



## Group Presentation on “Project Destiny”

Course: Project Management

Batch: PGEXP 2018-20

Submitted to: Prof. Arnab Adhikari

### Group Members:

- |                 |           |
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## Project Destiny Case Questions

1. Develop the project network of plant relocation using manual method as well as MS project.
2. Calculate the Early start, Early Finish, Late Start, Late Finish.
3. Find out the Critical Path of the network.
4. As Brent Colver, what action would you take and why?

# Introduction on Project destiny

Mr. Brent Collver, President and Chief executive officer of Romet Limited was preparing for the “Project Destiny” team meeting on Friday morning i.e April 27, 2018. He had just finalized the architectural design and layout for the company’s new plant and was reviewing the activities required to complete the move.

As per Brent Collver, Romet is a growing company and now it needs a larger facility. The company have leased a 75,000 sq.ft plant on Timberlea Bolulevard, about two blocks from current location on Matheson Boulevard.

The new building will give an additional 20,000 sq.ft and the layout will provide for improved material flow.

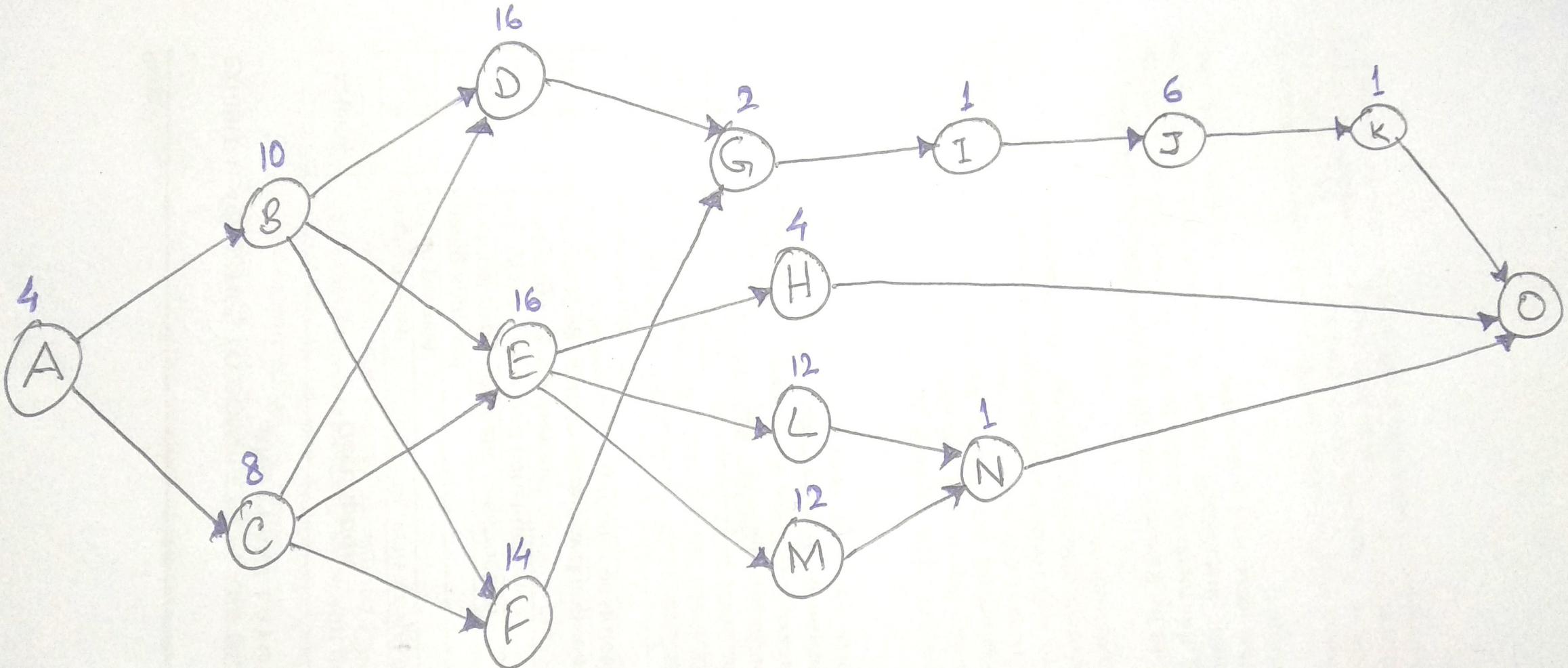
## Concerns for Brent Collver:

