MONASH University

Faculty of Information Technology

FIT2002 PROJECT MANAGEMENT

TUTORIAL 6

TOPIC 6:
Project Cost Management

Tutorial 6 solution

Activity 1

1. **What is direct vs indirect costs?**
   Direct costs: directly attributed to project activities (e.g. hardware purchase, labour costs).
   Indirect costs: cannot be directly attributed to project (e.g. energy costs, rent).

2. **What is sunk cost?**
   Sunk cost: money spent in the past that cannot be recovered.

3. **What are tangible and intangible costs (or benefits)?**
   Tangible cost/benefit: can be measured (cost of feasibility study).
   Intangible: difficult to measure (e.g. increased customer satisfaction).

4. **Why is estimating effort difficult in IT projects?**
   - Inexperience
   - Done too quickly
   - Bias to underestimating

   Come back to this question after the other activities are already covered.

5. **What are the different techniques used in creating cost estimates? Give an example of each.**
   Answers will vary. For example providing new laptops for 100 people, one possible response for each type of estimating techniques would be:
   - ***Analogous estimate***: You could research similar organizations that recently purchased about the same number and type of laptops.
   - ***Parametric estimate***: You could decide on key factors, such as the basic category of laptop required and other requirements, and estimate costs using those parameters. For example, you might estimate that the laptops would cost about $2,000 each and that another $500 per unit would be required for support costs.
   - ***Bottom-up estimate***: You could determine detailed hardware and software requirements, training, and support costs to create an estimate.

Activity 2

Main Assumptions

# hours spent	150
# postcards made	5,000
# postcards mailed	4,000
Registration fee / person	$ 5.00
Credit card fee / person	$ 24.00
Printing fee / postcard made	$ 0.40
Mailing fee / postcard mailed	$ 0.25
Beverages and lunch cost / person	$ 25.00
Class handouts cost / person	$ 30.00
Charging fee / person	$ 600.00

Projected Revenue

# people	10	20	30	40	50	60
Revenue	$ 6,000	$ 12,000	$ 18,000	$ 24,000	$ 30,000	$ 36,000

Projected Expenses

Variable costs						
Registration	$ 50	$ 100	$ 150	$ 200	$ 250	$ 300
Credit card processing	$ 240	$ 480	$ 720	$ 960	$ 1,200	$ 1,440
Beverages and lunch	$ 250	$ 500	$ 750	$ 1,000	$ 1,250	$ 1,500
Class handouts	$ 300	$ 600	$ 900	$ 1,200	$ 1,500	$ 1,800
Total variable costs	$ 840	$ 1,680	$ 2,520	$ 3,360	$ 4,200	$ 5,040
Fixed costs						
Room fee	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500
Registration setup fee	$ 400	$ 400	$ 400	$ 400	$ 400	$ 400
Postcard design	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300
Postcard printing	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000
Postcard mailing	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Total fixed costs	$ 4,200	$ 4,200	$ 4,200	$ 4,200	$ 4,200	$ 4,200
Total costs	$ 5,040	$ 5,880	$ 6,720	$ 7,560	$ 8,400	$ 9,240

Projected Profits	**$ 960**	**$ 6,120**	**$ 11,280**	**$ 16,440**	**$ 21,600**	**$ 26,760**
Value of personal time / hour	**$ 6.40**	**$ 40.80**	**$ 75.20**	**$ 109.60**	**$ 144.00**	**$ 178.40**

Activity 3: Earned Value Management

1. a.

- Cost variance = EV-AC=$20,000 - $25,000 = -$5,000
- Schedule variance = EV-PV=$20,000-$23,000=-$3,000
- CPI=EV/AC=$20,000/$25,000 =80% or .8
- SPI=EV/PV=$20,000/$23,000=87% or .87

