MONASH University

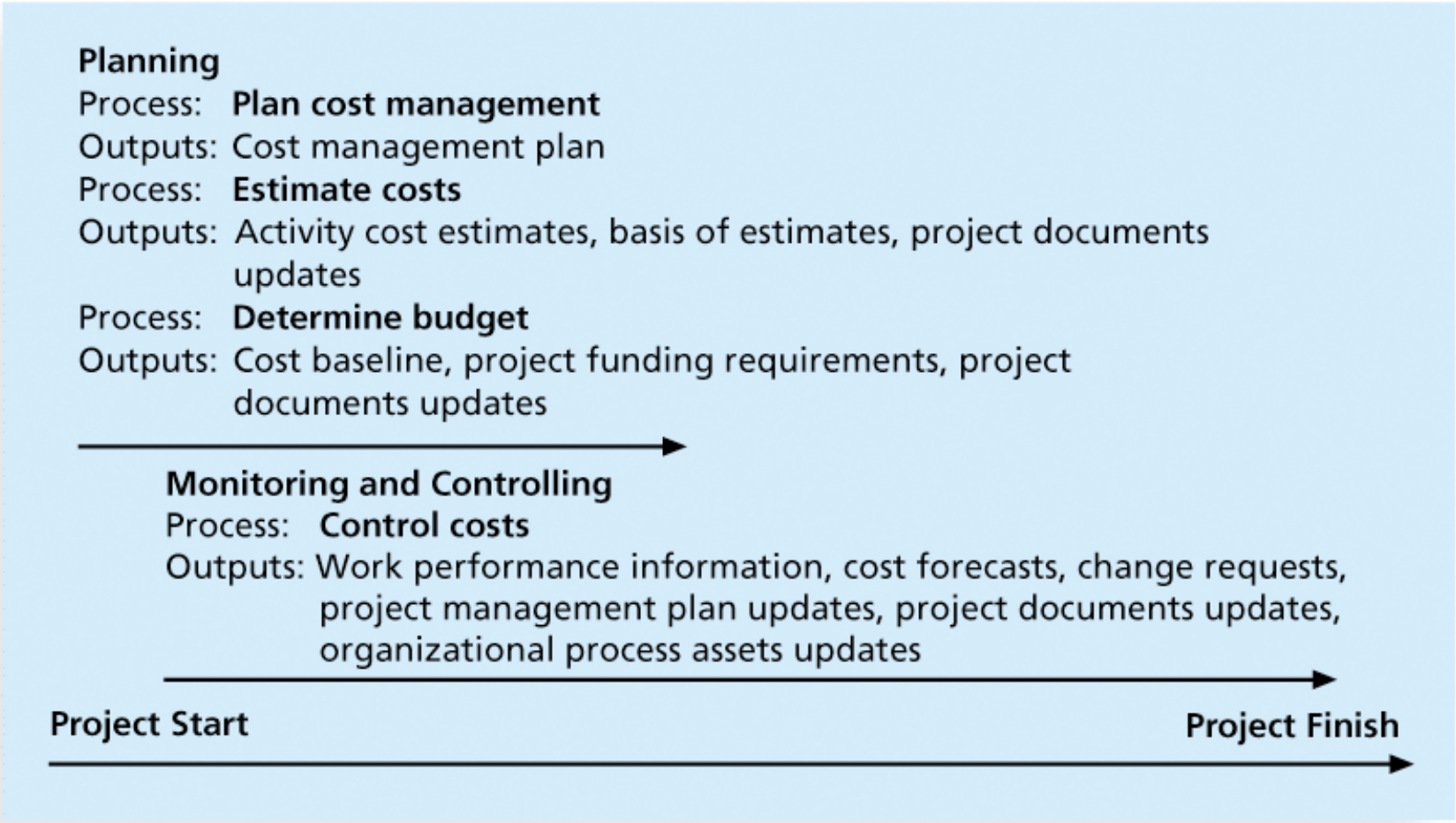
GROUP OF EIGHT AUSTRALIA

Information Technology

FIT2002
Week 6 Seminar

Project Cost Management

Project Cost Management Summary



Recap from Video 1:

- Project cost management is traditionally a weak area of IT projects.
- IT project managers must acknowledge the importance of cost management and take responsibility for understanding basic cost concepts, cost estimating, budgeting, and cost control.
- Project managers must understand several basic principles of cost management to be effective in managing project costs.
- Important concepts include
  - profits and profit margins,
  - life cycle costing,
  - cash flow analysis,
  - sunk costs, and
  - learning curve theory.

