

Planning

Solution of Exercise 6

In the following: Figure 3.1 and Table 3.1:

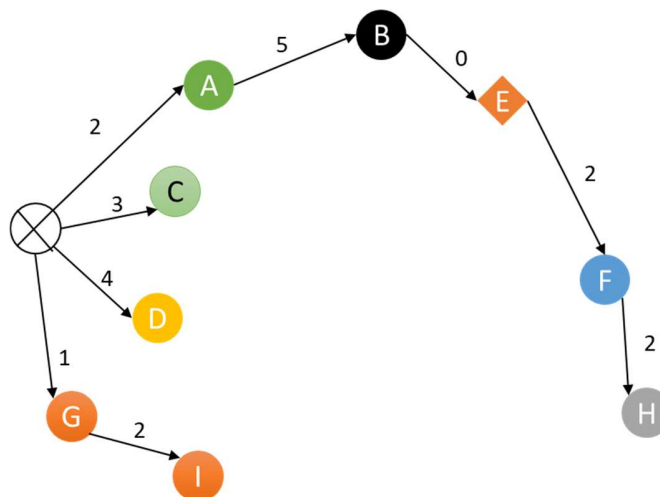
a. Table 3.1 completed

2.

Tasks	Previous task	Start date	End date	Duration	Resources (humans)
A	-	February 2019	April 2019	2 months	12
B	A	April 2019	September 2019	5 months	6
C	-	April 2019	July 2019	3 months	3
D	-	January 2019	May 2019	4 months	8
E	B	October 2019	October 2019	0 months	0
F	E	November 2019	January 2020	2 months	2
G	-	January 2020	February 2020	1 month	5
H	F	March 2020	May 2020	2 months	12
I	G	March 2020	May 2020	2 months	1

3. Table 3.1.

a. The PERT diagram based on Table 3.1

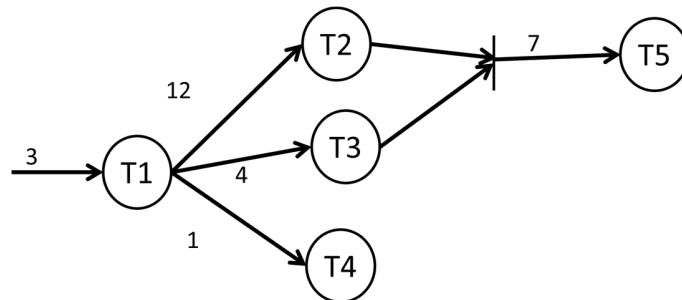


Planning

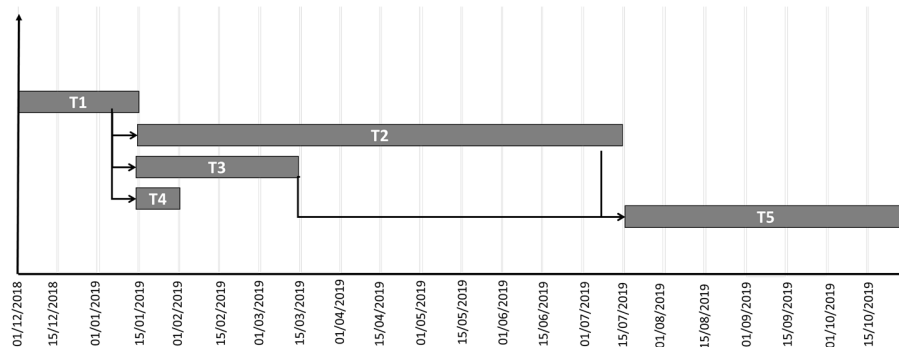
Solution of Exercise 7

In Figure 4.1, you have the CPM chart of a set of tasks {T1, T2, T3, T4, T5}:

- a. The PERT chart based on this CPM chart of Figure 4.1.



- b. Suppose the T1 starts in 01/12/2018, and the unit of duration is based on 1/2 month, propose your Gantt chart based on your PERT/CPM charts.



