

Module 4

Schedule & Resource Management Processes

Course Agenda

- Module 1: Introduction, definitions, concepts
 - Module 2: Product Scope: Concepts
 - Module 3: Project Scope: Deliverables & WBS
 - **Module 4: Schedule Management**
 - Module 5: Costs, Risks
 - Module 6: Control - Change, Communication
 - Module 7: Organization, Program and Portfolio management. Agile Concepts
 - Module 8: AGILE methodology introduction
 - Module X : Feedback on YAKA+ GO/NOGO
- **Fil Rouge:** Tender Yakasserole (YAKA*)
 - Requirements Table
 - Scope Baseline : WBS - Deliverables
 - Activities List / Milestone List
 - Schedule Baseline : GANTT Chart MS project
 - Evaluations:
 - QCM: Vocabulary – après le module 5
 - YAKA*: GO/NOGO
 - Retour sur GO/NOGO

Project Management Concepts

– IRON TRIANGLE



- **SCOPE** : defines WHAT? = the work that has to be performed, what are the deliverables expected, And also HOW ? it will be performed. !! Defines what is excluded from the delivery.
- **TIME** : WHEN? = the time you have to execute your project, and when you must deliver what is expected (SCOPE)
- **COSTS** : HOW MUCH? = The budget that can be spent to achieve the work defined in the SCOPE
- Quality is often defined as the 4th constraint driving to an « Iron Square » model.

RAPPEL

Scope Management Results

Tableau des Exigences



Microsoft Excel
Worksheet

WBS pour Yakasserole



Projet site WEB YAKASSEROLE

1. Gestion de Projet

1.1 Baseline go/nogo

1.2 Pilotage

1.3 Comm. Client

1.4 Gestion Change.t

livrables

Tab. Exigence ; livrables ; planning ; risques

Planning , doc projet (CR, decision , ...)

Pres Coaching , pres. Client

2. Conception

2.1 Env. Technique

2.2 Spec. Fonctionnelle

Spec archi technique ; env de developpement

Mock up ; specif .., plan de test

3. Réalisation

3.1 Lot1:Site client

3.2 Lot2: Site Administr.

3.3 Lot 3: Recettes

Logiciel ; resultat de test..

Logiciel ; resultat de test..

Logiciel ; resultat de test..

4. Livraison

4.1 Packaging et Doc

4.2 Grand Jury et démo

Resultat global du projet

Pres. & demo du grand jury

Knowledge area : Schedule Management Processes



Project Schedule Management : Flowchart

Define Activities

- Decompose Work Package (Deliverable) in activities
- Activities represent the amount of work to produce the Deliverable
- Define Milestone (Bornes) list

Sequence Activities

- Define dependancies between activities
- Network Diagramming Techniques : PDM, PERT

Estimate Duration

- Estimate activities durations
- Estimate amount of work for each activity
- Estimate ressources needed

Project Schedule Management: Define activities



Input: Scope Baseline or WBS

- Decompose Work Packages (WP) in activities
- The list of activities necessary to produce the WP deliverables
- Can be defined at the same time than the WBS.
- Attributes: Reference Code – Scope of Work

Id#	Definition Baseline pour GO/NOGO
1	Scope Baseline
2	Schedule Baseline
3	Risk Analysis
4	Prepare GO/NOGO Presentation
5	Planning Phase complete

Id#	Conception/Specifications Fonctionnelles
1	Définition du modèle de données
2	Mockup écrans d'interface utilisateur
3	Spécification de la logique d'enchaînement
4	Ecriture cahier de tests unitaires et intégration
5	Préparation Présentation/Démo de validation fonctionnelle
6	Spécification fonctionnelle validée

Project Schedule Management : Sequence Activities

Inputs:

- Scope Baseline (WBS)
- Activities list
- Milestone List : Activity with zero duration – very useful to control the work progress. Regularly placed along the schedule. Like milestones.
- Assumptions/Constraints