Schwalbe, K.. (2015). Information Technology Project Management. (8e) Cengage Learning

Time for polling: https://flux.qa/6CKSE4

Question 1:

_____ reserves allow for future situations that are unpredictable.

A. Contingency
B. Financial
✓ C. Management
D. Baseline

Question 2: **Poll Code: 6CKSE4**

You are preparing a cost estimate for a building based on its location, purpose, number of square feet, and other characteristics. What cost-estimating technique are you using?

- ✓ A. parametric
- B. analogous
- C. bottom-up
- D. top-down

Recap from Video 2:

- Planning cost management involves determining the policies, procedures, and documentation that will be used for planning, executing, and controlling project cost.
- The main output of this process is a cost management plan.
- Estimating costs is a very important part of project cost management.
- There are several types of cost estimates, including rough order of magnitude (ROM), budgetary, and definitive.
- Each type of estimate is done during different stages of the project life cycle, and each has a different level of accuracy.
- Several tools and techniques can help you develop cost estimates, including analogous estimating, bottom-up estimating, parametric estimating, and computerized tools.

Schwalbe, K.. (2015). Information Technology Project Management. (8e) Cengage Learning

Question 3: **Poll Code: 6CKSE4**

_____ involves allocating the project cost estimate to individual material resources or work items over time.

A. Reserve analysis

B. Life cycle costing

✓ C. Project cost budgeting

D. Earned value analysis

Question 4: **Poll Code: 6CKSE4**

_____ is a project performance measurement technique that integrates scope, time, and cost data.

A. Reserve analysis

B. Life cycle costing

C. Project cost budgeting

✓ D. Earned value management

Recap from Video 3:

- Determining the budget involves allocating costs to individual work items over time.
- It is important to understand how particular organizations prepare budgets so estimates are made accordingly.
- Controlling costs includes monitoring cost performance, reviewing changes, and notifying project stakeholders of changes related to costs.
- Earned value management is an important method used for measuring project performance.
- Earned value management integrates scope, cost, and schedule information.
- Project portfolio management allows organizations to collect and control an entire suite of projects or investments as one set of interrelated activities.

Schwalbe, K.. (2015). Information Technology Project Management. (8e) Cengage Learning

Question 5: **Poll Code: 6CKSE4**

If the actual cost for a WBS item is $1,500 and its earned value is $2,000, what is its cost variance, and is it under or over budget?

A. The cost variance is -$500, which is over budget.

B. The cost variance is -$500, which is under budget.

C. The cost variance is $500, which is over budget.

✓ D. The cost variance is $500, which is under budget.

Question 6: **Poll Code: 6CKSE4**

If a project is halfway completed, its schedule performance index is 110 percent, and its cost performance index is 95 percent, how is it progressing?

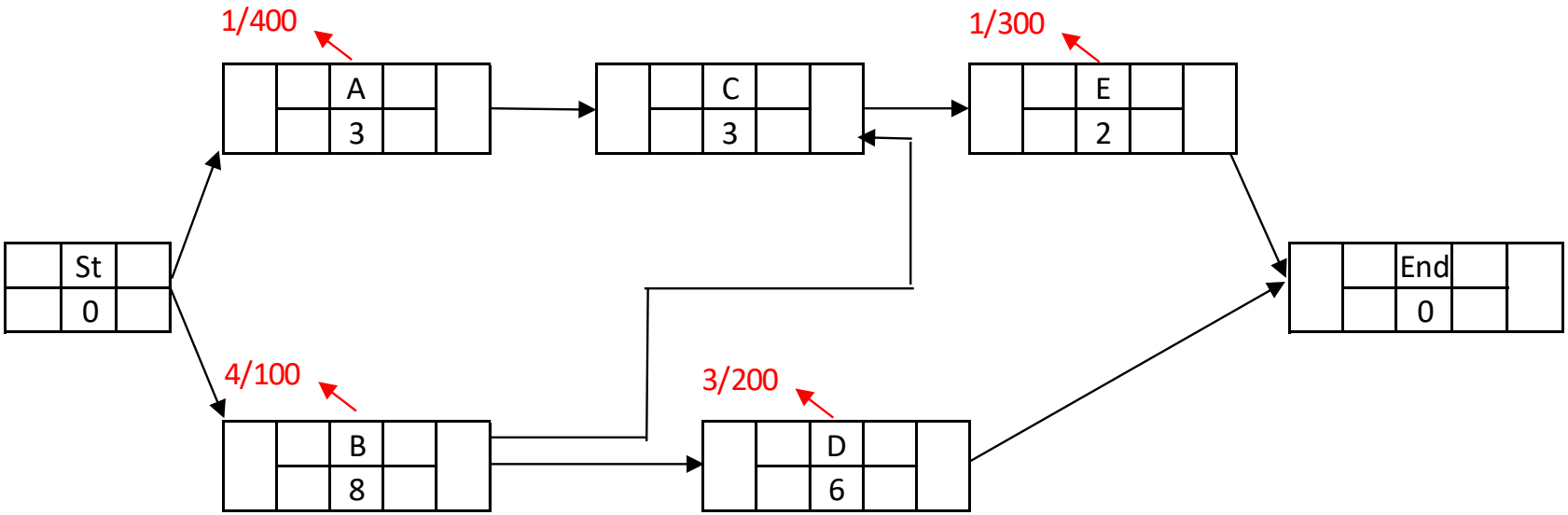
A. It is ahead of schedule and under budget.