- The lease for current building expires on December 31, 2018.
- Company face the challenge of having to ship and move the plant at same time.
- He don’t want to discontinue operations as moving the plant.

***He wanted to have the move completed before the Christmas shutdown, which starts on December 21, 2018***

This means that the total time for project move will be from April 27 to December 21, i.e ~ 34 weeks.

# 1. Project network diagram for plant relocation



## 2. Calculating the Early start, Early Finish, Late Start, Late Finish

Activity	Description	Immediate Predecessor	Estimated Time (Weeks)	Early Start	Early Finish	Late Start	Late Finish	Slack
A	Finalize lease	-	4	0	4	0	4	0
B	Obtain permits	A	10	4	14	4	14	0
C	Zoning approval	A	8	4	12	6	14	2
D	Electrical and pneumatic construction	B , C	16	14	30	17	33	3
E	Quality/supervisor pod construction	B , C	16	14	30	14	30	0
F	Anodizing line installation	B , C	14	14	28	19	33	5
G	Machine shop equipment removal and reinstallation	D , F	2	30	32	33	35	3
H	Climate controlled proving room construction	E	4	30	34	39	43	9
I	Assembly relocation	G	1	32	33	35	36	3
J	Paint line relocation	I	6	33	39	36	42	3
K	Auxiliary equipment	J	1	39	40	42	43	3
L	Office construction	E	12	30	42	30	42	0
M	Information technology services	E	12	30	42	30	42	0
N	Office move	L , M	1	42	43	42	43	0
O	Project end	H , K , N	-	43	43	43	43	0

### 3. Finding the critical path of the network

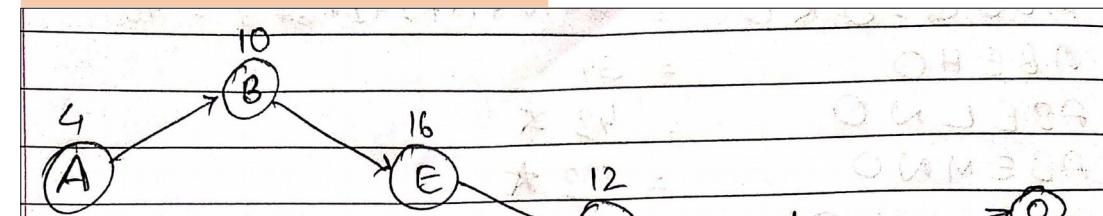
#	Path	Time (Weeks)	Critical path
1	ABDGJKO	40	
2	ABEHO	34	
3	ABELNO	43	Critical path (Longest time)
4	ABEMNO	43	Critical path (Longest time)
5	ABFGJKO	38	
6	ACDGJKO	38	
7	ACEHO	32	
8	ACELNO	41	
9	ACEMNO	41	
10	ACFGJKO	36	