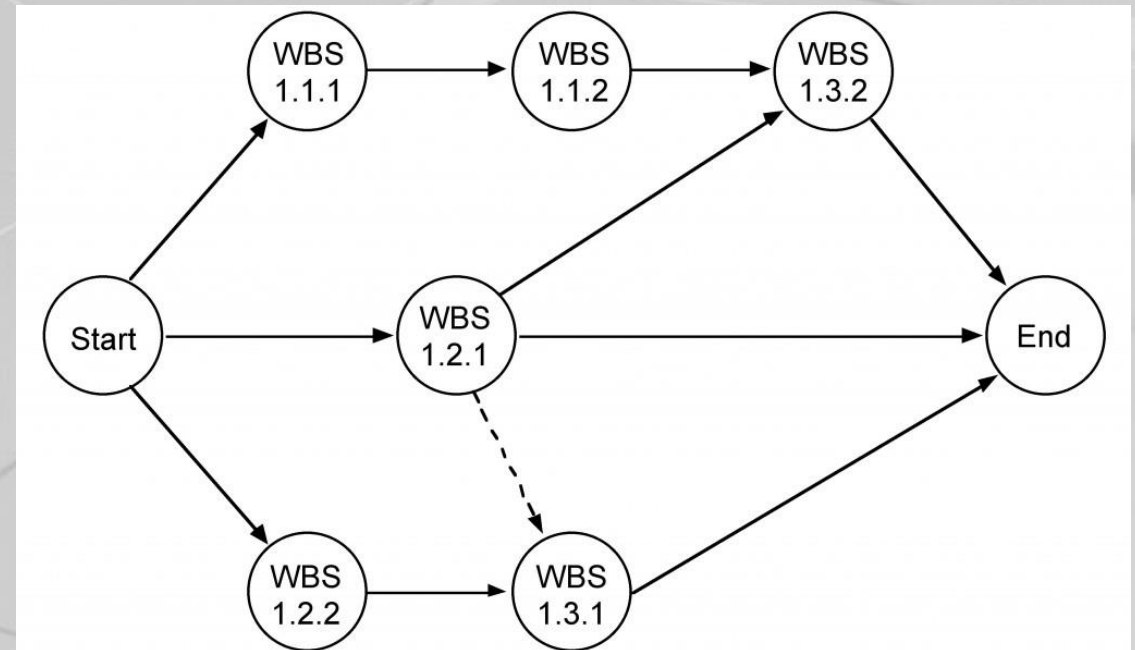
Techniques: PDM Precedence Diagramming Method

(or Network Diagramming methods)

- **Finish to Start** : **most common**. successor cannot start before predecessor is finished
- **Finish to Finish** : A successor cannot finish until predecessor finishes
- **Start to Start**: Successor cannot start until predecessor has started.
- **Start to Finish**: A successor cannot finish until predecessor has started.

– Leads & Lags

- **Lead**: amount of time successor activity can be advanced/predecessor
- **Lag**: amount of time successor activity will be delayed/predecessor



Project Schedule Management : Estimate durations

- Estimate amount of work
- Estimate amount of available resources needed
- Will serve to establish Schedule Baseline and also Cost Baseline
- Based on
 1. Expert judgment
 2. Historical Data
- Estimates: Worst/Best
- Definitions :
 - Critical Path:
 - Slack

