

Mod. 3: Project Planning



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Estimating Techniques

- ◆ Analogous Estimating
- ◆ Definitive Estimating
- ◆ Parametric Modeling

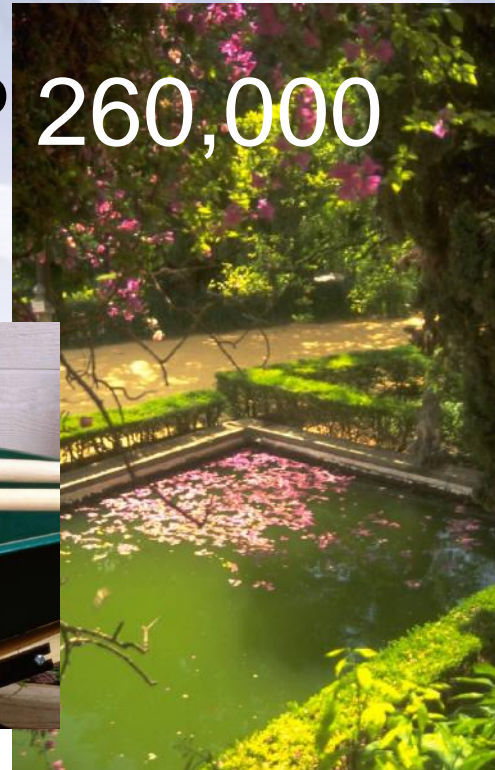


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Analogous Estimating

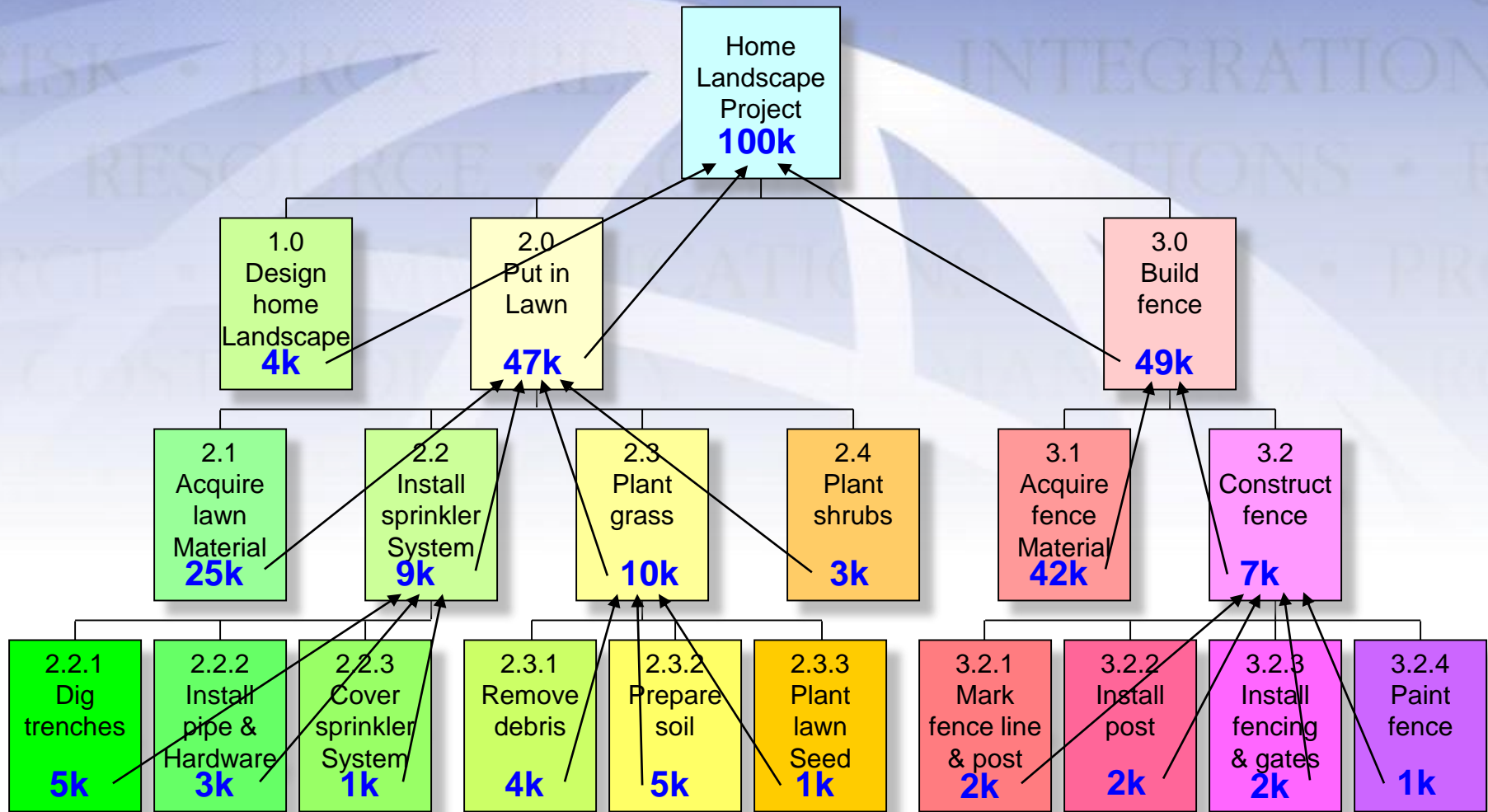
500 m²:PhP 650,000

≈ 200 m²:PhP 260,000



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Definitive Estimating



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Parametric Estimating

Component	Office Buildings			Secondary Schools		
	Low \$/SF	Median \$/SF	High \$/SF	Low \$/SF	Median \$/SF	High \$/SF
Foundation	3.95	4.00	4.80	1.35	1.85	2.70
Floors on grade	3.10	3.15	3.90	3.65	4.40	6.00
Superstructure	14.90	16.90	20.25	10.95	12.30	17.25
Roofing	0.20	0.25	0.30	1.70	2.05	2.45
Exterior walls	4.90	9.75	13.00	3.75	5.55	8.00
Partitions	4.35	5.30	7.05	5.90	6.55	8.50
Wall finishes	2.35	3.75	5.00	3.05	3.40	5.15
Floor finishes	2.05	3.90	5.15	3.10	3.95	5.25
Ceiling finishes	1.55	2.80	3.75	3.20	3.65	4.65
Conveying systems	5.55	6.70	8.25	0.00	0.00	0.00
Specialties	0.65	0.80	2.65	1.70	1.90	2.60
