proceeding in this way, we introduce the following information concerning tasks of Phase 2 of the project. For **task2-1(Raw Materials Selection)** we enter the following information, relating to the task of phase 2 of the project:

- Monday, 6th of March 2023:
  - 7 hours of real work total (16 hours were planned).

- Thursday, 9th of March 2023:
  - 4 hours for the Automotive Engineer (AE) (8 hours were planned).
  - 4 hours for the Machine technician (MT) (8 hours as it was planned).

6. **Explain the changes on the current view *Task usage (Uso de tareas)* and on the view *Gantt de seguimiento (Tracking Gantt)*.**

Before Setting Hours:

	Task Mode	Task Name	Work	D	St	% Work Complete	Actual Work	Add New Column	Details	06 Mar '23 M	T	W	T	F	S
9		**Component Integratio**	**1,284 hrs**	**40 d**	**3/23**	**0%**	**0 hrs**		Work	48h	48h	48h	48h	48h	
									Act. Wo						
10		Raw Materials selecti	160 hrs	10 d	3/23	0%	0 hrs		Work	16h	16h	16h	16h	16h	
									Act. Wo						
		Automotive Engine	*80 hrs*		*3/23*	*0%*	*0 hrs*		Work	8h	8h	8h	8h	8h	
									Act. Wo						
		Mechine Technicia	*80 hrs*		*3/23*	*0%*	*0 hrs*		Work	8h	8h	8h	8h	8h	
									Act. Wo						
11		Hardware Integratior	644 hrs	25 d	3/23	0%	0 hrs		Work	32h	32h	32h	32h	32h	
									Act. Wo						
		Project Manager	*200 hrs*		*3/23*	*0%*	*0 hrs*		Work	8h	8h	8h	8h	8h	
									Act. Wo						
		Automotive Engine	*120 hrs*		*3/23*	*0%*	*0 hrs*		Work	8h	8h	8h	8h	8h	
									Act. Wo						
		Mechine Technicia	*120 hrs*		*3/23*	*0%*	*0 hrs*		Work	0h	0h	0h	0h	0h	
									Act. Wo						
		Quality Engineer	*84 hrs*		*3/23*	*0%*	*0 hrs*		Work	8h	8h	8h	8h	8h	
									Act. Wo						
		Hardware Enginee	*120 hrs*		*3/23*	*0%*	*0 hrs*		Work	8h	8h	8h	8h	8h	

After Setting Hours:

The duration has been changed for Task-2 from 40 days to 43 days and also the subtask's hours has been changed and can be tracked by cells with blue colors

9	**Component Integratio**	**1,299 hrs**	**43 days**	**Mon 06/03/23**	**Wed 03/05/23**	**1%**	**15 hrs**	Work	39h	48h	48h	40h	48h
								Act. Wo	7h	0h	0h	8h	
10	Raw Materials selecti	175 hrs	12 days	Mon 06/03/23	Thu 23/03/23	9%	15 hrs	Work	7h	0h	0h	8h	16h
								Act. Wo	7h	0h	0h	8h	
	Automotive Engine	*87.5 hrs*		*Mon 06/03/23*	*Thu 23/03/23*	*9%*	*7.5 hrs*	Work	3.5h	0h	0h	4h	8h
								Act. Wo	3.5h	0h	0h	4h	
	Mechine Technicia	*87.5 hrs*		*Mon 06/03/23*	*Thu 23/03/23*	*9%*	*7.5 hrs*	Work	3.5h	0h	0h	4h	8h
								Act. Wo	3.5h	0h	0h	4h	

In Gantt chart, task progress has been shown for the Task 2-1(Raw Material selection) also Baseline and new Taskline got separate

For task2-2 (Hardware Integration), we introduce the following data for progress for Monday, 27th of March,2023:

- 4 hours more of real work for the task (16h as was planned).

For Thursday, 30th of March,2023:

- 34 hours more of real work for the task (16h as was planned).

Before changing hours:

Task Name	Work	Duration	Start	Finish	% Work Complete	Details	27 Mar '23 M	T	W	T	F
Hardware Integratior	644 hrs	27 days	Mon 06/03/23	Tue 11/04/23	0%	Work	16h	16h	16h	16h	16h
						Act. Wo					
Project Manager	*200 hrs*		*Mon 06/03/23*	*Fri 07/04/23*	*0%*	Work	8h	8h	8h	8h	8h
						Act. Wo					
Automotive Engine	*120 hrs*		*Mon 06/03/23*	*Fri 24/03/23*	*0%*	Work					
						Act. Wo					
Mechine Technicia	*120 hrs*		*Tue 07/03/23*	*Tue 11/04/23*	*0%*	Work	8h	8h	8h	8h	8h
						Act. Wo					
Quality Engineer	*84 hrs*		*Mon 06/03/23*	*Mon 20/03/23*	*0%*	Work					
						Act. Wo					
Hardware Enginee	*120 hrs*		*Mon 06/03/23*	*Fri 24/03/23*	*0%*	Work					
						Act. Wo					

