
Research Projects

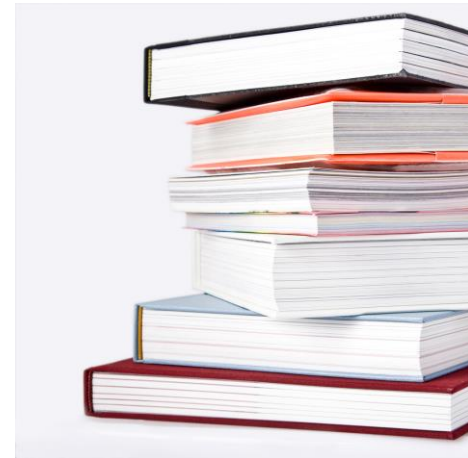


Choosing your Project

- Choose a project you're interested in.
- If you're enthusiastic about it you'll put more effort in

Literature Review

- Start from first principles
- Be thorough
- Make sure you really understand everything in your literature review.
- Your viva can include questions on this as well!
- Set up a system for your references
- Write and talk to people who have done similar research



Engagement

- Talk to colleagues about your work
- Submit papers to conferences (postgraduate degrees)
- Take part in research groups (if available)

Research Methods

How do I decide what methods to use?

- Use British/ EU / International standards
- Read the literature to look at what other people have done
- Talk to colleagues / other researchers
- Ask for advice

Research Methods

Be adaptable

- Research isn't necessarily a liner process
- Obstacles, unexpected data may need you to change track
- This is good!

Research Methods

Ask yourself why?

- Why am I conducting the data collection in this way?
- Why am I writing this?
- You need to be able to justify everything you have done and written.
- Because my supervisor said do it in this way is not enough!

Research Methods

Confidence

- What confidence can you have in the data produced from your research?
- How much error is there?
- What factors are influencing your data?
- How do you take them into account?
- Can you control or limit these factors?
- Cause or correlation?

Writing up

- Conclusions - first or last?
- Contents - first or last?
- Abstract - first or last?
- Allow enough time

Viva

- Scary!
- Enjoy it!
- If your viva involves a presentation – stick to the guidelines on time and content!



Project Planning

Project Planning

- Plan your project
- Agree deadlines with your supervisor
- Set up regular meetings with your supervisor – linked to deadlines, produce a presentation for this meeting
- Back up your work
- Start data collection as soon as you can.

Project Planning

- Be realistic
- Write up as you go along
- Write your literature review by the end of the first year

Summary

- Choose your topic well
- Treat it like a job
- Plan it
- Engage with others
- Be thorough with your research methods
- Ask yourself why?
- Leave plenty of time to write up

Project Planning 2

What is a Project?



A definition:

“A temporary endeavor undertaken to accomplish a unique purpose”

Project Planning

Factors common to successful projects:

1. User Involvement 15.9%
2. Executive Management Support 13.9%
3. Clear Statement of Requirements 13.0%
4. Proper Planning 9.6%
5. Realistic Expectations 8.2%
6. Smaller Project Milestones 7.7%
7. Competent Staff 7.2%
8. Ownership 5.3%
9. Clear Vision & Objectives 2.9%
10. Hard-Working, Focused Staff 2.4%
- Other 13.9%