Fixed equipment	1.05	2.80	3.75	2.85	3.35	6.00
Heat/vent/air cond.	8.85	9.50	12.20	9.05	10.45	14.45
Plumbing	3.50	3.80	4.85	5.05	6.00	9.20
Electrical	4.60	4.75	6.25	10.25	12.00	16.50
Total \$/SF	\$ 61.55	\$ 78.15	\$ 101.15	\$ 65.55	\$ 77.40	\$ 108.70

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Estimating Exercise

Your manager requested you to calculate how much it would cost to transfer 135 units of PCs to a new location. To help you in your computation, he gave you the table below showing the historical data (cost updated to current period) of similar projects done by your business unit during the last three years.

Project	Total Cost	No. of Units	Unit Cost
1	1,387,500	150	9,250
2	896,000	80	11,200
3	1,797,000	120	14,975
4	1,107,000	90	12,300
5	590,400	60	9,840
6	1,903,000	220	8,650
7	889,000	70	12,700
8	1,615,500	180	8,975

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Project Scheduling

Logical Relationships

- ◆ Mandatory (hard logic)
- ◆ Discretionary (soft logic & preferential logic)
- ◆ External dependencies

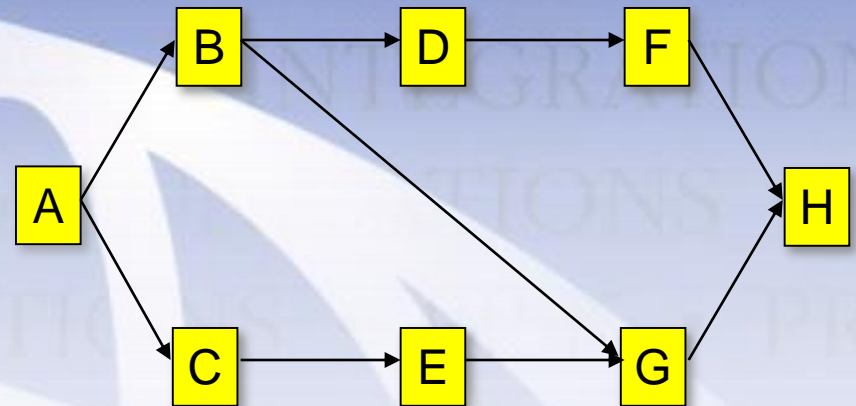


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Precedence Diagramming Method