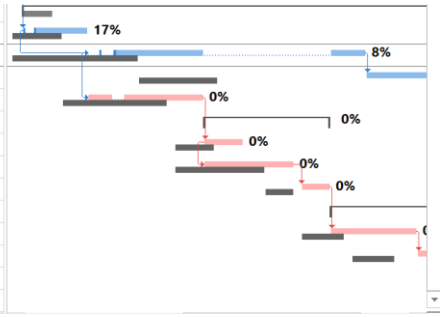
After Changing Hours: the changes can be tracked by blue colored cells

Task Name	Work	Duration	Start	Finish	% Work Complete	Details	27 Mar '23 M	T	W	T	F
Hardware Integratior	650.17 hrs	26 days	Fri 24/03/23	Thu 08/06/23	11%	Work	20h	0h	0h	0h	50h
						Act. Wo	20h	0h	0h	0h	50h
Project Manager	*206.17 hrs*		*Mon 27/03/23*	*Thu 08/06/23*	*7%*	Work	4.17h	0h	0h	0h	10h
						Act. Wo	4.17h	0h	0h	0h	10h
Automotive Engine	*120 hrs*		*Mon 27/03/23*	*Thu 20/04/23*	*12%*	Work	4.17h	0h	0h	0h	10h
						Act. Wo	4.17h	0h	0h	0h	10h
Mechine Technicia	*120 hrs*		*Mon 27/03/23*	*Thu 20/04/23*	*12%*	Work	4.17h	0h	0h	0h	10h
						Act. Wo	4.17h	0h	0h	0h	10h
Quality Engineer	*84 hrs*		*Mon 27/03/23*	*Thu 13/04/23*	*17%*	Work	4.17h	0h	0h	0h	10h
						Act. Wo	4.17h	0h	0h	0h	10h
Hardware Enginee	*120 hrs*		*Mon 27/03/23*	*Thu 20/04/23*	*11%*	Work	3.33h	0h	0h	0h	10h
						Act. Wo	3.33h	0h	0h	0h	10h

The required time for the Task 2-2(Hardware Integration) has been decreased by 1 day and also no work should be done on 28th March(Tuesday) and 29th March(Wednesday).

In the Gantt chart, the baseline is showing separately from the current task line

9	**Component Integratio**	**86 days**	**Mon 06/03/2**	**Mon 03/07/2**		
10	Raw Materials selecti	12 days	Mon 06/03/2	Thu 23/03/23	8	Automotive Engine
11	Hardware Integratior	26 days	Fri 24/03/23	Thu 08/06/23	10SS	Hardware Enginee
12	Software Integration	17 days	Fri 09/06/23	Mon 03/07/2	11	Software Engineer
13	System Integration	21 days	Fri 24/03/23	Mon 24/04/2	11SS	Project Manager,A
14	**Cost Estimation**	**25 days**	**Tue 25/04/23**	**Mon 29/05/2**		
15	Component Cost Esti	9 days	Tue 25/04/23	Fri 05/05/23	13	Financial Manager
16	Assembling Cost	19 days	Tue 25/04/23	Fri 19/05/23	15SS	Automotive Engine
17	Final Cost	6 days	Mon 22/05/2	Mon 29/05/2	16	Project Manager,Q
18	**Project Scheduling**	**28 days**	**Tue 30/05/23**	**Thu 06/07/23**		
19	Activity Schedule	18 days	Tue 30/05/23	Thu 22/06/23	17	Project Manager,Q
20	Ghant Chart	10 days	Fri 23/06/23	Thu 06/07/23	19	Project Manager,Fi



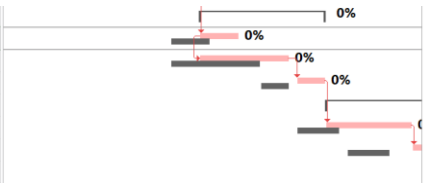
D) Planning of incomplete work

Now we assume that **at 25/04/2023** there was a failure at some facility that affects the work of **task 3-1(Component Cost Estimation).** Thus, we are forced to temporarily suspend the work on this task and we believe that this work can be **started again after 02/05/2023**. Now, we reflect on this issue in the Planning:

