

EXERCISE

NETWORKS, PERT, AND CPM

GENERAL OBJECTIVE

- Apply time planning tools and techniques to a case study.

SPECIFIC OBJECTIVES

- Develop a GANTT chart.
- Develop a network diagram.
- Calculate activities and project duration using the PERT technique
- Determine the critical path using the CPM technique.
- Apply the PERT technique to calculate the probability for a given project duration.

INSTRUCTIONS

Based on the reading material, do the following:

1. Develop the GANTT diagram using the most likely duration for each activity.
2. Develop the network diagram for the following project using the expected duration for each activity, calculated with the three-point estimating technique.

ID	Description	Predecesor	Optimistic ² duration	Most likely ² duration	Pesimistic ² duration
1	Start	NA	0	0	0
2	Producers Association Organization	1	59	70	93
3	Historical Features Development	1	22	33	56
4	To Hire Expeditor	1	22	30	50
5	Twenty Beneficiaries Identification	1	31	40	61
6	Producers Association Formalization	2	30	51	90
7	Cultural Features Development	3	22	33	56
8	Technical Norm Proposal Development	6,7	25	38	51
9	Technical Norm Proposal Approval	8	36	54	102
10	Ten Beneficiaries Diagnosis	4,5	25	40	55
11	Technical Assistance To Five Beneficiaries	10	59	70	93
12	Joining Of Five Entrepreneurs With Exporters	11	25	35	45
13	Ten Beneficiaries Diagnosis	10	25	40	55
14	Technical Assistance To Five Beneficiaries	13	59	70	93
15	Joining Of Five Entrepreneurs With Exporters	14	25	35	45



Notice that there are some activities with the same name (10 and 13, 11 and 14, and 12 and 15).

3. Calculate the project duration using the PERT technique.
4. Determine the project's critical path.
5. Calculate the critical path duration with an 84% probability.

RULES AND CONSIDERATIONS

- The document must be presented in a .doc format. If needed, in order to support the PERT and CPM techniques calculations, you can submit additional files such as MSExcel or MSPProject. These files should be sent as a compressed file type (.zip or .rar). The file must be uploaded to the virtual campus in the specific location established for this purpose.
- The document must be a maximum of 15 pages in length.
- Questions related to this deliverable should be channeled through the Inquiries forum.