Types of Dependency

- ◆ Finish to Start
- ◆ Finish to Finish
- ◆ Start to Start



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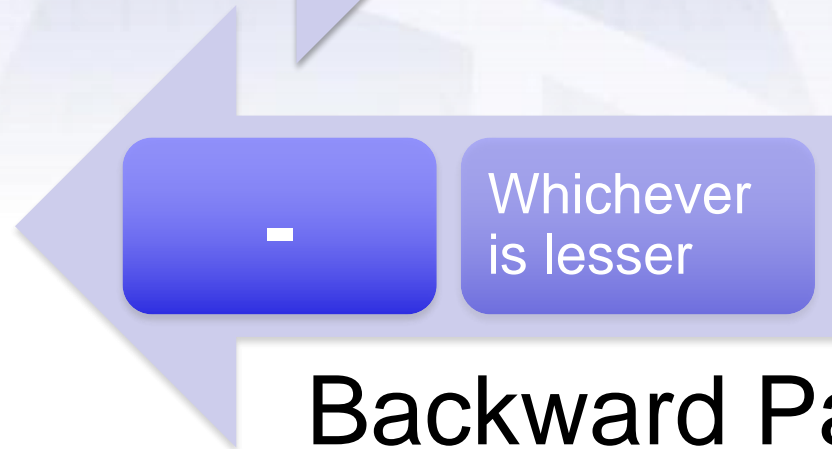
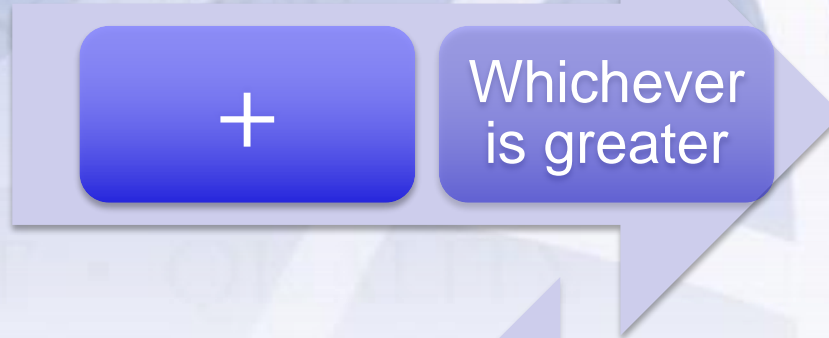
Network Analysis

Activity	Predecessor	Duration
A Design Hardware	-	2 mons
B Build Hardware	A	2
C Test Hardware	B, D	0.5
D Procure Test Facility	A	1
E Design Software	-	3
F Code Software	E	2
G Design Tests	E	0.5
H Test System	C, F, G	1