✓ B. It is ahead of schedule and over budget.

C. It is behind schedule and under budget.

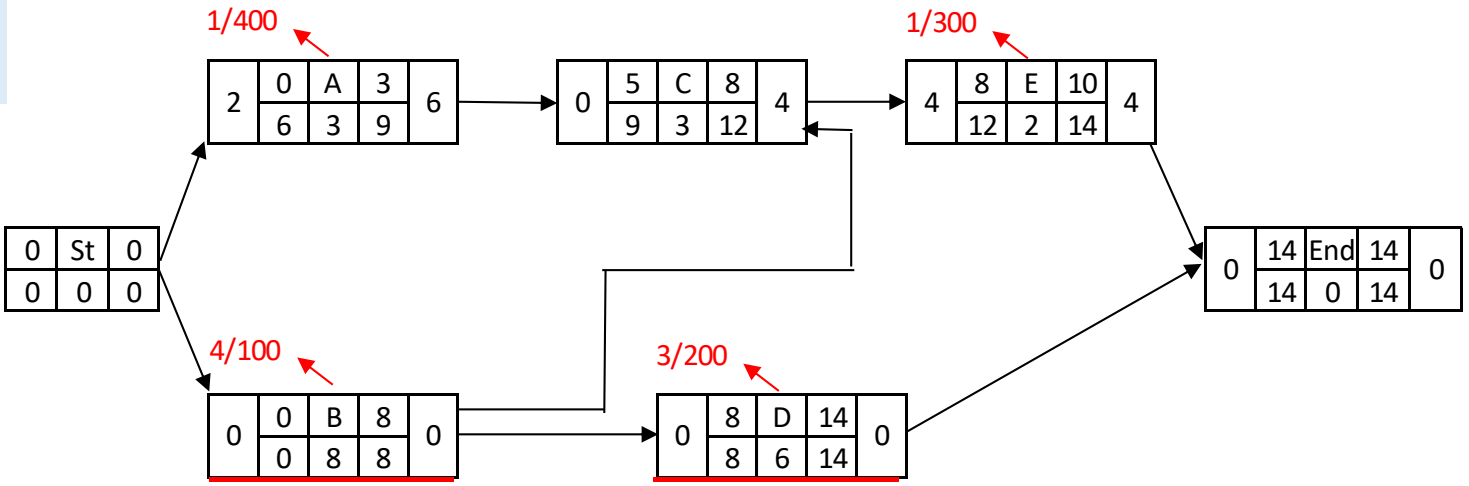
D. It is behind schedule and over budget.