First, make sure that Task 3-1 is selected. Then we go to the view *Gantt de seguimiento (Tracking Gantt)* and select Task 3-1 in the table. Now, in the tab *Project (Proyecto)* we select *Update Project (Actualizar proyecto)*. In the window that opens we select the option *Reschedule uncompleted work to start after (Reprogramar trabajo restante para que empiece después de),* and as date we select **02/05/2023**. Using the corresponding button for this operation we choose that this operation is only realized for S*elected tasks (Tareas seleccionadas).*

Before Rescheduling:

14		Cost Estimation	25 days	Tue 25/04/23	Mon 29/05/23	
15		Component Cost Esti	9 days	Tue 25/04/23	Fri 05/05/23	13	Financial Manager
16		Assembling Cost	19 days	Tue 25/04/23	Fri 19/05/23	15SS	Automotive Engine
17		Final Cost	6 days	Mon 22/05/23	Mon 29/05/23	16	Project Manager,Q
18		Project Scheduling	28 days	Tue 30/05/23	Thu 06/07/23	
19		Activity Schedule	18 days	Tue 30/05/23	Thu 22/06/23	17	Project Manager,Q
20		Ghant Chart	10 days	Fri 23/06/23	Thu 06/07/23	19	Project Manager,Fi



After Rescheduling:

14		Cost Estimation	25 days	Fri 23/06/23	Fri 28/07/23	
15		Component Cost Esti	9 days	Fri 23/06/23	Thu 06/07/23	13	Financial Manager
16		Assembling Cost	19 days	Fri 23/06/23	Thu 20/07/23	15SS	Automotive Engine
17		Final Cost	6 days	Thu 20/07/23	Fri 28/07/23	16	Project Manager,Q
18		Project Scheduling	20 days	Fri 28/07/23	Fri 25/08/23	
19		Activity Schedule	10 days	Fri 28/07/23	Fri 11/08/23	17	Project Manager,Q
20		Ghant Chart	10 days	Fri 11/08/23	Fri 25/08/23	19	Project Manager,Fi

Logically, this operation has also caused the delay of the task, following after 3-1 (task 3-1). However, the effect on the Gantt tracking can cause some confusion. To really see the effect on the planned work, we must go to the view *Task Usage (Uso de tareas),* and check that what it has really occurred what was expected; i.e. the planned work for the task 3-1 is suspended on **25/04/2023** and restarted again on **23/06/2023**, extending the task for the necessary days in order to maintain unchanged the initial plan of the total work.

7. **Once done this, which is now the duration, cost and project work (*trabajo del Proyecto*)?**
   For this, go to the menu *Project (Proyecto)* and choose the option *Information of the project > Statistics (Información del proyecto > Estadísticas)*

New Duration is : 172 days
New Working Hour: 3053.17 Hour
New Cost: 176,546.67 Euro

Project Statistics for 'Lab Session 3_FINAL ACTIVITY(own)-level_allocation'

	Start	Finish
Current	Wed 04/01/23	Thu 31/08/23
Baseline	Wed 04/01/23	Fri 16/06/23
Actual	Wed 04/01/23	NA
Variance	0d	54d

	Duration	Work	Cost
Current	172d	3,053.17h	£176,546.67
Baseline	118d	3,032h	£175,440.00
Actual	17.38d	304h	£16,293.33
Remaining	154.62d	2,749.17h	£160,253.33

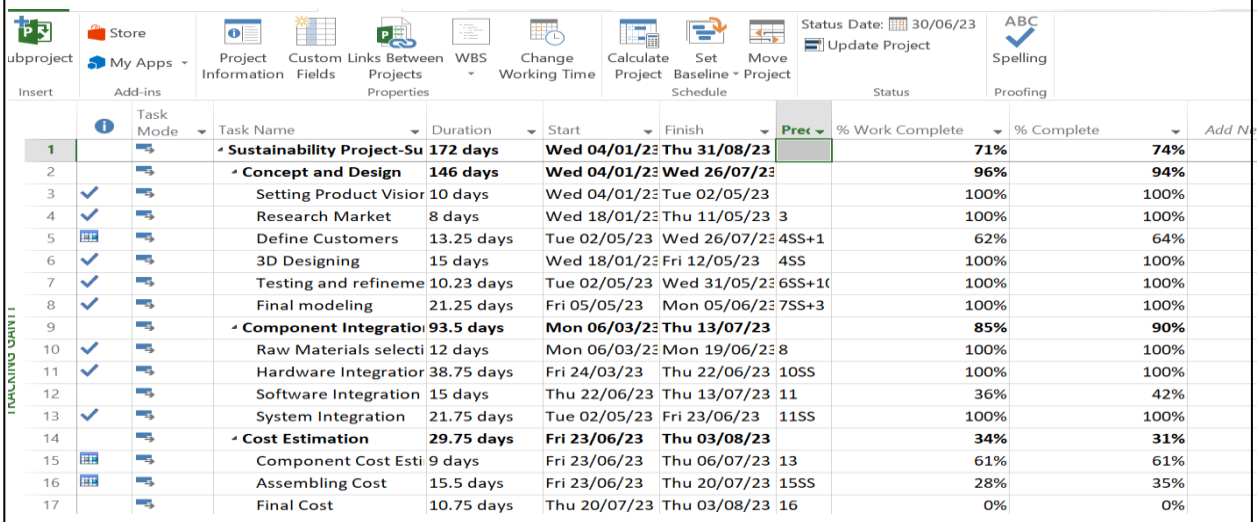
Percent complete:
Duration: 10% Work: 10%