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Network Analysis Rule

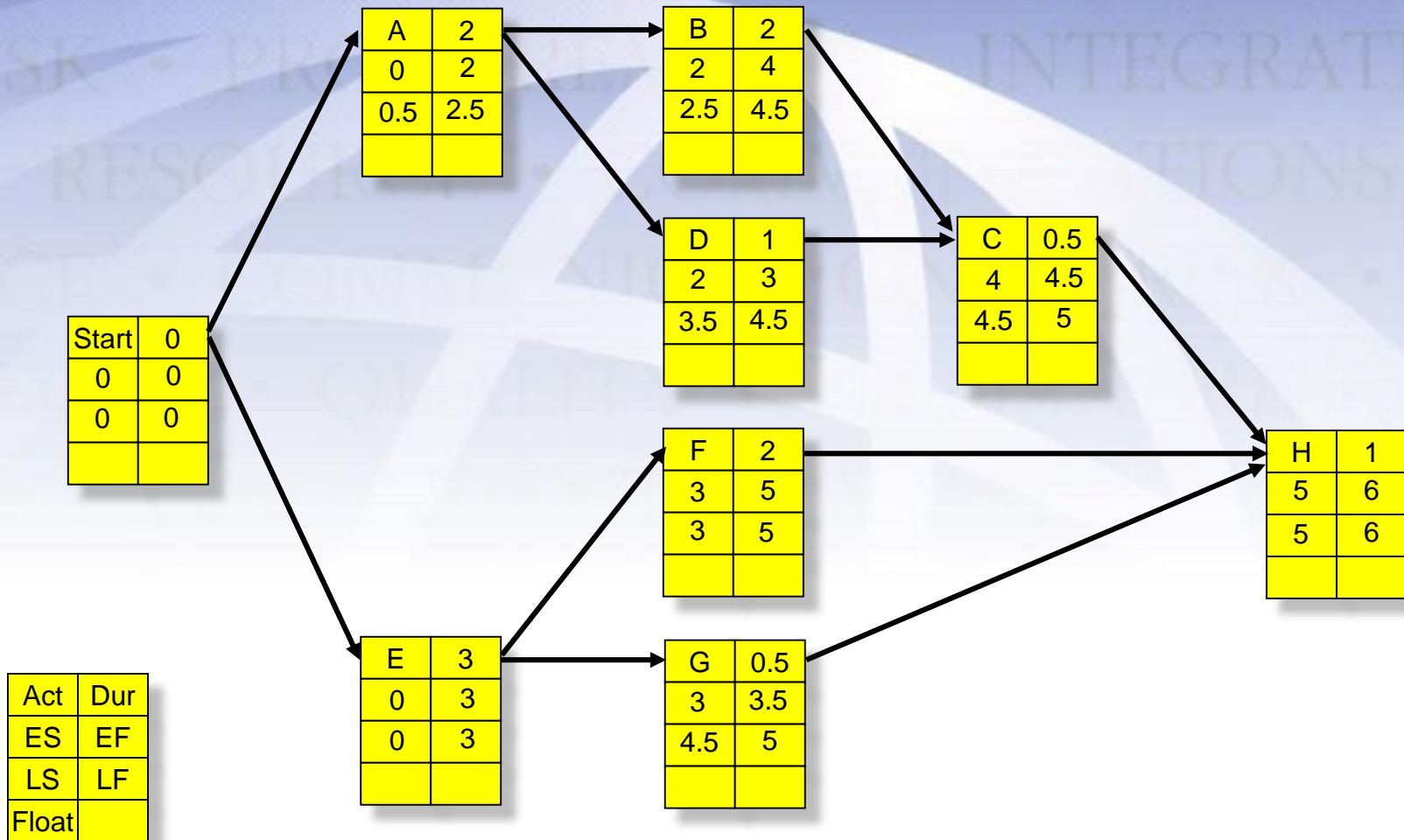
Forward Pass



Backward Pass

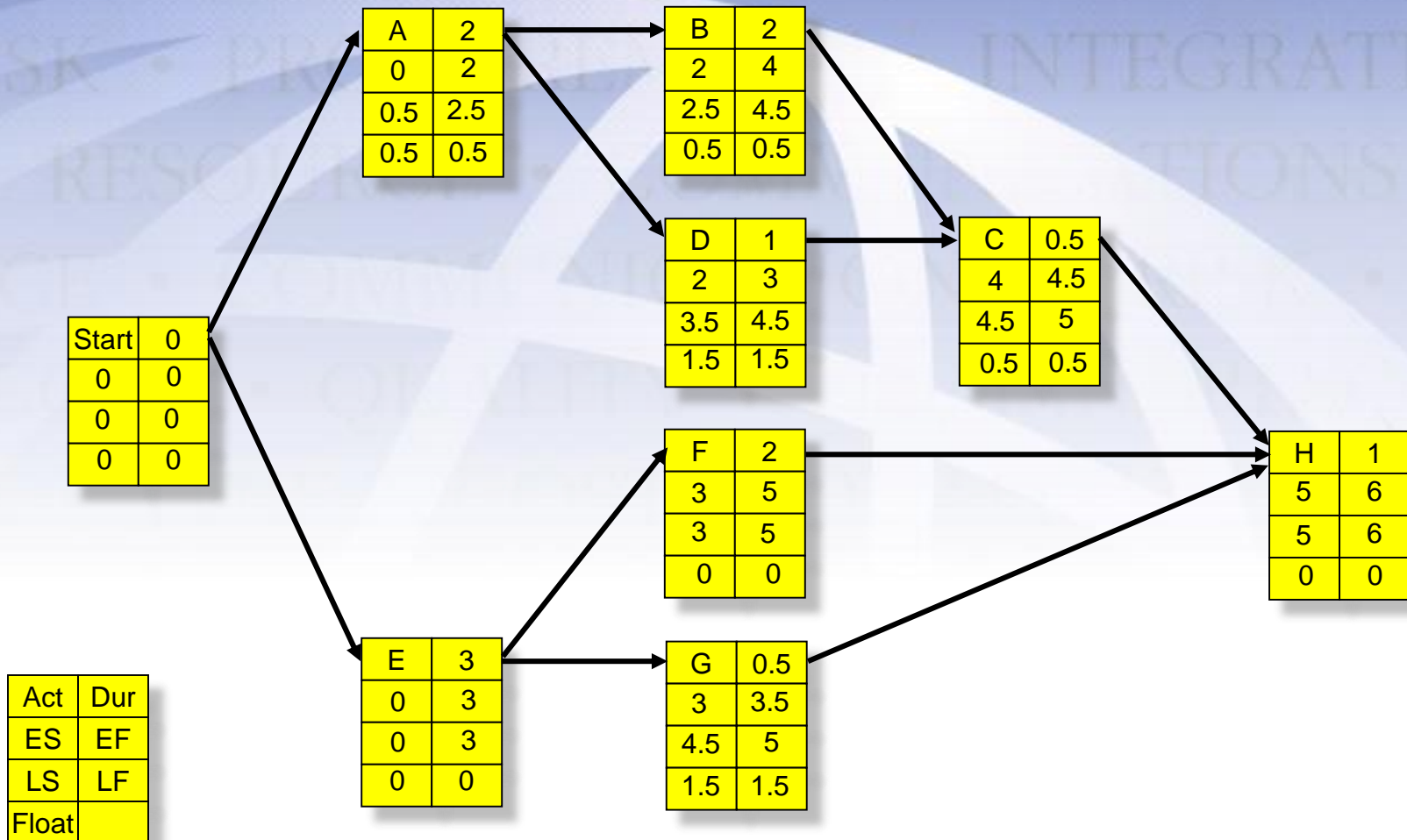
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Step 1: Draw the PDM Network



