Objectives, Notesale.co.uk

Diagram metworks of project activities

- Estimate the completion time of a project
- Compute the probability of completing a project by a specific time
- Determine how to reduce the length of a project effectively
- Describe the critical chain approach to project management

Network Diagrams.uk

- Uses nodes to represent the activity
- Uses arrows to represent precedence relationships



a. Activity A precedes activity B, which precedes activity C



b. Activity A must be completed before activities B and C can begin.



c. Activities A and B must both be completed before activity C or D can begin.



d. Activities B and C can begin once activity A has been completed; activity D cannot begin until both B and C are completed.

Step 1-Define the Project: Cables By Us is bringing a new product on line to be manufactured in their current facility in existing space. The owners have identified 11 activities and their precedence relationships. Development AON for the project.									
	Activity	preview pageription	Immediate Predecessor	Duration (weeks)					
	А	Develop product specifications	None	4					
	В	Design manufacturing process	А	6					
	С	Source & purchase materials	А	3					
	D	Source & purchase tooling & equipment	В	6					
	E	Receive & install tooling & equipment	D	14					
	F	Receive materials	С	5					
	G	Pilot production run	E & F	2					
	Н	Evaluate product design	G	2					
	1	Evaluate process performance	G	3					
	J	Write documentation report	H & I	4					
	K	Transition to manufacturing	J	2					

Step 3 (a)- Add Deterministic Time Estimates and 6 some cool Estimates and 6 some cool Preview from 10 of 38 Preview page





Calculating the Probability of Completing the Project in Lessandian a Specified Time

- Whenewickhowage 20
 - The expected completion time
 - Its variance
- You can calculate the probability of completing the project in "X" weeks with the following formula:

$$z = \frac{\text{specified time - path expected time}}{\text{path standard time}} = \left(\frac{D_T - EF}{\sqrt{\sigma_P^2}}\right)$$

Where D_T = the specified completion date EFPath = the expected completion time of the path σ_{Path}^2 = variance of path

Reducing the Times of a Project (crashing)

Activity	Fime (wk)	Ncolel 3 Cost (\$)	Crash Time	Crash Cost (\$)	Max. weeks of reduction	Reduce cost per week
А	4	8,000	3	11,000	1	3,000
В	6	30,000	5	35,000	1	5,000
С	3	6,000	3	6,000	0	0
D	6	24,000	4	28,000	2	2,000
E	14	60,000	12	72,000	2	6,000
F	5	5,000	4	6,500	1	1500
G	2	6,000	2	6,000	0	0
Н	2	4,000	2	4,000	0	0
Ι	3	4,000	2	5,000	1	1,000
J	4	4,000	2	6,400	2	1,200
K	2	5,000	2	5,000	0	0