Scedule Management : Estimate durations : Top-Down vs Bottom-up

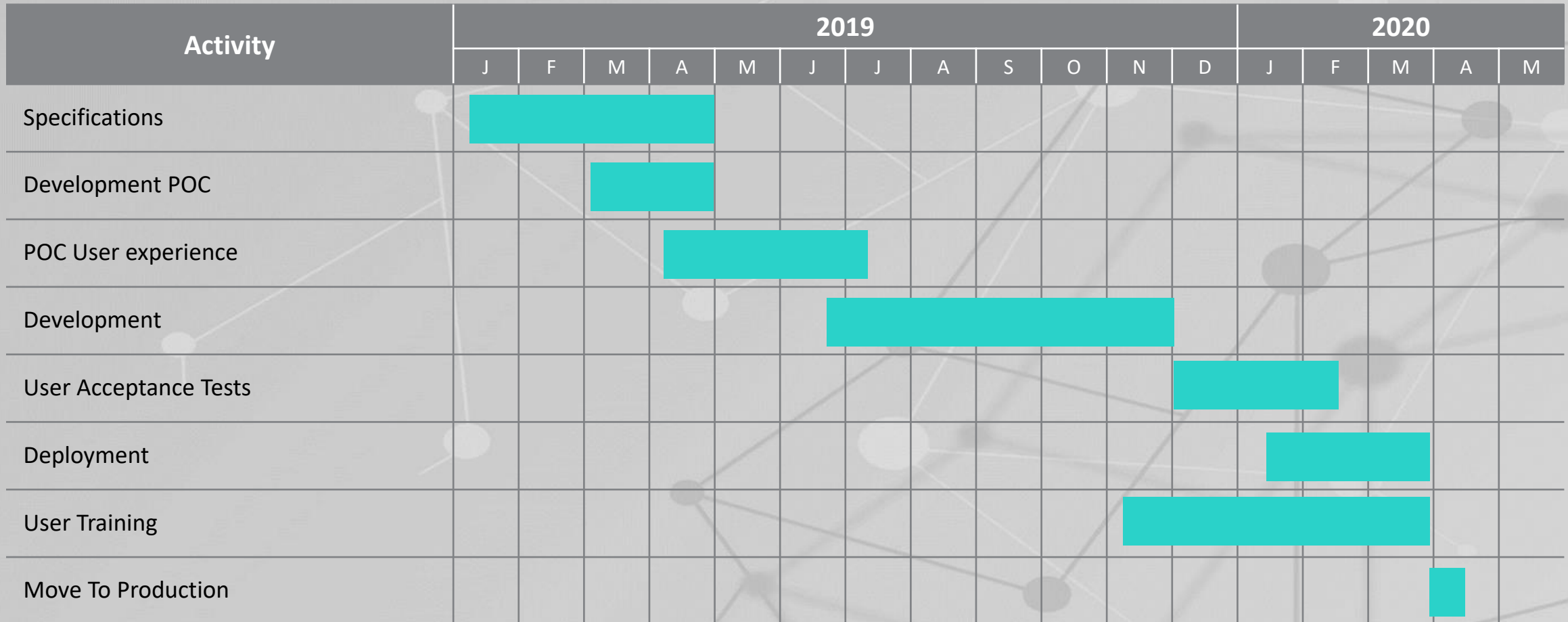
The proposed approach (decompose in activities and estimate each activity) is called **BOTTOM-UP estimation**

- Method is accurate
- Method generates often OVER ESTIMATION (tendency to slightly overestimate each activity duration and effort)
- USEFULL to counterbalance bottom-up with **TOP-DOWN** estimation:
 - Based on experience get an estimation of duration or effort of a complete project phase or full WP and then
 - See how WP and the activities can match with this estimates.
- Often actual project duration is a mid term between the two estimations

TIMELINE



Gantt chart



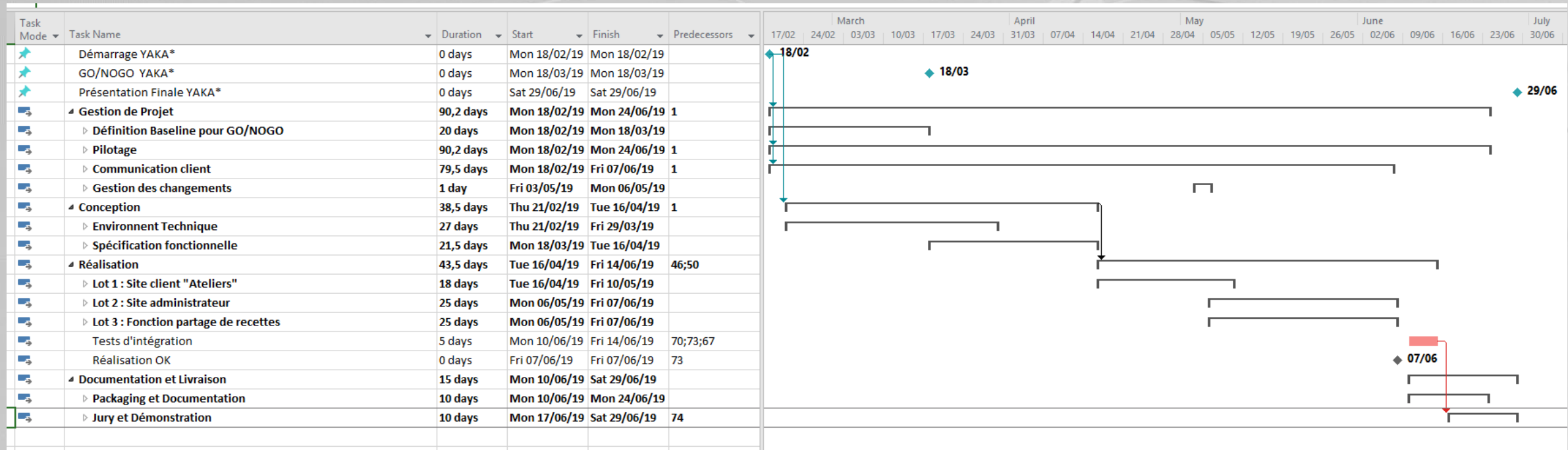
Project Schedule Management : Develop schedule