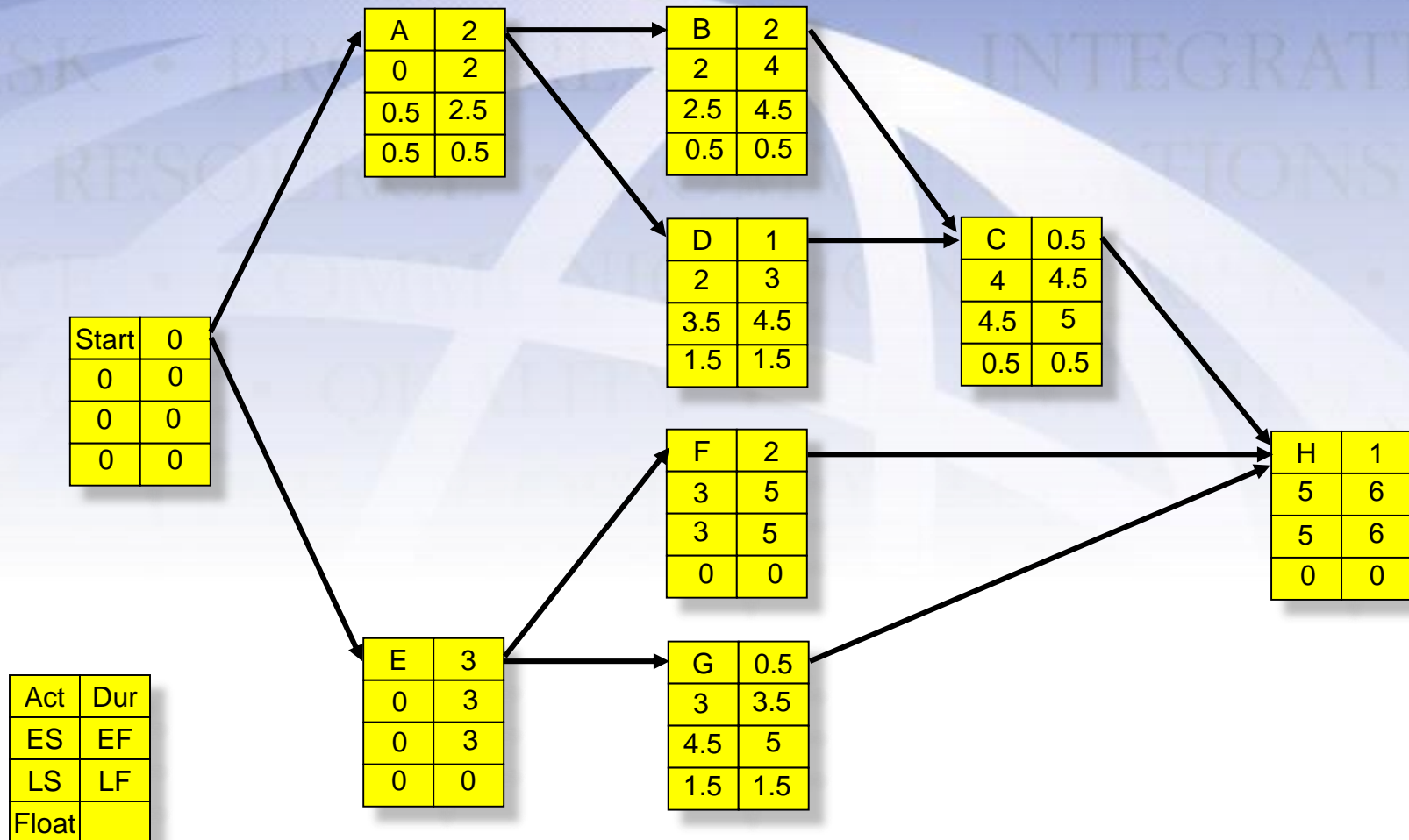
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Step 2: Compute for Float



