Summary of 18SEPT20

Gestion de Project – Overall WoW

- Documents sent through Slack :
  - Chapter 1 and Chapter 2
  - Summary 04SEPT20
  - Annexe : Concentration
  - Exercice Critical path with correction

Chapter 2 : Project - Scope

- The scope states what the **objectives of the project are and what goals must be met to achieve success**

- A good Objective must be **SMART** or **SMARTED** :

  S : Specific
  M : Measurable
  A : Achievable
  R : Realistic
  T : Time Limited
  E : Ethical
  D : Documented

Chapter 2 : Project - Project Life cycle

- Project **Life cycle** → four Phases
  - **Project Initiation :** Defines the phase start and authorises action
  - **Project Planning :** Defines the objectives and the work required
  - **Project Execution :** Measure, monitor and adjust as needed
  - **Project Closure :** Formal acceptance of the project deliverables, end of phase

Chapter 2 : Project - Work Breakdown Structure (WBS)

- WBS allows :
  - to visually define the scope into manageable chunks that a project team can understand → ***to define all the work needed***

  - to identifying the major functional deliverables and subdividing those deliverables into smaller systems and sub-deliverables. → ***to subdivide a project into smaller work items / tasks / activities***

  - ***to group all the activities logically***

  - **to help to identify the activities**

- To develop a WBS :
  - **Top / Down**
  - **Bottow up**
  - **Mind-mapping Technique**

Chapter 3 : Time

- **Planning Definition**

❑ What needs to be done ? → **Tasks and Deliverables**

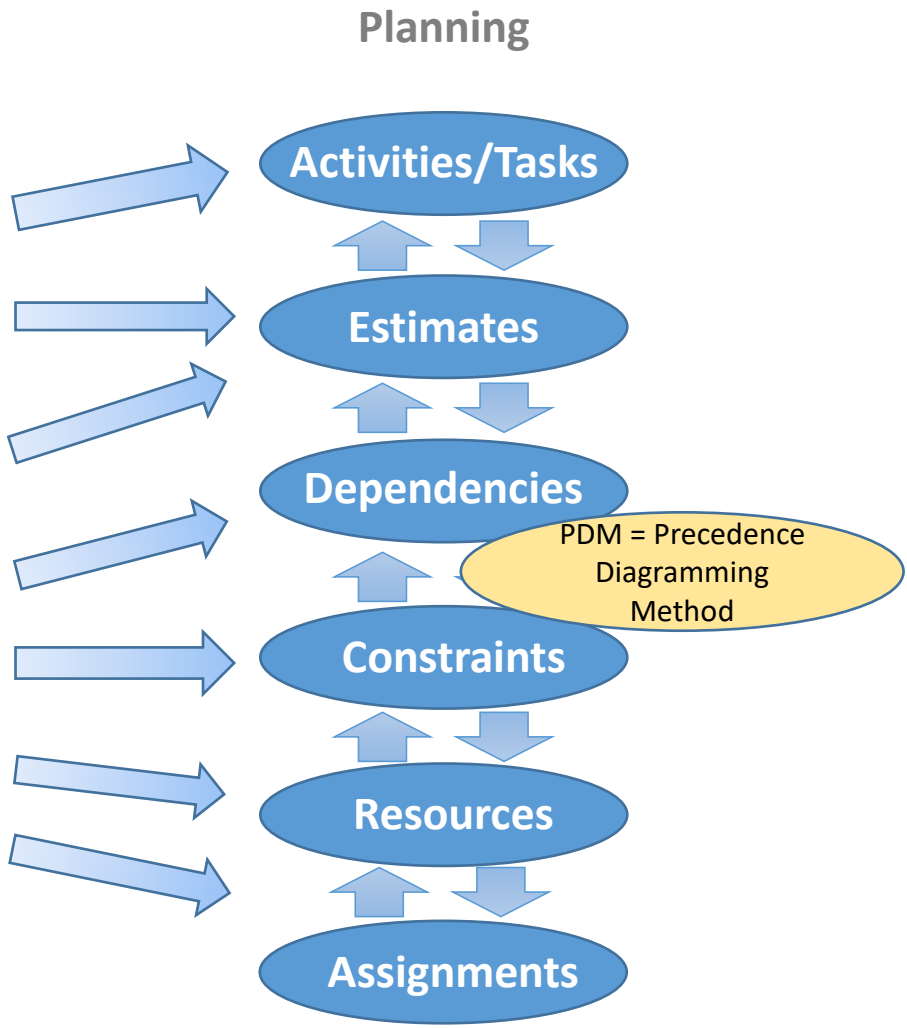
❑ How long will it take ? → **Duration or Work Estimates**