– Microsoft Project – Or any other Gantt chart tool....

Example GANTT Microsoft Project chart



– Milestone Chart / Summary Chart

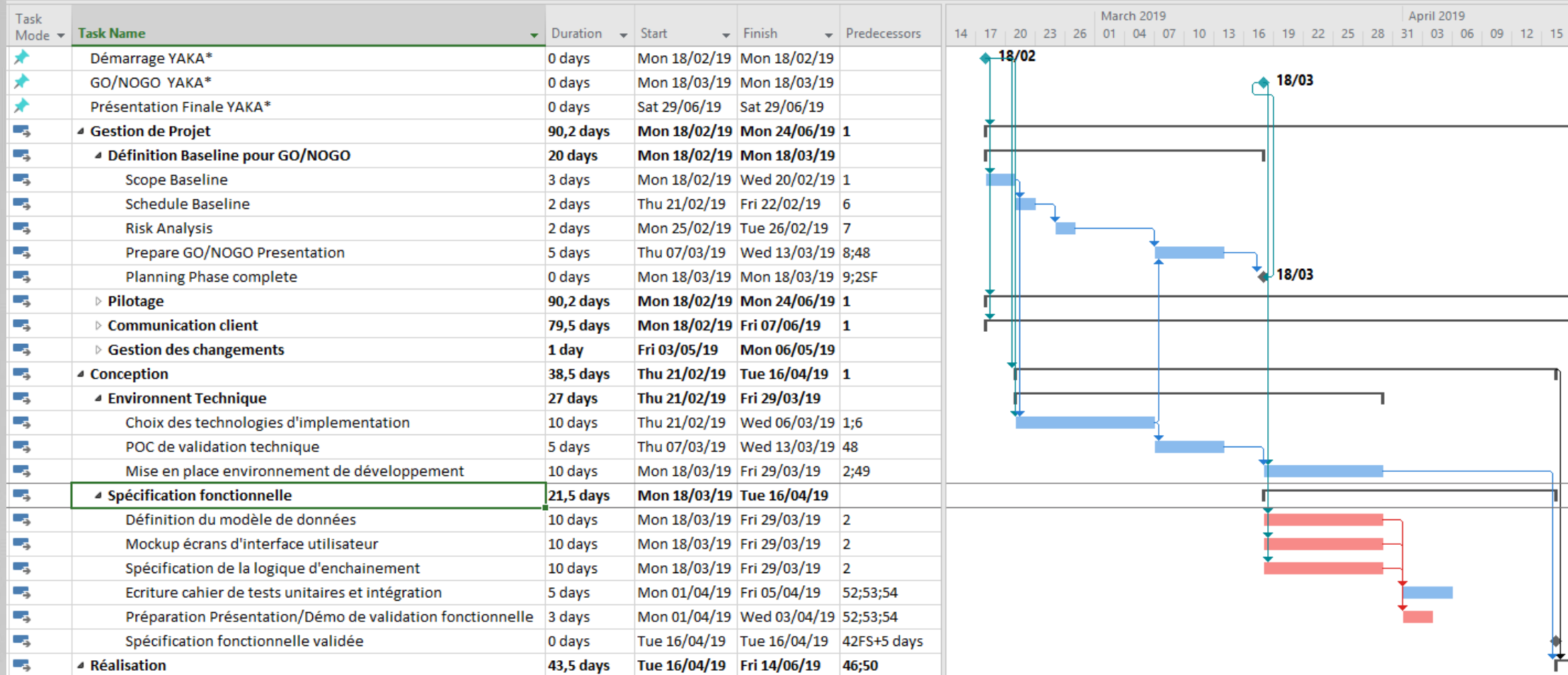




Example GANTT Microsoft Project chart



– Detailed GANTT

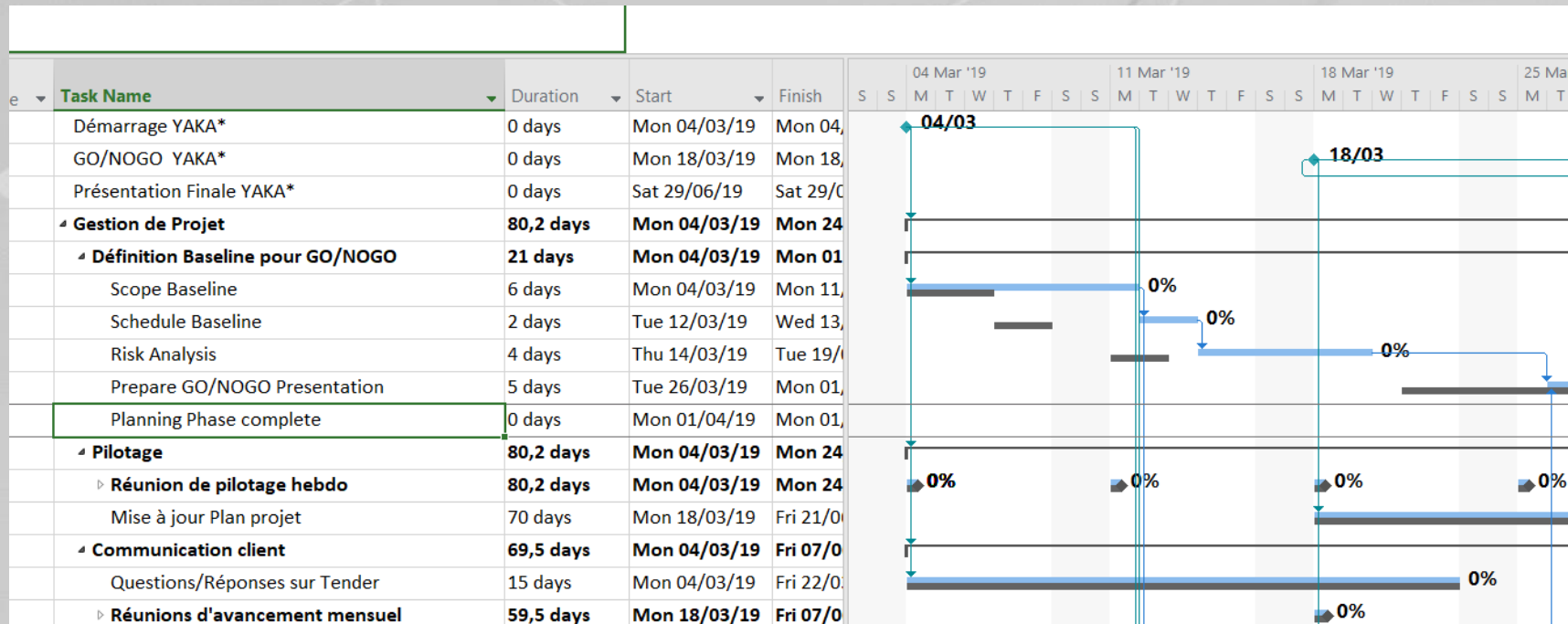




The Schedule established during planning constitutes a BASELINE.

On a regular basis : Weekly, monthly, the schedule will be updated with actual work and **actual duration** of activities performed or changes to planning.

Example TRACKING GANTT: Change (blue) vs Baseline (black)



Control Schedule : progress review and re-planning