Project Planning

Common Characteristics

**A target
outcome**

**A defined life
span**

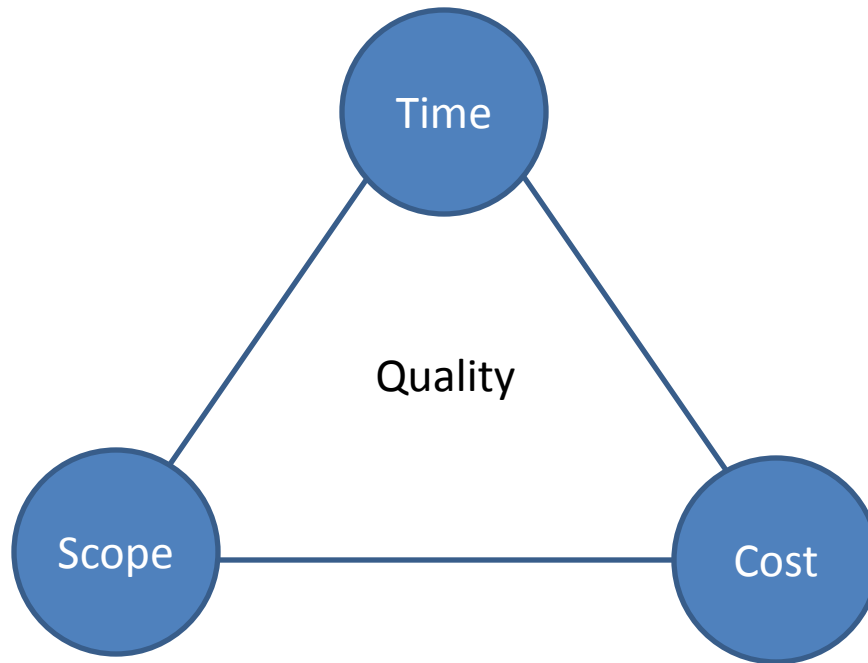
**Cross
organisational
participation**

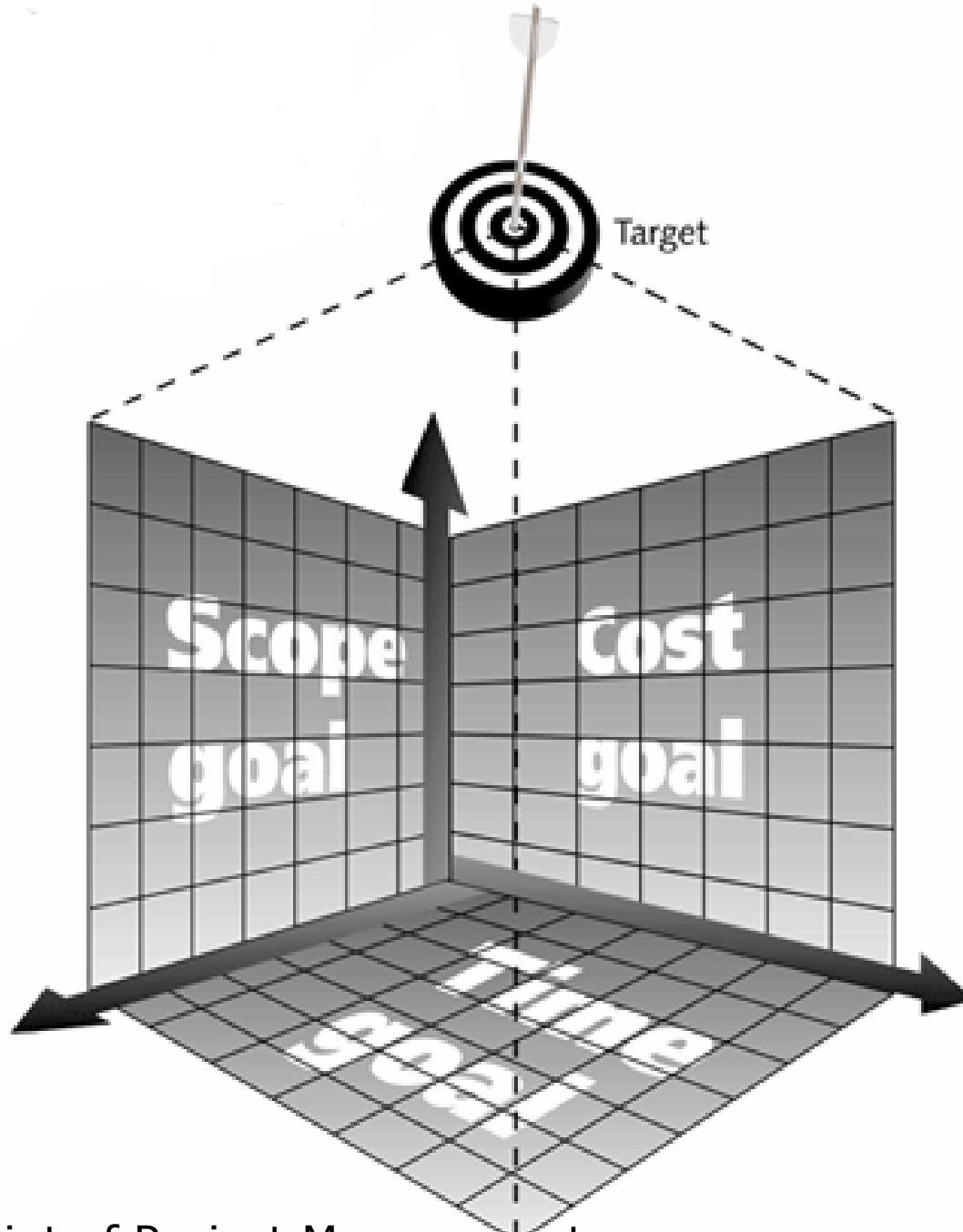
New or unique