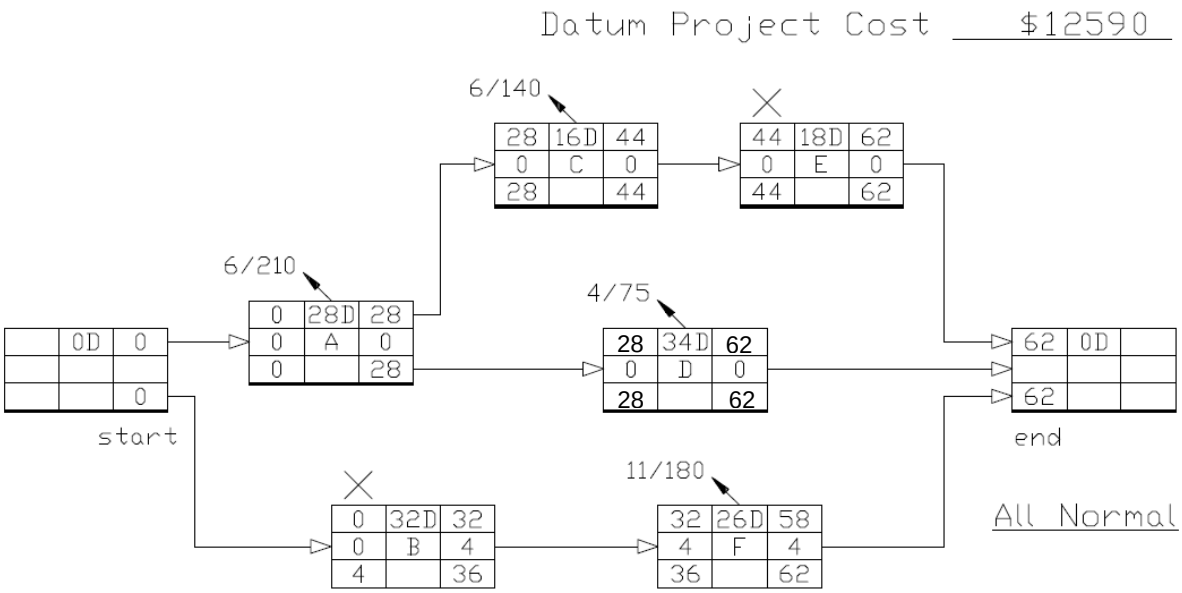
b) The project is over budget and behind schedule

c) EAC=BAC/CPI=$120,000/.8=$150,000

The project is performing worse than planned since the new estimate to complete it is $30,000 more than planned.

d) The estimated time to complete the project =12months/.87=13.8 months. The project is projected to take 1.8 months longer than planned.

