

February 25, 2020

Project Resource Planning

The Allocation of Resources to accomplish a Portfolio Workload.

When managing a Project or a Project Portfolio, it's critical to correctly distribute resources to accomplish all Project Objectives in a Portfolio of Projects in the shortest and most efficient manner possible. Without proper resource allocation, projects expense and total duration can quickly get out of control. During the Execution phase, information and reports will not provide meaningful intelligence for any realistic decision-making or course correction.

By construction a *Feasible and Executable Project Network*, Exepron will generate the Resource Plan for all valuable projects. Exepron follows five phases sequential for successful Project Portfolio Management.

Plan —> Schedule —> Execute —> Analyze —> Improve

What is Resource Planning?

Resource Planning is the step in a business plan required to identify the resource quantity required, duration needed and timing on a calendar for a proposed project.

Allocating Resources to individual projects during the Planning phase is conducted independently from the existing active Projects and any committed projects waiting in Pipeline. The committed start date of a project is established in the *Scheduling* phase after Planning. After Planning, the Scheduling phase will find the most practical and feasible time to Start the project given any portfolio resource limitation.

What are Resources?

Resources can be anything from Equipment to project Sites to Subcontractors, Vendors Materials and Skills and People. A short list of some resources needed when planning your project:

- Type of teams needed.
- Roles, number and key Skills required .
- Task Managers, Project Manager, Program Manager, Executive Sponsor.
- Equipment, quantity needed and the purpose.
- Job / Site locations.
- Material and quantity needed.

Once the Project Network logic is established. Allocating available resource quantity, skill level allocated to each Task on a Project Network will determine individual *Task Durations*. See the Exepron Reference Guide, Page 25.

Run the Critical Chain: Exepron will generate a Resource Plan, a Timeline by Resource Type allocation.

- Including the dates for using the planned resources by duration for Skills, equipment rental, project site rental and anything else.
- Display the amount of resources required per Task.

In summary

Step 1: List the Resources

Create a list of all the different resources required.

Required Skills: Enter or ensure that the Resource Types on your list exist in **Exepron >> Setting >> Resource Types**. Identify Resource Managers responsible for each Resource Type. That includes full-time, part-time vendors and contractors.

Regarding equipment. Do the same as you did with the skills. Identify all the equipment needed to complete the project. That list should include anything from office equipment such as computers, communication devices Rental equipment such as cranes, forklifts and machinery.

Materials List. What are the non-consumable materials you'll need to complete the project activities? These can be materials necessary to build physical deliverables, such as wood, steel, and concrete.

Step 2: Estimate How Many Resources are available.

Each Task is a deliverable. Now figure out how many of of the listed resources needed for each individual Task. For example, how many hours are you going to need from your team? Break that down per role and skill. Do the same for the required equipment. How many pieces of equipment are going to be necessary? And the same for the material. Estimate the amount of material, in terms of square footage, number of units, etc., is going to be necessary for each Task. How much hardware do you need to buy, and will you have to license software?

Get as accurate an estimate as you can, and enter that data into each Task.

Step 3: Generate the a Resource Plan

Run the **Critical Chain >> Accept** the CCPM schedule.

1. Test Duration: is the Total Project Duration acceptable?
2. Test the Risk: is the Project Risk Quotients under 0.5?
3. Test the Resource Plan: Critical Chain >> Accept >> Project Dashboard >> Project Resource Loading Report.
4. Is there opportunity to shorten the Project Plan by challenging and re-defining Task dependencies, and durations. Can we reduce or increase the Resource allocation?

Dynamic Drum Scheduling.

Determining the best **Start Date** for a new Project.

If steps 1 through 4 are acceptable, then Critical Chain >> Accept >> Pipeline your project. The Exepron **Dynamic Drum** will assist Users determine the “best fit” for when to Start a new project. That is, what is the best timing and **predicted** Portfolio Resource Requirement of the new project in a portfolio of Started and committed Pipeline Projects? Project should be in Pipeline status before running the Dynamic Drum.

5. Critical Chain >> Accept >> Pipeline >>

run Dynamic Drum >> Resource Loading Report.

This report will display the Portfolio Resource Loading before Accepting the Drum schedule to commit the Resources and Customer Due Date for you new project. Users can ‘go back’ and conduct “What-If” scenarios by using a different Priority or Resource Type to run the Drum. See Exepron Reference Guide, Pages: 71 to 76.

You now have a Feasible and Executable Portfolio of Project providing you with a practical opportunity to deliver all projects on-time and budget.