**Time, Cost and
performance
requirements**

Project Planning

Quadruple Constraint



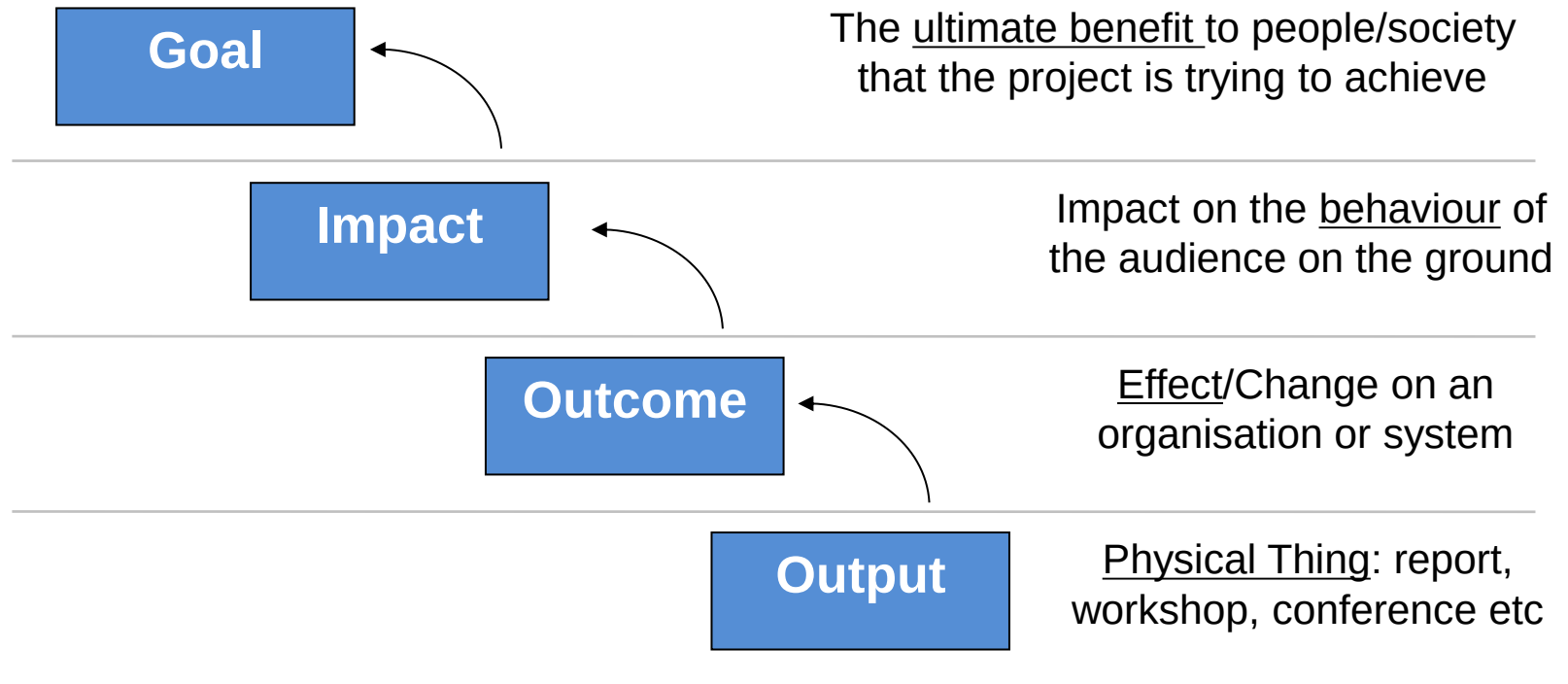


Triple Constraint of Project Management
(Schwalbe, 2006, p8)

So how are you going to plan your project?