# Here we have multiple critical path, hence selecting the individual critical path and performing crashing activity

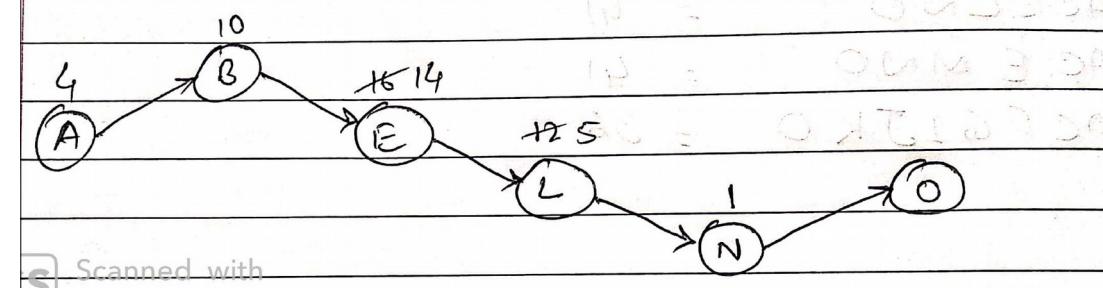
- Selecting critical path -1 : A B E L N O

Activity	Description	Est. Time (Weeks)	After crashing
A	Finalize lease	4	4
B	Obtain permits	10	10
E	Quality/supervisor pod construction	16	14
L	Office construction	12	5
N	Office move	1	1
O	Project end	0	0
	Total time	43	34

Critical path before crashing



Critical path after crashing



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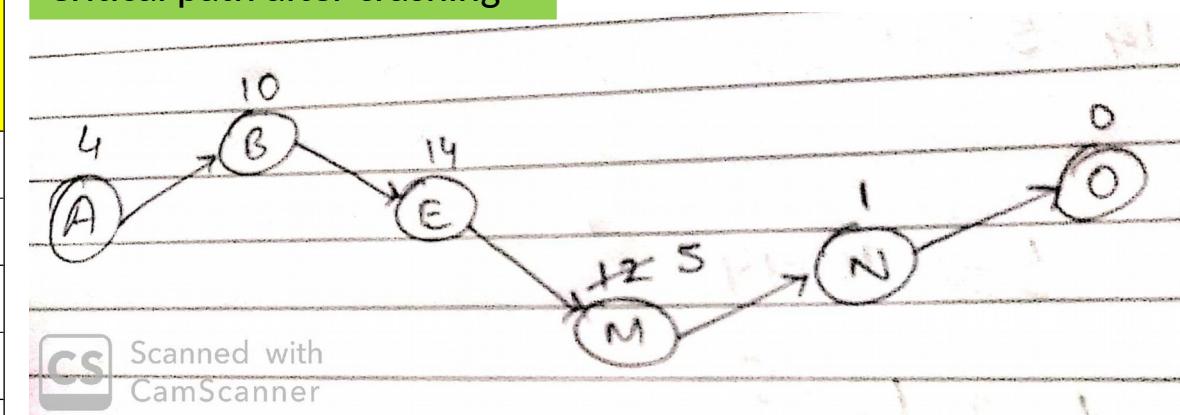
Assumptions for crashing:

1. Activity E i.e Quality/ supervisor pod construction time can be reduced by 2 weeks through deploying more workers to complete the construction.
2. Activity L i.e Office construction time can be reduced by 7 weeks as it is based on contractual agreement hence there is scope of agreement for completion in 5 weeks by additional manpower engagement through contract labour.
3. We can not cut shot the time for activity A - Finalize lease and B- Obtain permits as these are external controls and not in scope.

➤ Selecting critical path -2 : A B E M N O

Activity	Description	Est. Time (Weeks)	After crashing
A	Finalize lease	4	4
B	Obtain permits	10	10
E	Quality/supervisor pod construction	16	14
M	Information technology services	12	5
N	Office move	1	1
O	Project end	0	0
	Total time	43	34

Critical path after crashing



Assumptions for crashing:

Activity M i.e Information technology services can be reduced by 7 weeks as it can be implemented partially with operation