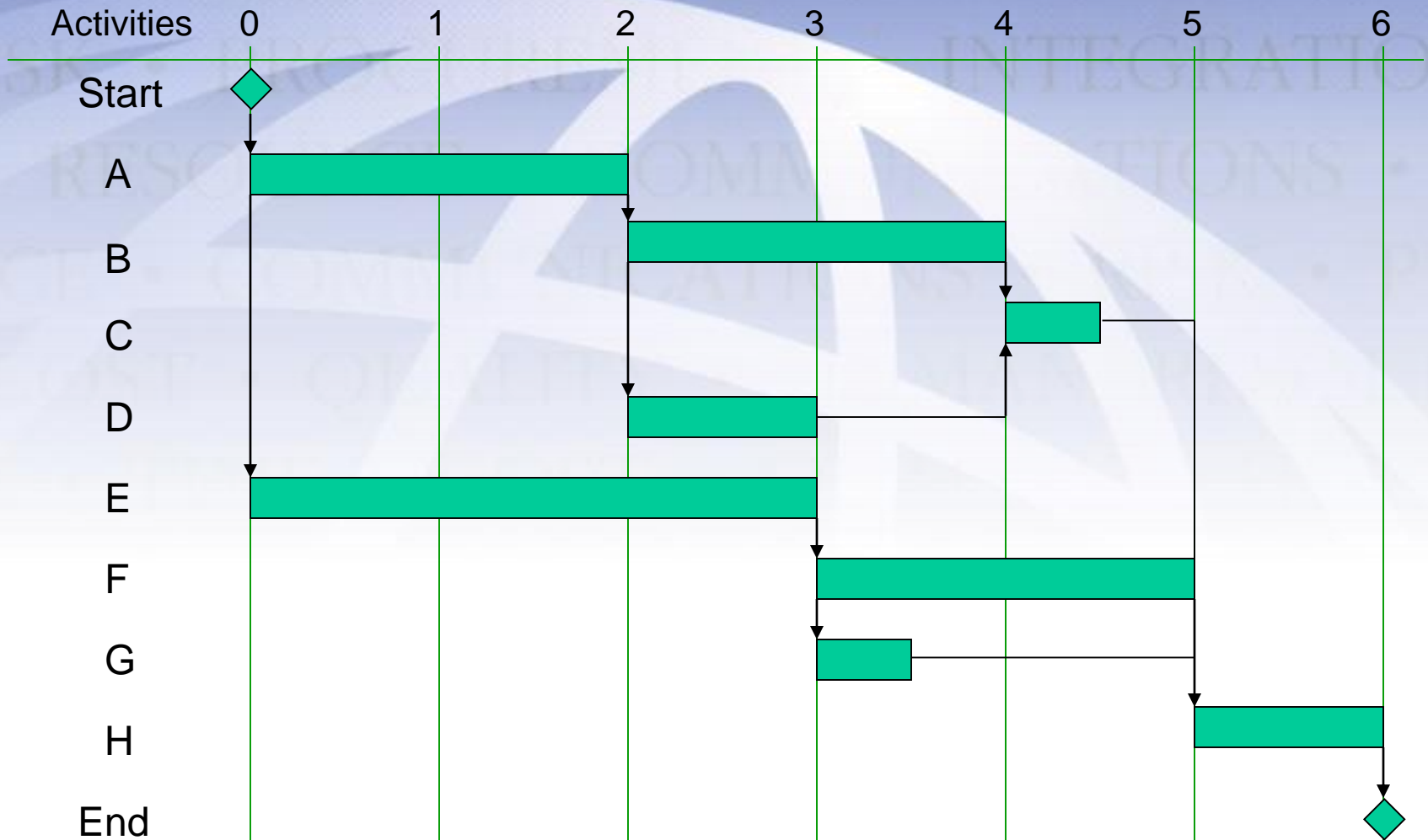
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Step 3: Draw the Critical Path



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The Gantt Chart



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Project Baseline

Types of Cost

◆ Direct Cost

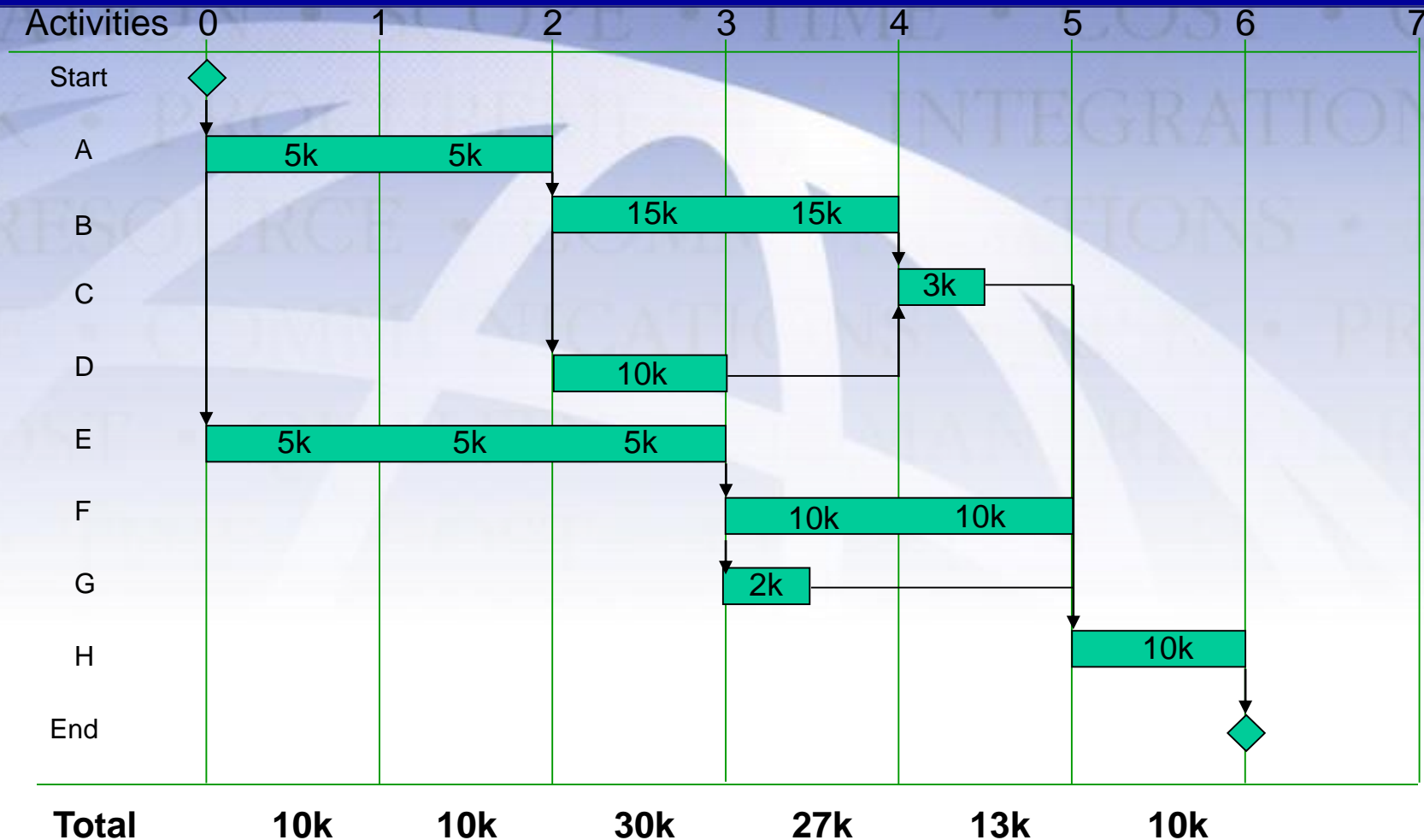
- Labor
- Materials
- Supplies and Equipment

