

RESOURCES in MS Project

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Resources

There are 3 types of resource in MS Project

- 1. Work Resource:** people and equipment
- 2. Material Recourse**
- 3. Cost Resource:** design cost, filing cost, travel cost

Focus on Work Resource, because it impacts schedule!

WORK, DURATION, and UNITS

RESOURCE is easy, if you understand that MS Project calculates

$$\text{WORK Amount} = \text{Activity DURATION} \times \text{UNITS}$$
$$\mathbf{W=DU}$$

When

- Duration = Activity Duration
- Work Amount = total work required **in hours or days**
- Units = units of worker or equipment

Note: Work Amount in MS Project is called WORK
(For me, this is confusing and frustrating.)

Calculation

- Example 1.1 W&U : If a job requires 3 days of work amount and we have 2 workers, so

Duration = Work Amount/Units = $3/2 = 1.5$ days

Recap

- 3 days of WORK AMOUNT

- 1.5 days DURATION using 2 workers (called UNITS)

- Example 1.2: if we put 1 more worker, so

Duration = $3/(2+1) = 1$ days

Remember: Duration = Activity Duration

Calculation

- Example 2.1 U&D: If we use 10 workers to finish an activity in 5 days, so

$$\underline{\text{Work Amount}} = \text{Duration} \times \text{Units} = 5 \times 10 = \underline{50 \text{ days } W}$$

- Example 2.2: If we actually have 2 workers, so

$$\text{Duration} = 50 \text{ days}(\text{Work Amount})/2 = 25 \text{ days } D$$

Remember: Work Amount or WORK is in time scale measured in TOTAL minutes, hours, or days of works

Calculation

- Example 3.1 D&W: If we have to finish an activity within 10 days with Work Amount of 50 days, so

Since $W=DU$

$$\text{Units} = W/D = 50/10 = 5 \text{ units}$$

Material Resource

It represents tangible resource used in the project such as concrete, oil, paper, and formwork.

It does not effect activity duration.

Cost Resource

- Use to track cost in the project that is not material or time-based related resource.
- Appropriate for fixed cost or one-time cost
- While one activity has only 1 fixed cost field, many cost resource can be assigned to one or more activities.
- A Cost resource can vary from one activity to another.

Schedule this project with MS Project, given that we have only maximum 6 workers.