Close

8. **What are the differences in cost, duration and work comparing to the planned?**

Cost Difference is 1106.37 Euro
Duration Difference is 54 Days
Working Hour Difference is 21.17 Hours

9. **What is the percentage of the duration and of the work completed for the project until the tracking date (30/06/2023)?**



		Task Mode	Task Name	Duration	Start	Finish	Prec	% Work Complete	% Complete	Add Ne
1			**Sustainability Project-Su**	**172 days**	**Wed 04/01/23**	**Thu 31/08/23**		**71%**	**74%**	
2			**Concept and Design**	**146 days**	**Wed 04/01/23**	**Wed 26/07/23**		**96%**	**94%**	
3	✓		Setting Product Visior	10 days	Wed 04/01/23	Tue 02/05/23		100%	100%	
4	✓		Research Market	8 days	Wed 18/01/23	Thu 11/05/23	3	100%	100%	
5			Define Customers	13.25 days	Tue 02/05/23	Wed 26/07/23	4SS+1	62%	64%	
6	✓		3D Designing	15 days	Wed 18/01/23	Fri 12/05/23	4SS	100%	100%	
7	✓		Testing and refineme	10.23 days	Tue 02/05/23	Wed 31/05/23	6SS+10	100%	100%	
8	✓		Final modeling	21.25 days	Fri 05/05/23	Mon 05/06/23	7SS+3	100%	100%	
9			**Component Integratio**	**93.5 days**	**Mon 06/03/23**	**Thu 13/07/23**		**85%**	**90%**	
10	✓		Raw Materials selecti	12 days	Mon 06/03/23	Mon 19/06/23	8	100%	100%	
11	✓		Hardware Integratior	38.75 days	Fri 24/03/23	Thu 22/06/23	10SS	100%	100%	
12			Software Integration	15 days	Thu 22/06/23	Thu 13/07/23	11	36%	42%	
13	✓		System Integration	21.75 days	Tue 02/05/23	Fri 23/06/23	11SS	100%	100%	
14			**Cost Estimation**	**29.75 days**	**Fri 23/06/23**	**Thu 03/08/23**		**34%**	**31%**	
15			Component Cost Esti	9 days	Fri 23/06/23	Thu 06/07/23	13	61%	61%	
16			Assembling Cost	15.5 days	Fri 23/06/23	Thu 20/07/23	15SS	28%	35%	
17			Final Cost	10.75 days	Thu 20/07/23	Thu 03/08/23	16	0%	0%	

Percentage of work complete : 71%
Percentage of Duration complete : 74%

10. **How do you understand what is the baseline (*Linea de base*)?**

From the Gantt Chart, the Black line shows the baseline, also there is a column which indicates baseline. It helps to track all changes done since the beginning of the project

11. What has caused the difference between the Baseline cost (*Costo previsto*) and the actual cost (*Costo actual*) of the project? What does this difference mean for the project?

Rescheduling Task has Caused new Costs for the project,we can track this difference from the actual cost and baseline cost

ed Cost crual	Total Cost	Baseline	Variar
Prorated	**£176,546.67**	**£175,440.00**	**£1**
Prorated	**£50,120.00**	**£50,120.00**	
Prorated	£6,400.00	£6,400.00	
Prorated	£5,440.00	£5,440.00	
Prorated	£6,000.00	£6,000.00	
Prorated	£9,600.00	£9,600.00	
Prorated	£9,480.00	£9,480.00	
Prorated	£13,200.00	£13,200.00	
Prorated	**£75,706.67**	**£74,600.00**	**£1**
Prorated	£7,875.00	£7,200.00	
Prorated	£37,831.67	£37,400.00	
Prorated	£18,960.00	£18,960.00	
Prorated	£11,040.00	£11,040.00	
Prorated	**£31,520.00**	**£31,520.00**	
Prorated	£12,960.00	£12,960.00	
Prorated	£10,400.00	£10,400.00	
Prorated	£8,160.00	£8,160.00	
Prorated	**£19,200.00**	**£19,200.00**	
Prorated	£9,600.00	£9,600.00	
Prorated	£9,600.00	£9,600.00	