- c. The total cost of all the tasks: **1100**

Task	Cost
T 1	342
T 2	126
T 3	548
T4	35
T 5	49
Total	1100

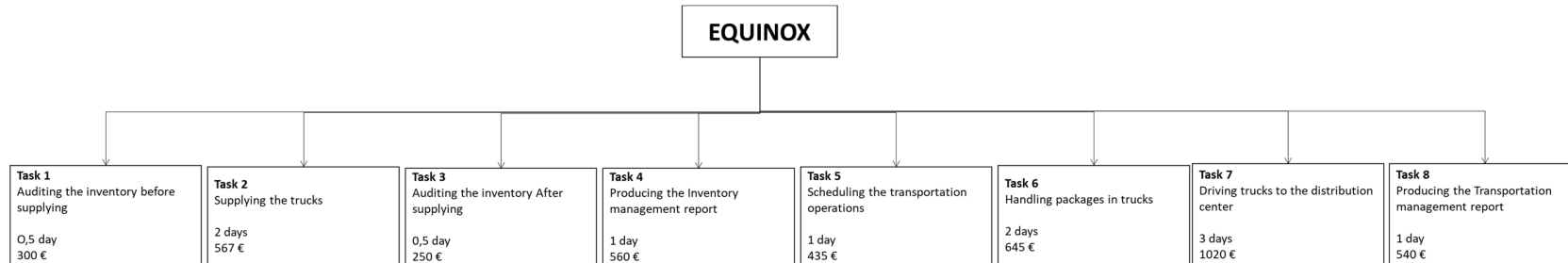
- d. The minimum number of resources required for this project?
 Supposing for each task one resource is required, the minimum number for the project is **3**.

Argumentation: In the Gantt chart we look for maximum number of parallel tasks, it is 3 (Tasks 2, 3, and 4). Therefore, the sum is 3 resources.