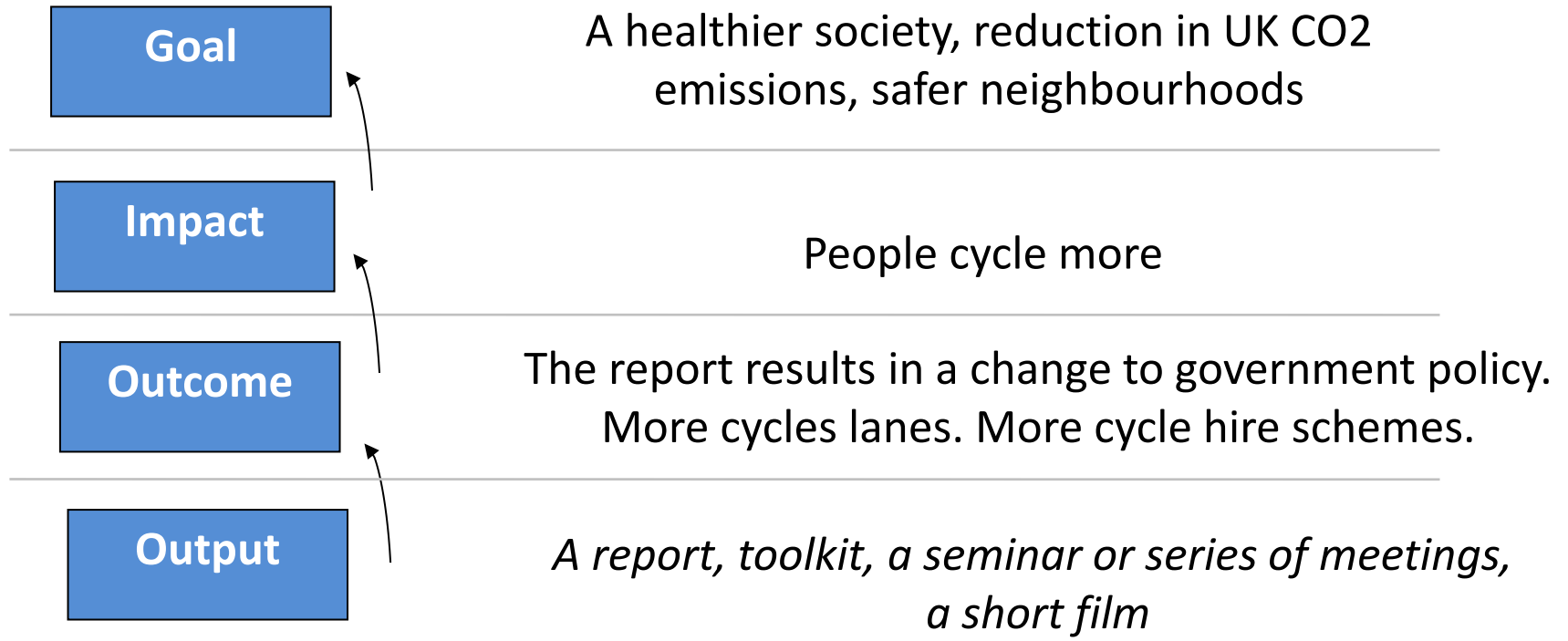
Project Planning

Outputs, Outcomes, Impacts and Goals



Project Planning

Outputs, Outcomes, Impacts and Goals



Project Planning

Minimisation of Construction Waste



Project Planning

Outputs, Outcomes, Impacts and Goals

There is a clear path to success through these four definitions.

The outputs must achieve the outcomes which in turn must have an impact to achieve the goal.

Project Planning

So how are you going to plan your project?

- List the activities within your project
- Assign timescales for each activity
- Identify which sequence the activities need to be completed in
- Identify earliest start times

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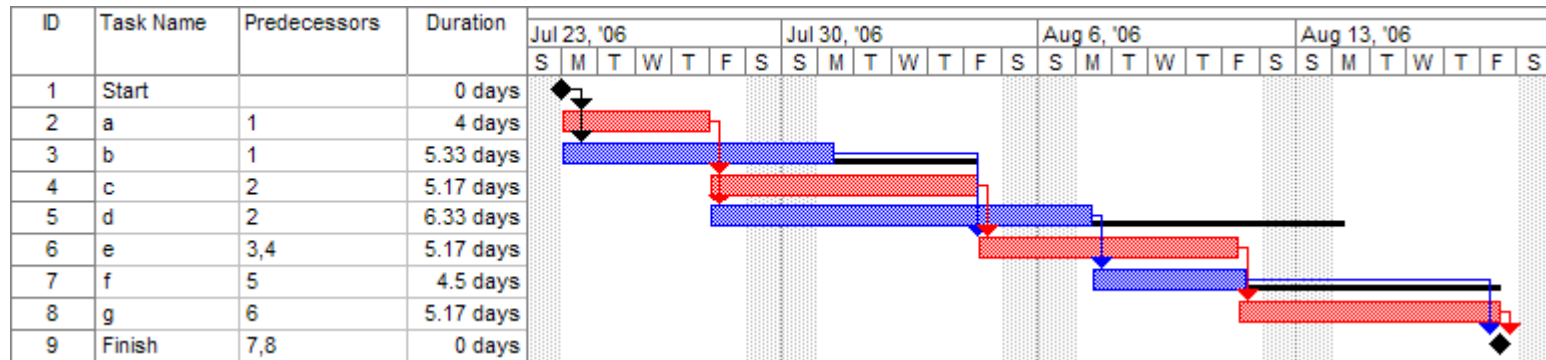
Project Planning

Gantt Chart

Task	Earliest Start	Length	Type	Dependent Upon
A.				
B.				
C.				

Project Planning

Gantt Chart



Project Planning

	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
			Dec-08					Jan-09				Feb-09				Mar-09				Apr-09					May-09			
Phase 1 - Framework Development																												
Research																												
Sector Research																												
General																												
Transport																												
Built Environment																												
Waste (Hayley)																												
EU Connections (Liz Mills)																												
Meetings																												
Regional Transport Planners																												
Transport Workshop																												
Built Environment Wrksp(Jan 23rd existing, Mar 9th Z C Hub)																												
Waste Workshop (Hayley investigating)																												
Defining a Low Carbon Region																												
SD Panel																												
Commisioners																												
Phase 2 - Reporting																												
Draft final report																												
Final report submitted																												
Steering Group meetings																												
Phase 3 - Communications																												
Communication and advocacy of Report																												

Project Planning

Critical Path

- Helps with scheduling complex projects
- developed in the late 1940's
- Helps ensure projects are completed in the minimum time