Activity 4



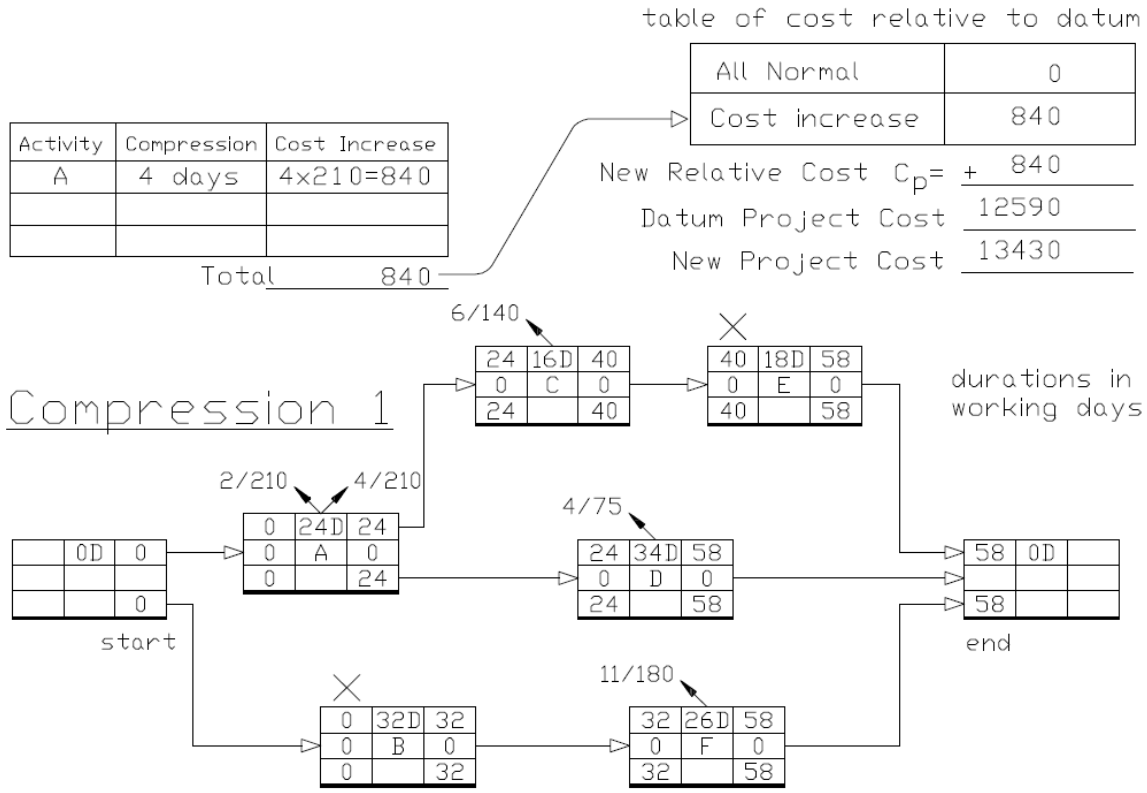


table of cost relative to datum
All Normal 0
Cost increase 840
New Relative Cost C_p= + 840
Datum Project Cost 12590
New Project Cost 13430
Activity | Compression | Cost Increase
A | 4 days | 4x210=840
Total 840
Compression 1
durations in working days
6/140
2/210
4/210
4/75
11/180
start
end