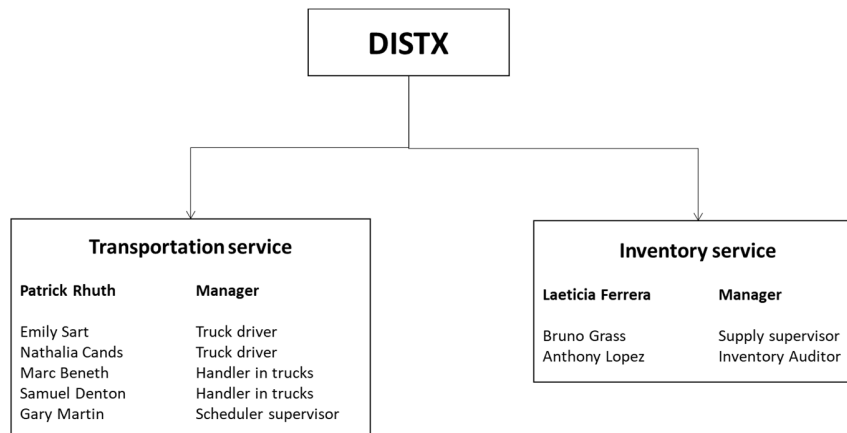
WBS – OBS - WP

Solution Exercise 8

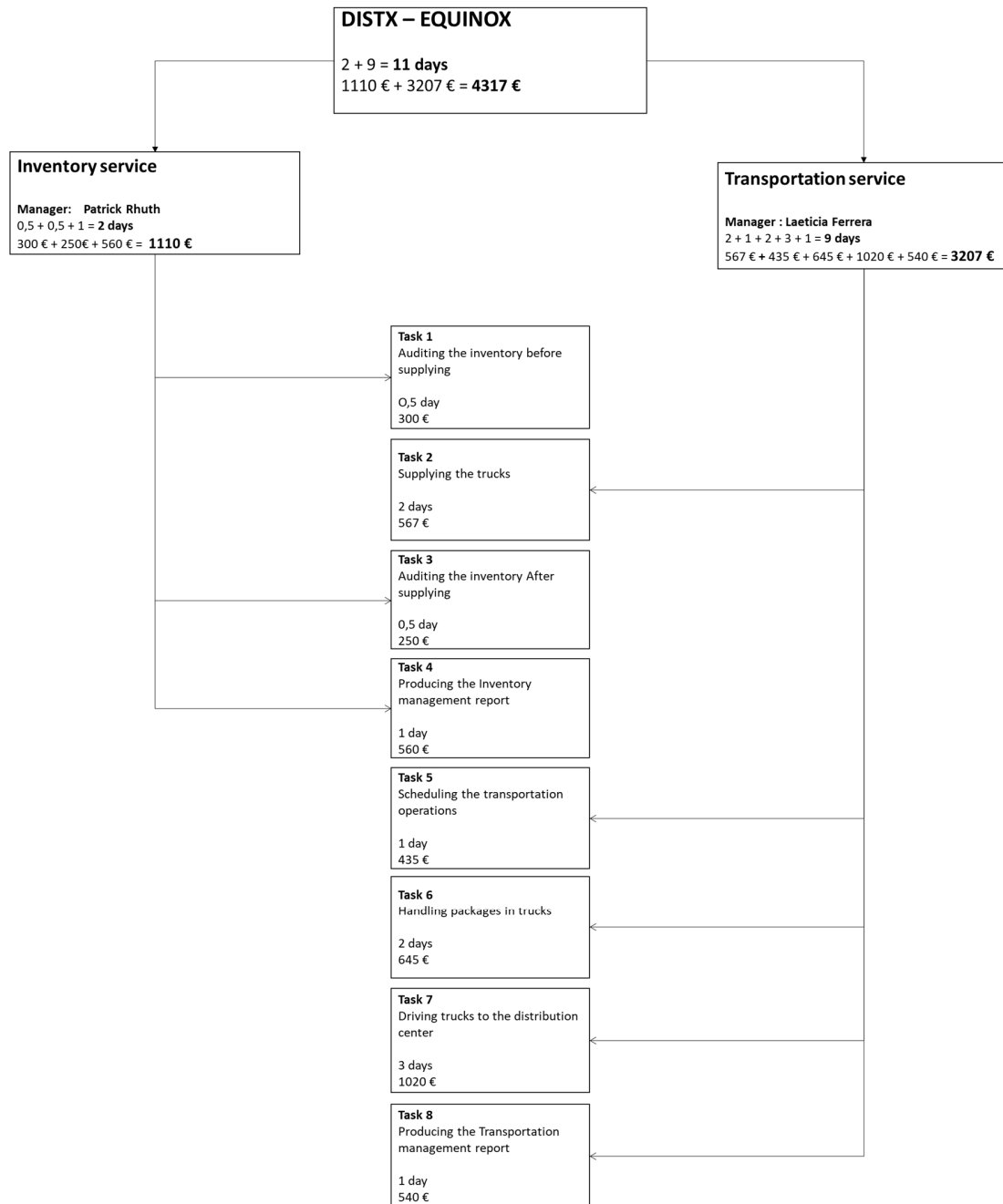
a. The WBS table



b. Propose a OBS table



c. Propose a WP table

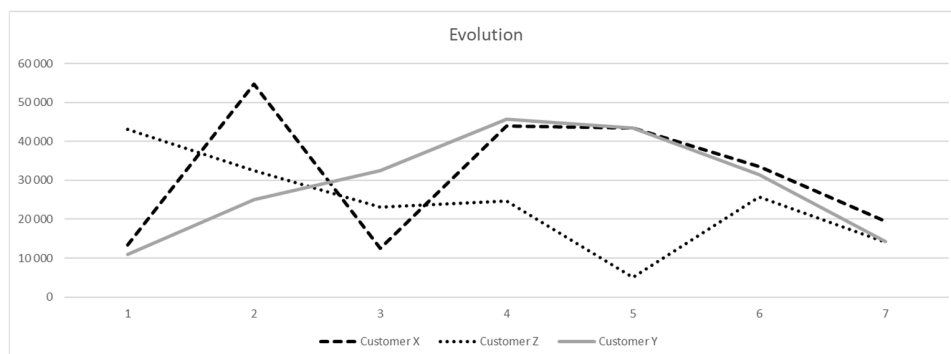


Project Management

Solution of Exercise 9

- a. The role of the warehouse manager (mainly):
- Keeping control of all the operation in the warehouse: distribution, receiving, delivering, coordinating, and planning.
 - Management of material handling requirements in the trucks and inside the warehouse
 - Analysing and estimating risks
 - Controlling the inventory levels,
 - Controlling and keeping under control the conditions of storage of materials,
 - Leading teams
 - Communicating to customers and management,
 - Planning all operations,
 - Management of the staff (recruiting, training, etc.).
 - Risk management and recovery planning
 - Monitoring all operations
 - Meetings and communication support
- b. The optimal site to close (location) with argumentation.

Location	Customer ID	Yearly orders (number of items)					Average*	Standard deviation*
		2013	2014	2015	2016	2017		
Strasbourg	Customer X	13 453	54 678	12 435	43 980	43 500	33 609	19 390
Lille	Customer Y	43 090	32 456	23 090	24 656	5 004	25 659	14 002
Nice	Customer Z	10 980	24 098	32 409	45 769	43 509	31 353	14 356



The lowest average is the site of Lille (Customer Y), but in the trend shows that orders were increasing until the year 2017 (last year) and the variation is quite low (14 002). And as we know a low standard deviation means regularity and less risk for the future.

Therefore: If the company prefers less risk and more regularity, it will keep Lille opened. The additional decision would be requesting an audit analysis to face the reason of the last decrease (maybe a local issue in Lille). But if the company prefers not referring to regularity and risk, it will close Lille.

The highest average is the site of Strasbourg (Customer X), but the trend shows that orders are strongly irregular with big collapse in the year 2015 (12 435) in addition the standard deviation is the highest one, this means high irregularity and high risk in the future.

Therefore, if the company prefers less risk and more regularity, it will close Strasbourg. But if the company prefers not referring to the regularity and risk, it will keep Strasbourg opened.

As we see, the decision depends on the policy and strategy of the company. There is no one accurate decision. Management is not an accurate science!

- c. Suppose the warehouse project manager makes his decision without studying the historical data, what could be the impacts of his decision?

A good manager never make decision without analyzing the situation and communicating with the customers and the direction. Therefore, if the manager does not refer to the historical data and the analysis, catastrophic decision may be taken!