Project Planning

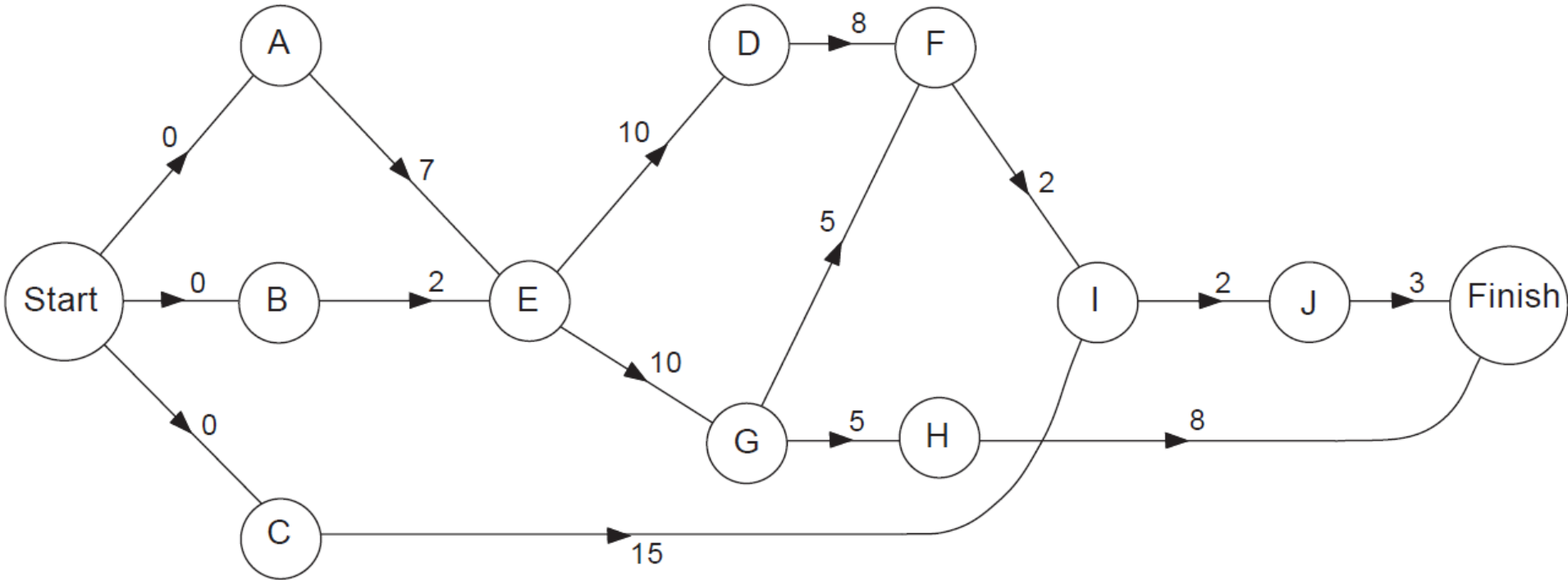
	activity	duration (in days)
A	prepare foundations	7
B	make and position door frame	2
C	lay drains, floor base and screed	15
D	install services and fittings	8
E	erect walls	10
F	plaster ceiling	2
G	erect roof	5
H	install door and windows	8
I	fit gutters and pipes	2
J	paint outside	3



