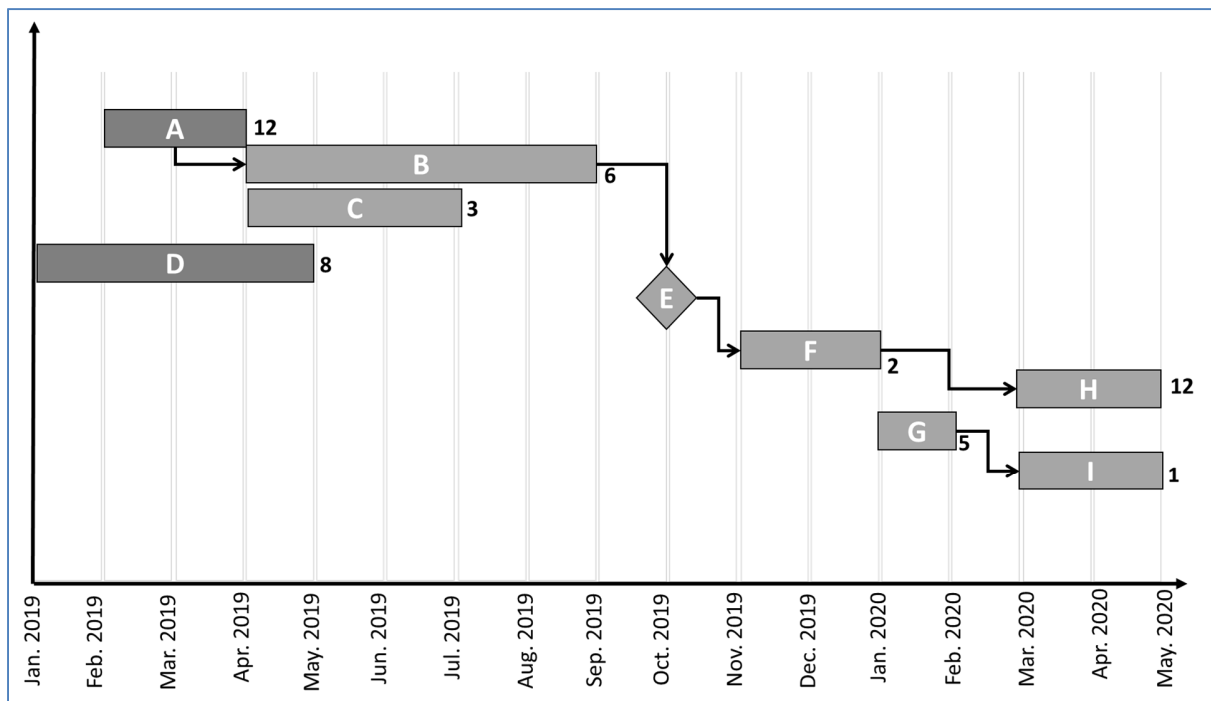


Planning

Exercise 6

In the following: Figure 3.1 and Table 3.1:

- Based on Figure 3.1, try to complete Table 3.1
- Propose a PERT diagram based on Table 3.1 (after completion).



Legend

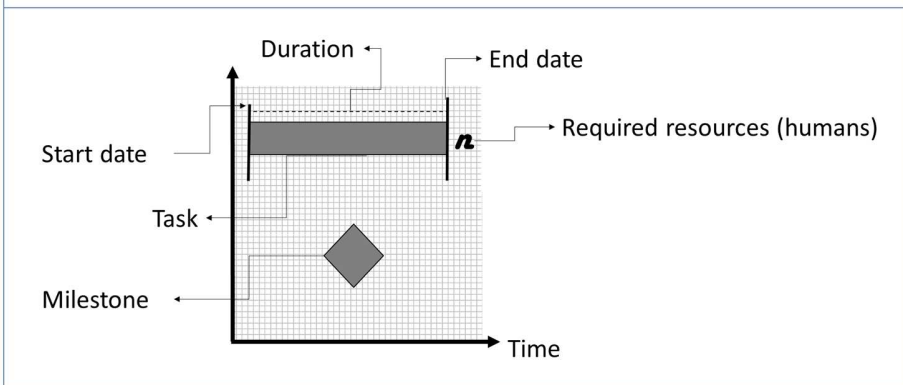


Figure 3.1. Chart with legend

Tasks	Previous task	Start date	End date	Duration	Resources (humans)
A					
B					
C					
D					
E					
F					
G					
H					
I					

Table 3.1.