➤ Reducing time for activity D , J

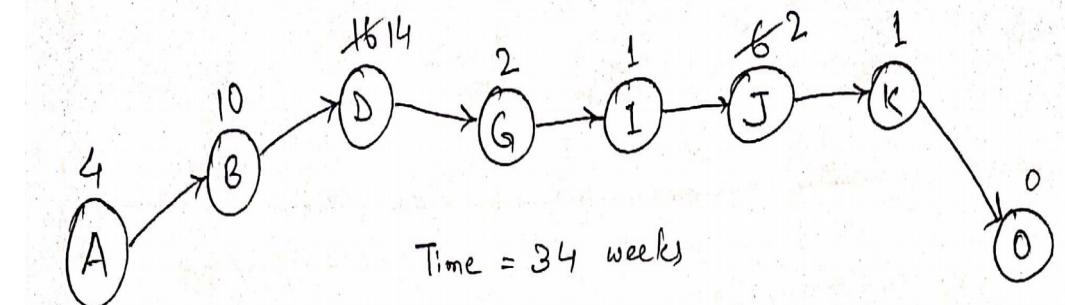
D	Electrical and pneumatic construction	16	14
J	Paint line relocation	6	2

Assumptions for crashing:

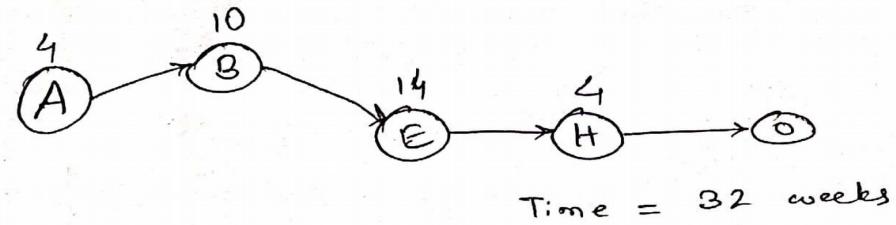
Activity D i.e Electrical & pneumatic construction can be reduced by 2 weeks through additional manpower as same as activity E

Activity J i.e Paint line relocation pre work can be done in 2 weeks and rest can be done after start of the plant