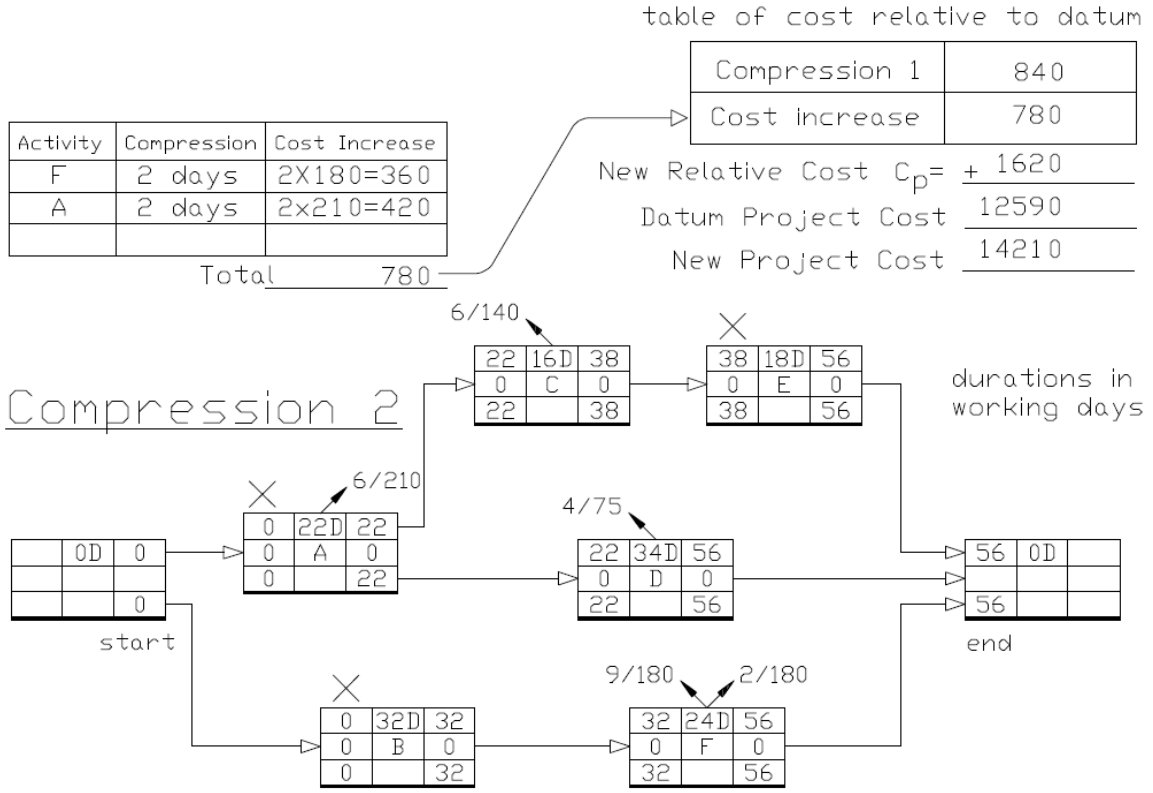


table of cost relative to datum
Compression 1 840
Cost increase 780
New Relative Cost C_p= + 1620
Datum Project Cost 12590
New Project Cost 14210
Activity | Compression | Cost Increase
F | 2 days | 2X180=360
A | 2 days | 2x210=420
Total 780
Compression 2
durations in working days
6/140
6/210
4/75
9/180
2/180
start
end

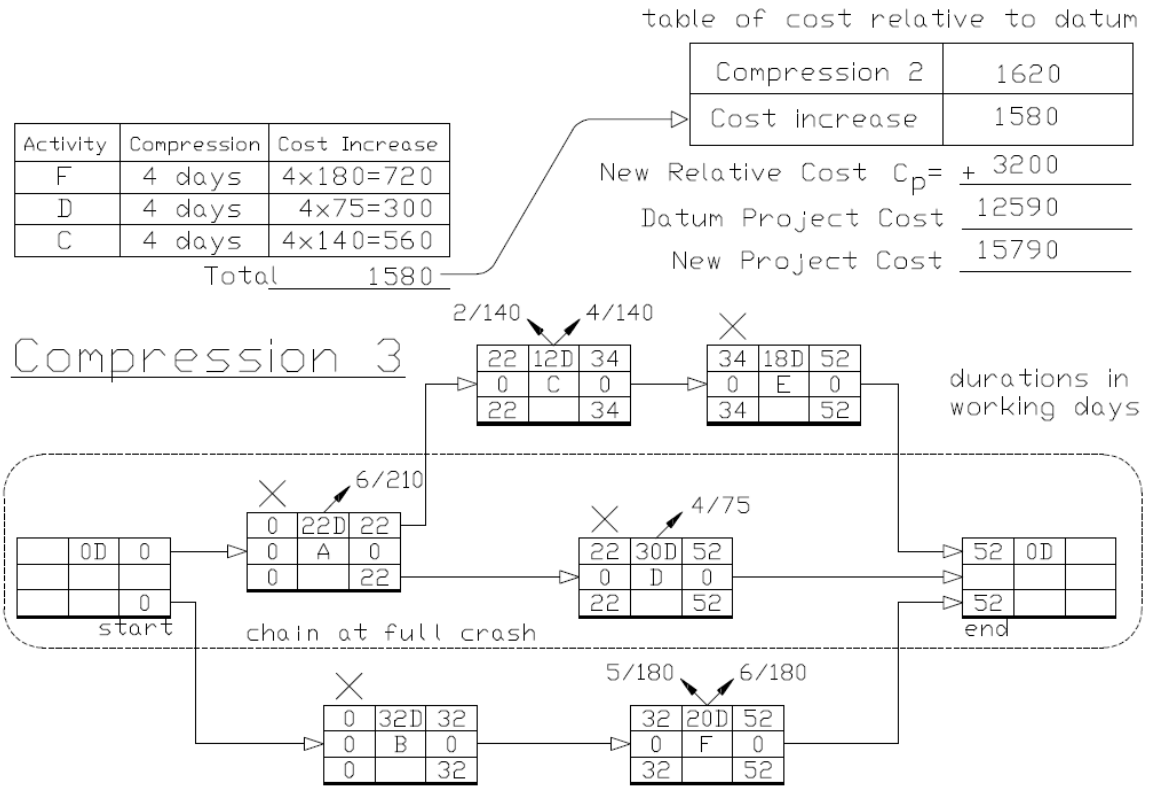


table of cost relative to datum
Compression 2
1620
Cost increase
1580
New Relative Cost C_p= + 3200
Datum Project Cost
12590
New Project Cost
15790
Activity
Compression
Cost Increase
F
4 days
4x180=720
D
4 days
4x75=300
C
4 days
4x140=560
Total
1580
Compression 3
2/140
4/140
durations in working days
6/210
4/75
start
chain at full crash
end
5/180
6/180