◆ Indirect Cost

- Fringe Benefits
- Facilities
- General and Administrative

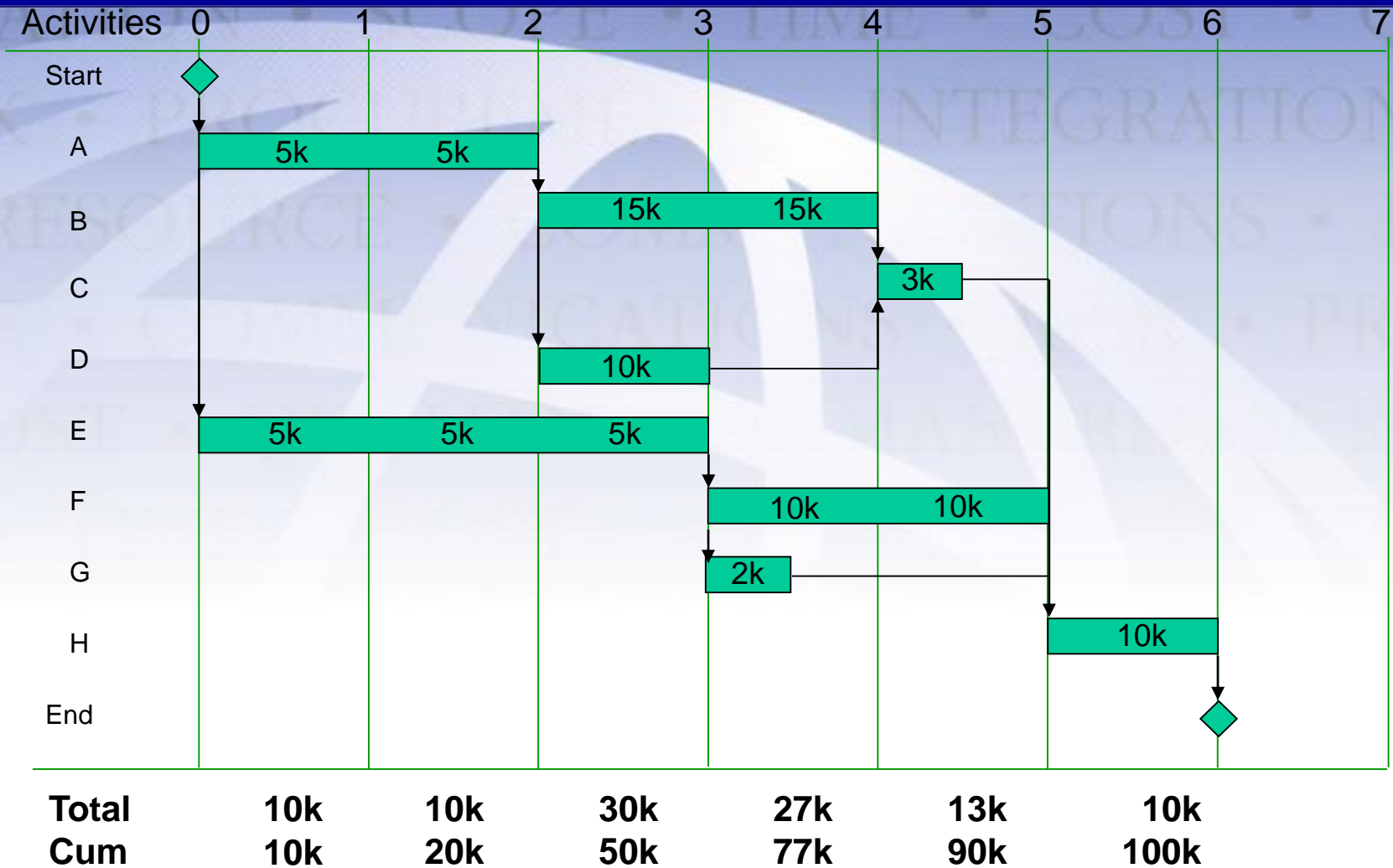
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Project Cost Distribution