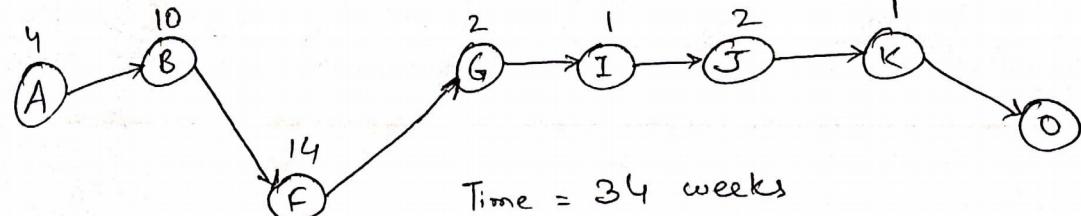
Path A B D G I J K O



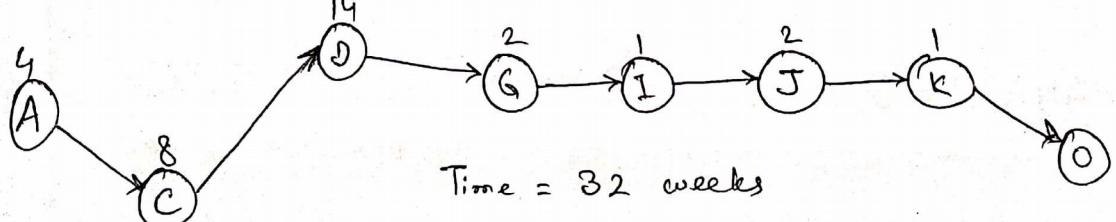
Path A B E H O



Path A B F G I J K O

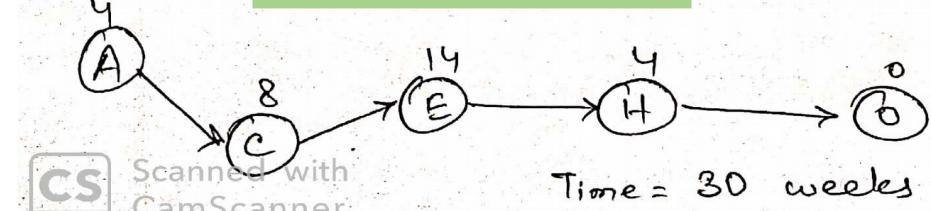


Path A C D G I J K O

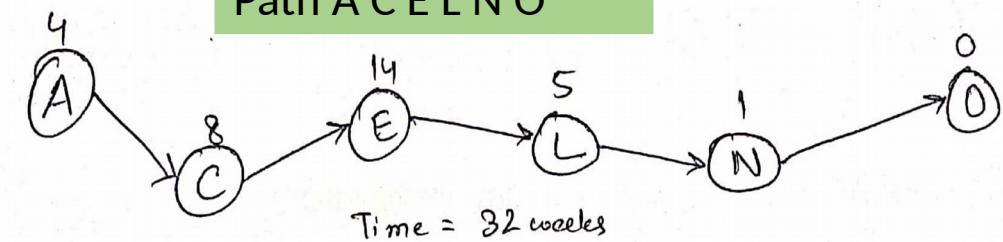


Stopping the process as critical path are fully crashed and desired due date of 34 weeks are reached by all activity path

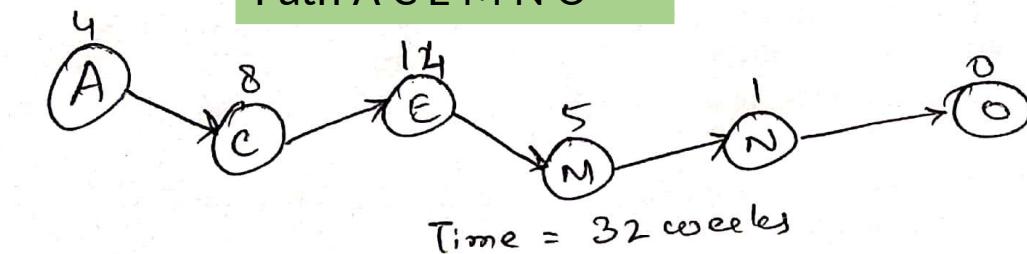
Path A C E H O



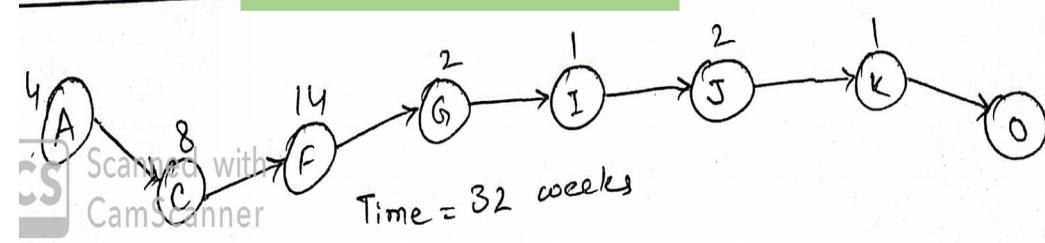
Path A C E L N O



Path A C E M N O



Path A C F G I J K O



#### **4. As Brent Collver what action would you take and why?**

*As Brent Collver,*

- o *I would take the maximum benefits of state of the art equipment and a strong team image what Romet Limited have by completing the project destiny before December 21, 2018.*
- o *I would try to achieve zero downtime & no disruption in the customer service.*
- o *Strategic priorities would be centre as customer satisfaction & product innovation*
- o *I would focus more on deploying good skilled manpower for pod construction & electrical and pneumatic construction in 12 weeks.*
- o *I would focus on office construction and negotiate the contract for construction in 5 weeks through extra manpower.*

Thank You  
Q & A