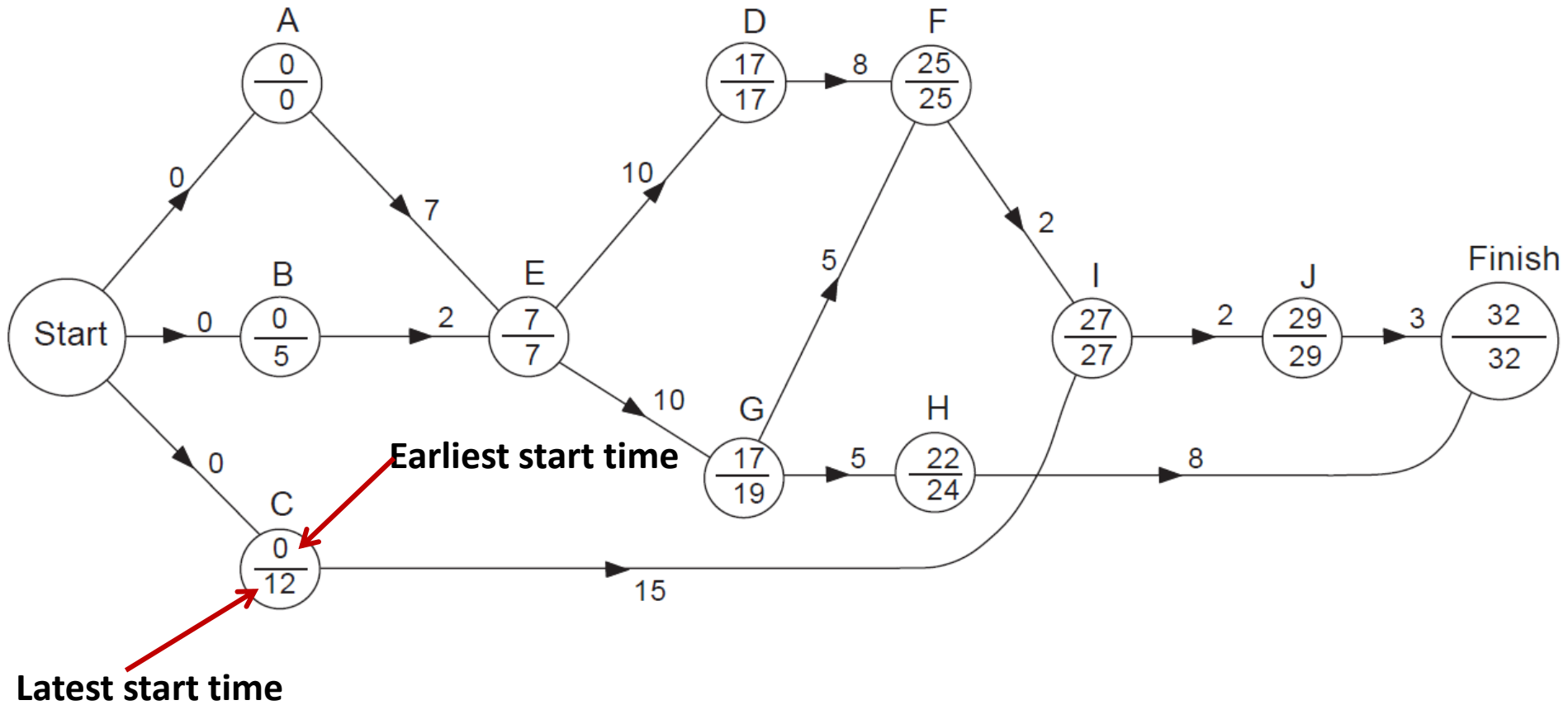
Project Planning

activity		duration (in days)	
A	prepare foundations	7	
B	make and position door frame	2	
C	lay drains, floor base and screed	15	
D	install services and fittings	8	D must follow E
E	erect walls	10	E must follow A and B
F	plaster ceiling	2	F must follow D and G
G	erect roof	5	G must follow E
H	install door and windows	8	H must follow G
I	fit gutters and pipes	2	I must follow C and F
J	paint outside	3	J must follow I.

