

① Present value (PV) =  $\frac{FV}{(1+r)^n}$

② Net present value (NPV) = Income - Cost

Range estimates:

① Rough Order of magnitude (ROM): -25 to +75

② Budget Estimate : -10 to +25

③ Definitive Estimate : ± 10 sometimes -5 to +10

Evm:

Cost Variance (CV) = EV - AC

Sch Variance (SV) = EV - PV

CPI =  $\frac{EV}{AC} > 1$  SPI =  $\frac{EV}{PV} > 1$  good

Em =  $P \times I$   
communication channels =  $\frac{n(n-1)}{2}$

① EAC = AC + Bottom up

③ EAC = AC + (BAC - EV)

② EAC = ~~AC~~ +  $\frac{BAC}{CPI}$

④ EAC = AC +  $\left( \frac{BAC - EV}{CPI \times SPI^2} \right)$

TCPI =  $\frac{BAC - EV}{BAC - AC} < 1$  good

EIC = EAC - AC

VAC = BAC - EAC

Juran 80/20 rule

quality = fitness for use

top management involvement

Deming

PDCA cycle

14 points of TQM

Crosby

Quality = conformance to req.

cost of poor quality

zero defects

± 1σ 68.27%

± 3σ 99.73%

± 6σ 99.9999998 1 in a million

ISTCQACRPS  
4 5 6 7 8 9 10 11 12 13

3 - PROJECT MANAGEMENT PROCESSES

Table 3-1. Project Management Process Group and Knowledge Area Mapping

Knowledge Areas	Project Management Process Groups					
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group	
I S T C Q HR C R P S 4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work	4.4 Monitor and Control Project Work 4.5 Perform Integrated Change Control	4.6 Close Project or Phase	6
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope		6
6. Project Time Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Resources 6.5 Estimate Activity Durations 6.6 Develop Schedule		6.7 Control Schedule		7
7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs		4
8. Project Quality Management		8.1 Plan Quality Management	8.2 Perform Quality Assurance	8.3 Control Quality		3
9. Project Human Resource Management		9.1 Plan Human Resource Management	9.2 Acquire Project Team 9.3 Develop Project Team 9.4 Manage Project Team			4
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Control Communications		3
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses		11.6 Control Risks		6
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	12.4 Close Procurements	4
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Management	13.3 Manage Stakeholder Engagement	13.4 Control Stakeholder Engagement		4

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