Workshop Exercise – Project compression



First: Work out the All Normal calculation

All Normal
Critical Path: B - D
Project duration: 14 days



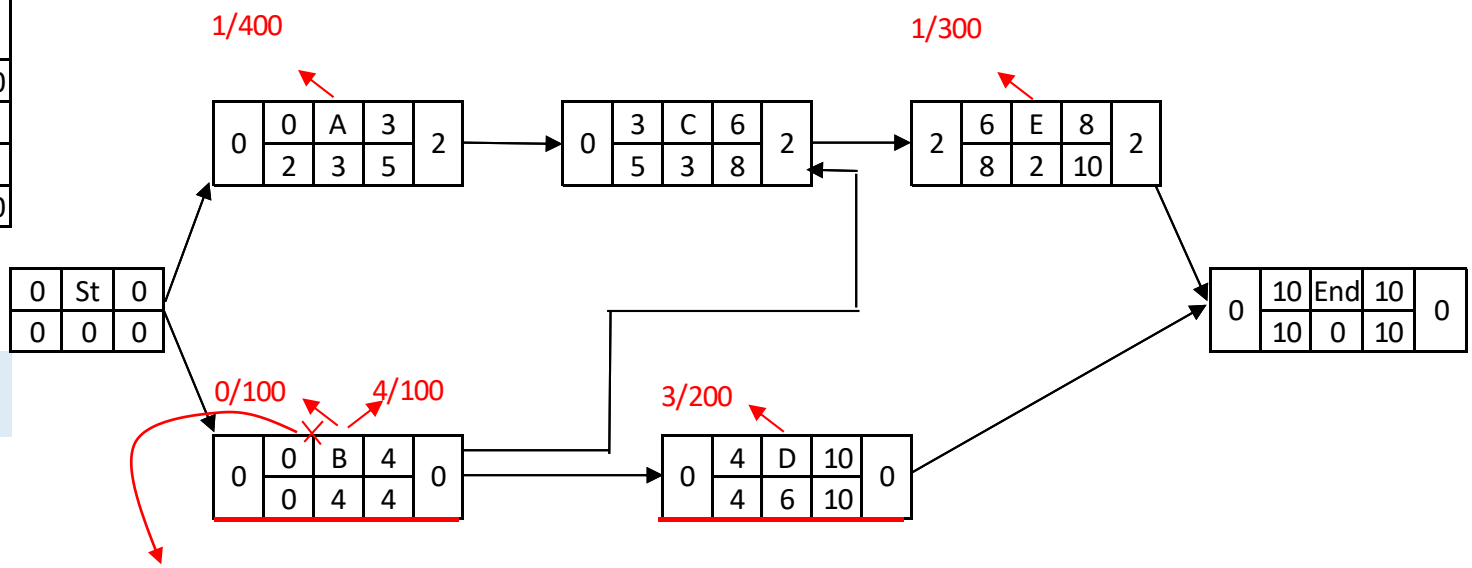
Project compression rules:

1. Crash the activity on the critical path that is cheapest to crash.
   - Activity B and D are on critical path → choose B because it's cheaper
2. Decide on number of days to crash. (Refer to previous slide)
   - Minimum of:
     - Smallest total float in parallel chain (A-C-E) = 4 days ;
     - Maximum number of days that activity B can be crashed = 4 days

1st compression:		
Activity crashed	Duration crashed	Cost increase
B	4	4 x 100
	Total:	400

Critical Path: B - D
Project duration: 10 days

After first compression:

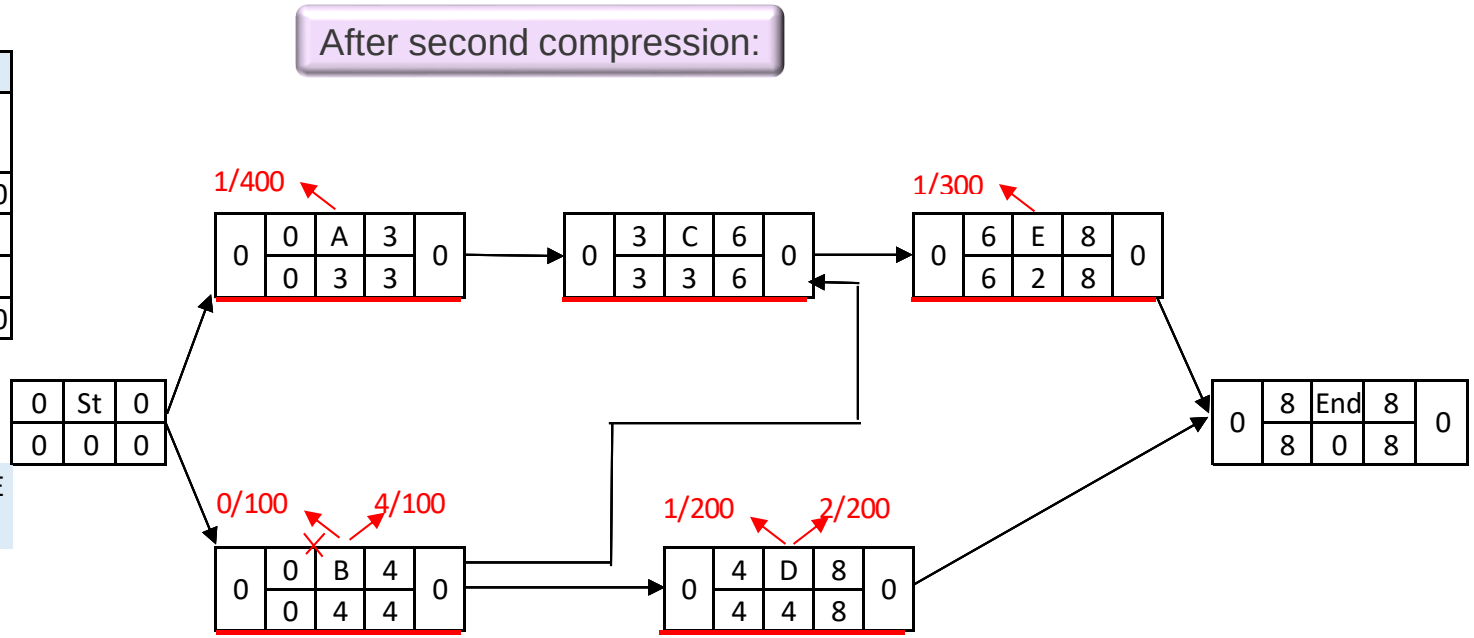


2nd compression…

1. If we want to reduce the project duration further, we can only crash activity D (the only one on critical path that can be crashed).
2. Decide on number of days to crash. (Refer to previous slide)
   - **Minimum** of:
     - Smallest total float in parallel chain (A-C-E) = **2 days** ;
     - Maximum number of days that activity D can be crashed = **3 days**

2nd compression:		
Activity crashed	Duration crashed	Cost increase
D	2	2 x 200
	Total:	400

Critical Path: B-D and A-C-E
Project duration: 8 days



3rd compression…

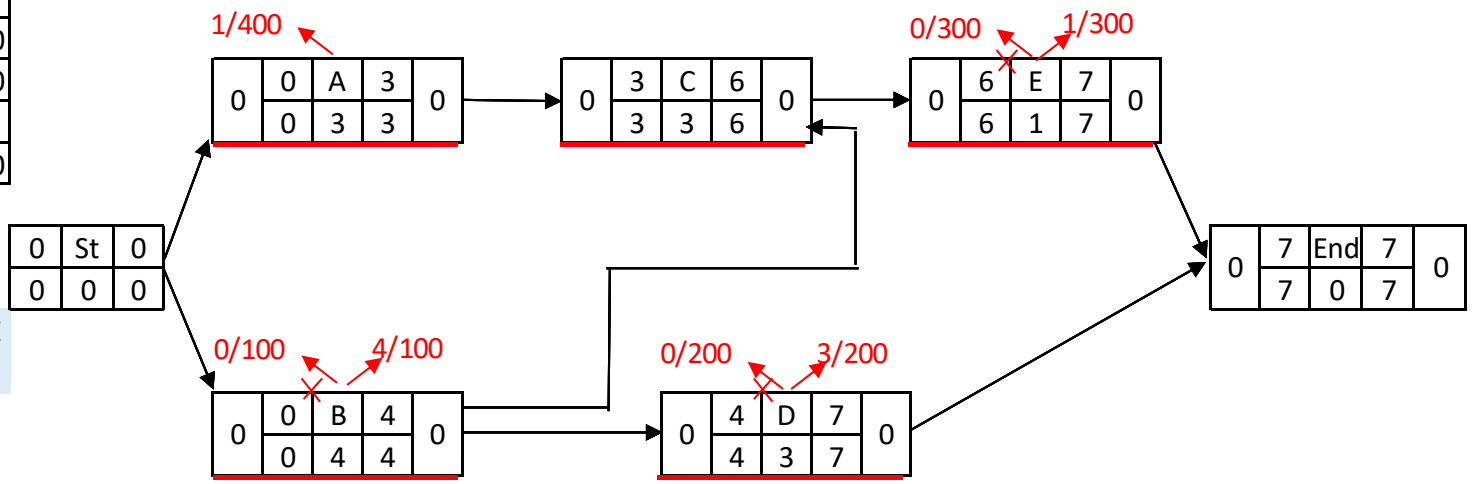
After the 2nd compression, we have 2 critical paths (B-D and A-C-E).

Rule: We must compress the same number of days for all parallel chains in the critical path.

- For chain B-D: we can only compress activity D by 1 day
- So, should compress I day on chain A-C-E. We can compress either A or E, but E is cheaper.

After third compression:

3rd compression:		
Activity crashed	Duration crashed	Cost increase
D	1	200
E	1	300
	Total:	500



Critical Path: B-D and A-C-E
Project duration: 7 days

Can we compress any further?

- What's the stopping point?
  - When you've reached the duration that you want; or
  - When there's no activity in the critical path that you can crash.

- In the example, the project duration is 14 days in the original (All Normal) state – slide 13.
- After 1st compression, we can reduce project duration by 4 days at an additional cost of $100 per day
- After 3rd compression, project duration is reduced to 7 days with a total cost of $1300.
- We can't compress any further as one of the critical path (B-D) is fully crashed (i.e. can't crash any activity on this chain).