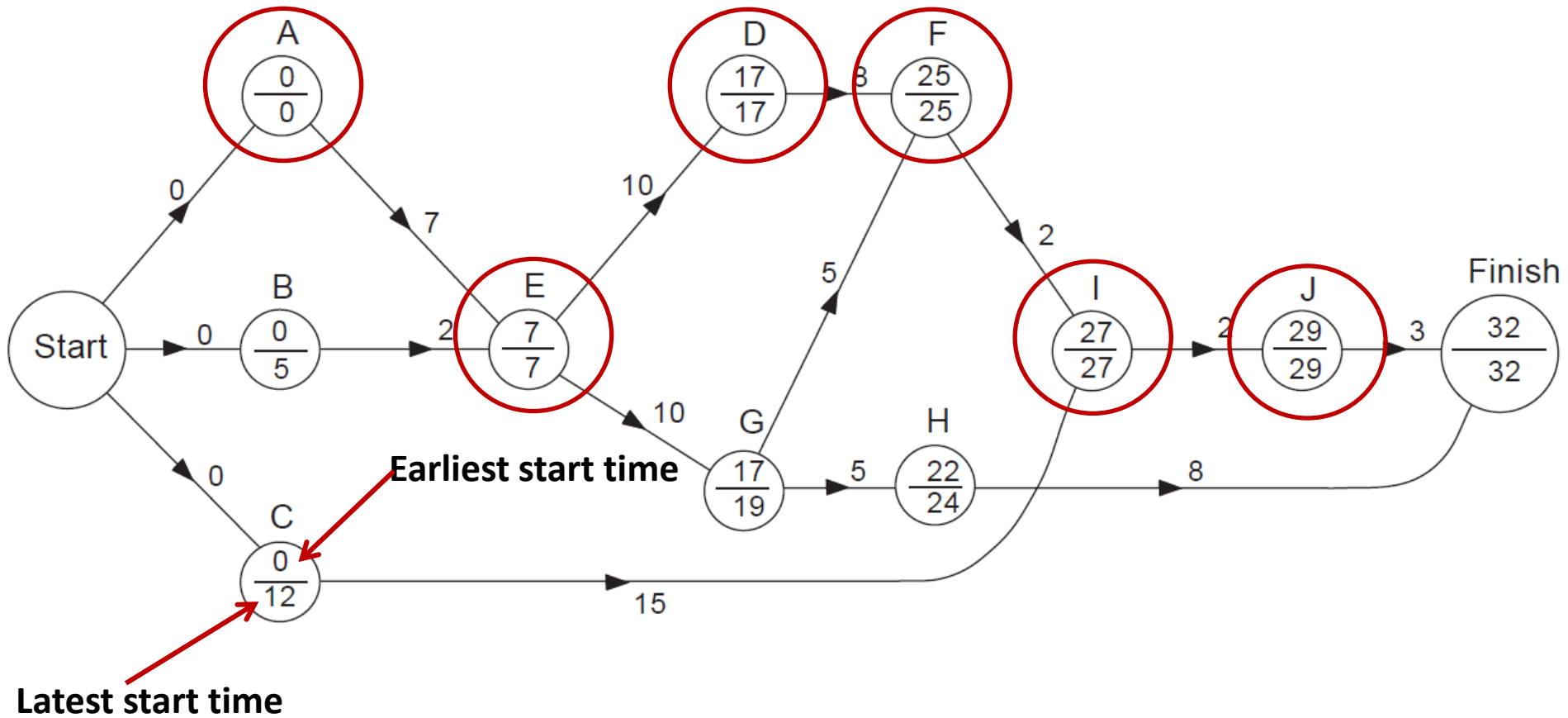
Project Planning



Project Planning



Project Planning



Project Planning

activity		time (mins)	
A	preparation of the frame	9	
B	mounting and aligning the front wheel	7	B must be after A
C	mounting and aligning the back wheel	7	C must be after A
D	attaching the chain wheel to the crank	2	D must be after A
E	attaching the chain wheel and crank to the frame	2	E must be after D
F	mounting the right pedal	8	F must be after D and E
G	mounting the left pedal	8	G must be after D and E
H	final attachments such as saddle, chain, stickers, etc.	21	H must be after A-G

Summary

- Importance of Outputs, Outcomes, Impacts and Goals
- Gantt Charts
- Critical path Analysis

➤ Gavin Bunting