Planning

Exercise 7

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

- Propose your PERT chart based on this CPM chart of Figure 4.1.
- Suppose the T1 starts in 01/12/2018, and the unit of duration is based on $\frac{1}{2}$ month, propose your Gantt chart based on your PERT/CPM charts.
- What is the total cost of this set of all the tasks?
- What is the minimum number of resources required for this project?

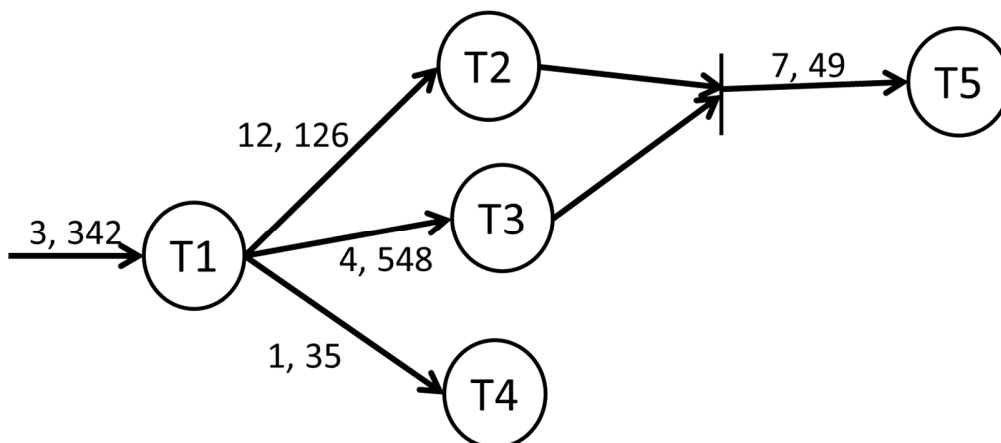


Figure 4.1. CPM chart of tasks {T1, T2, T3, T4, T5}

WBS – OBS - WP

Exercise 8

In a company of logistics DISTX, there are 2 services:

1. Transportation service
2. Inventory service

DISTX owns 2 trucks in his fleet {Truck 1, Truck 2}.

DISTX launched a new project named EQUINOX.

In Table 5.1, we illustrate the organizational structures of services in company DISTX.

Services	Employee	Position
Transportation	Patrick Rhuth	Manager
	Emily Sart	Truck driver
	Nathalia Cands	Truck driver
	Marc Beneth	Handler in trucks
	Samuel Denton	Handler in trucks
	Gary Martin	Scheduler supervisor
Inventory	Laeticia Ferrera	Manager
	Bruno Grass	Supply supervisor
	Anthony Lopez	Inventory Auditor

Table 5.1. DISTX organizational structure

In Table 5.2, we illustrate the EQUINOX structure (tasks):

EQUINOX tasks	Title	Duration (days)	Required Resources	Cost
Task 1	Auditing the inventory before supplying	0,5	1	300 €
Task 2	Supplying the trucks	2	1	567 €
Task 3	Auditing the inventory After supplying	0,5	1	250 €
Task 4	Producing the Inventory management report	1	1	560 €
Task 5	Scheduling the transportation operations	1	1	435 €
Task 6	Handling packages in trucks	2	2	645 €
Task 7	Driving trucks to the distribution center	3	2	1020 €
Task 8	Producing the Transportation management report	1	1	540 €

Table 5.2. EQUINOX structure

Suppose the task 1 starts in 01/12/2018, based on tables Table 5.1 and Table 5.2:

- a. Propose a WBS table
- b. Propose a OBS table
- c. Propose a WP table

Project Management

Exercise 9

DISTW is a French Company specialized in warehousing (located in Strasbourg). 3 sites (warehouses) exist in France.

To reduce the inventory costs, DISTW asked the warehouse project manager to perform the task of closing one warehouse. In Table 2.1 is the summary of the historical data regarding the same product of the 3 main customers in each area of the 3 sites during 5 years.

Suppose, the manager bases his decision on this data only:

- What is the main role(s) of the warehouse project manager?
- Give the optimal site to close (location). Give argumentation for you choice.
- Suppose the warehouse project manager makes his decision without studying the historical data, what could be the impacts of his decision?

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

Table 2.1. Historical Data of the 3 main customers in the 3 sites of DISTW (5 years)

* Reminder:

Average: is a measure of the mean value of the data set.

Standard deviation: is a measure to quantify the amount of dispersion of a set of data from the mean.