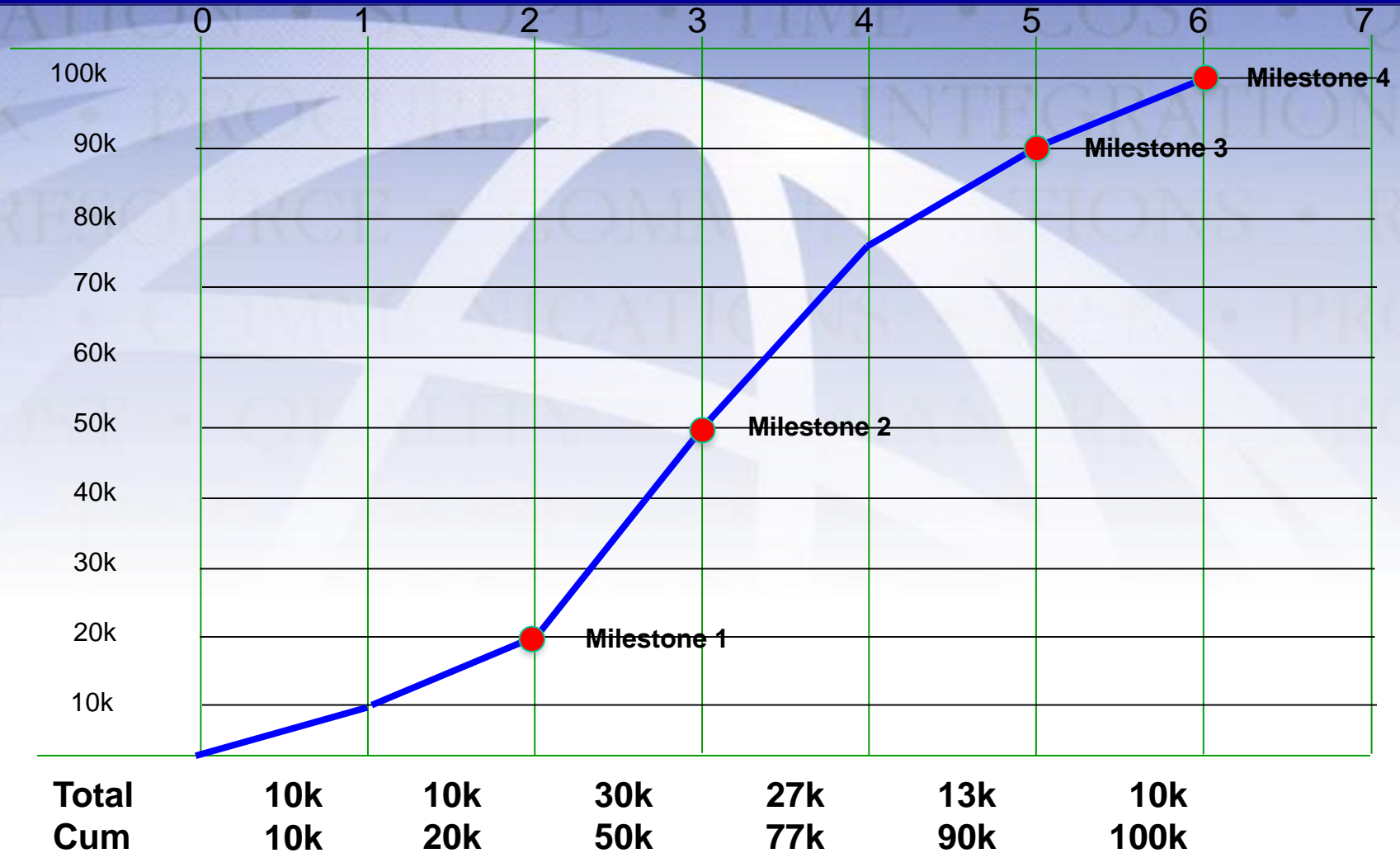
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Project Cash Flow



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Project S-Curve



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End of Presentation



Project Management in the Context of GMS Cooperation & Integration
6 – 10 Jan. 2016, Mekong Institute, Khon kaen, Thailand



Capacity Development for Regional Cooperation and Integration