❑ When will it happen ? → **Start and Finish dates**

❑ In which order ? → **Dependencies**

❑ When must it happen? → **Constraints**

❑ Who is going to do it ? → **Resources and assignments**



Chapter 3 : Time

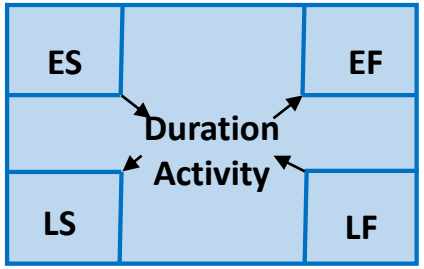
- **Planning Definition :**
  - Identify tasks or activities / key milestones / deliverables
  - Estimate the amount of time needed to execute the activity → difference between **duration** and **effort**
  - Estimation tools & techniques include :
    - **Expert judgement**
    - **Analogous estimation** (eg. past projects) : it uses parameters from previous, similar products
    - **Parametric estimation** (eg. statistical database)
    - "**Three-points estimates" (technique is called PERT (Program Evaluation and Review Technique) :**
      - **Beta distribution** → using a weighted average of 3 estimates (O = Optimistic estimate, M= Most Likely Value, P = Pessimistic estimate)
      T_E = (O+P+4×M)/6
      - **triangular distribution** → average of Optimistic / Pessimistic and Most Like Estimates :
      T_E = [O+P+M] / 3
  - Activity Sequency & Constraints
    - Identifying in what order the activities must be executed
    - Dependency : Mandatory or "hard" dependencies (constraint) or Discretionary or "soft" dependencies
    - Links :

1. Finish-to-start (common)
2. Finish-to-finish
3. Start-to-start
4. Start-to-finish
5. Lag = wait time
6. Lead = Acceleration time

Chapter 3 : Time

- **Planning Building** : **Critical Path Method**

  - **Identify the Critical Path :** The critical path can be identified using these parameters:



- **ES – Early Start**: earliest time to start a predetermined activity, given that prior activities must be completed first
- **EF – Early Finish**: earliest finish time for the activity → early start + duration
- **LF - Late Finish**: latest time the activity must be completed without delaying the entire project
- **LS – Late Start**: latest start date that the activity must be started without delaying the project → LF – duration

↳ The critical path is the path through the project network in which none of the activities have been delayed, that is, the path for which ES=LS and EF=LF for all activities in the path.
A delay in the critical path delays the project.

→ **Calculate forward pass** : Early start + duration = Early Finish
→ **Calculate Backward pass** : Late Finish – duration = Late Start
→ **Calculate the float per activity** : Float on any activity is calculated either by LS – ES or LF – EF.
Activities with zero float are activities on the critical path.

1 : **A SMART objective is :**

a - Specific / Maximum / Achievable / Realist / Time Limited

b- Specific / Measurable / Achievable / Realist / Time Limited

c- Specific / Measurable / Achievable / Real / Time Limited

d- Specific / Maximum / Achievable / Real / Time Limited

2 : **"All the following are characteristics of a project except :(toutes les propositions suivantes sont des caractéristiques d'un projet SAUF) "**

a - It operates with defined boundary conditions

b- Unique

c- No detailed objective with No specific Delivery

d- Time delimited : with a START and an END

3 – All the following are characterisitics of a project except :

a – Temporary
b – Definite beginning and end
c – Unique
d – Repeats itself every month

4 – During which life cycle phase is the detailed project schedule created:

a – Initiating
b – Before the project management life cycle
c – Planning
d – Execution

5– During Activity Sequency & Constraints, what link is the most common :

a - Finish-to-finish
b - Finish-to-start
c - Start-to-start
d - Start-to-finish

6– The critical path in a schedule network is the path that :

a – takes the longest time to complete

b – must be done before any other tasks

c – allows some flexibility in scheduling a start time

d- is not affected by schedule slippage

7– A dependency that requires that design must be completed before manufacturing can start is an example of :

a – Discretionary or “soft” dependencies

b – Mandatory or “hard” dependencies

c – Internal or external dependency

d- Scope dependency

8– If the Optimistic estimate for a task is 12 days, pessimistic is 18 days, what is the most likely estimate :

a – 15 days

b – 13 days

c – 16 days

d- Unknown

9– To control the schedule, a PM is re-analysing the project to predict project duration. He does this by analysing the sequence of activities with the least amount of scheduling flexibility.
What technique is used :

a – Critical Path
b – Flowchart
c – Precedence Diagramming
d- Work Breakdown structure

10– Lag means :

a – Amount of time a task can be delayed without delaying the project
b – Amount of time a task can be delayed without delaying the early start date of its predecessor
c – Waiting time
d- The product of a forward pass and backward pass

11 - A float is :

a – The reduction of the overall project duration by using buffers
b – The addition of time to delay the start of an activity
c – The period of time which a task has available for flexibility in its start or finish.
d – The reduction of the overall project duration by adding additional resources