



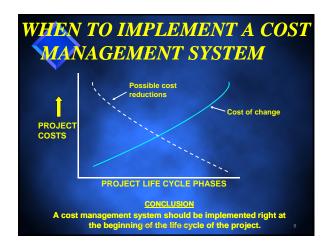




Cost Control Requirements Measure resources consumed Measure status and accomplishments Compare measurements to projections and standards Provide the basis for diagnosis and replanning

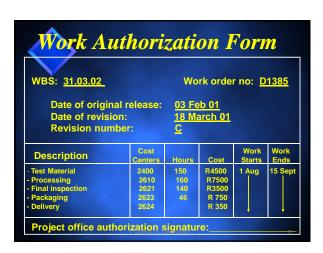
* Thorough planning of the work to be performed to complete the project * Good estimating of time, labor, and costs * Clear communication of the scope of required tasks * A disciplined budget and authorizations of expenditures * Timely accounting of physical progress and cost expenditures * Periodic re-estimation of time and cost to complete remaining work

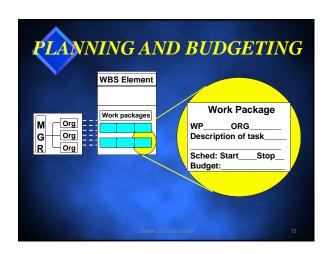






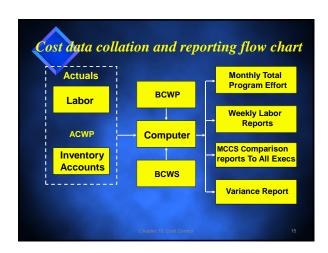


















VARIABLES FOR VARIANCE ANALYSIS

- * BUDGETED COST FOR WORKED SCHEDULED (BCWS) IS THE BUDGETED AMOUNT OF COST FOR WORD SCHEDULED TO BE ACCOMPLISHED PLUS THE AMOUNT OF LEVEL OF EFFORT OR APPORTIONED EFFORT SCHEDULED TO BE ACCOMPLISHED IN A GIVEN TIME PERIOD.
- * BUDGETED COST FOR WORK PERFORMED (BCWP) IS THE BUDGETED AMOUNT OF COST FOR COMPLETED WORD, PLUS BUDGETED FOR LEVEL OF EFFORT OR APPORTIONED EFFORT ACTIVITY COMPLETED WITHIN A GIVEN TIME PERIOD. THIS IS SOMETIMES REFERRED TO AS AN "EARNED VALUE."
- * ACTUAL COST FOR WORK PERFORMED (ACWP) IS THE AMOUNT REPORTED AS ACTUALLY EXPENDED IN COMPLETING THE WORK ACCOMPLISHED WITHIN A GIVEN TIME PERIOD.
- ♦ COST VARIANCE = BCWP ACWP
- * SCHEDULE/PERFORMANCE VARIANCE = BCWP BCWS

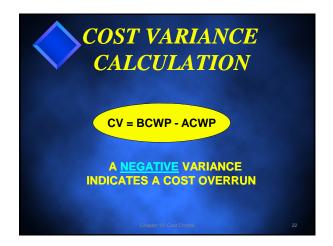
Variances

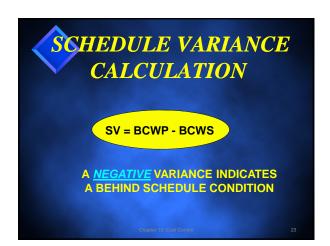
- The cost variance compares deviations only from the budget and does not provide a measure of comparison between work scheduled and work accomplished.
- The scheduling variance provides a comparison between planned and actual performance but does not include costs.

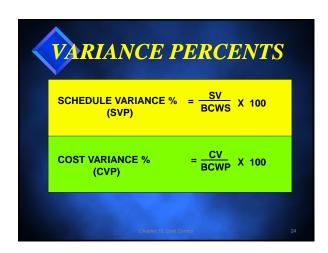
Measurements

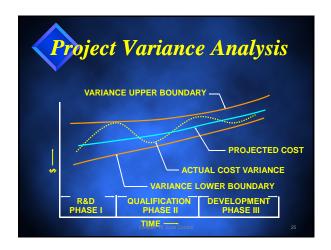
- Measurable efforts: discrete increments of work with a definable schedule for accomplishment, whose completion produces tangible results.
- Level of effort: work that does not lend itself to subdivision into discrete scheduled increments of work, such as project support and project control.

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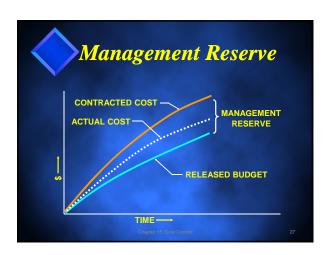












Information Requirements * Budgeted cost for work scheduled (BCWS) * Budgeted cost for work performed (BCWP) * Actual cost for work performed (ACWP) * Estimated cost at completion * Budgeted cost at completion * Cost and schedule variances/explanations * Traceability

Variance Analysis Questions

- * What is the problem causing the variance?
- What is the impact on time, cost, and performance?
- What is the impact on other efforts, if any?
- What corrective action is planned or under way?
- What are the expected results of the corrective action?

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VARIANCE REPORTING

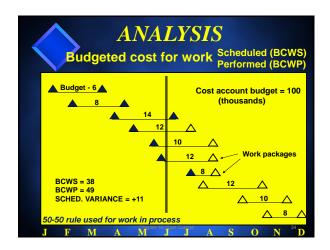
Variance reporting is accomplished at each reporting interval. However, the variance threshold reports are exception reports and occur only when the variances exceed the upper and lower boundaries of the project variances envelope.

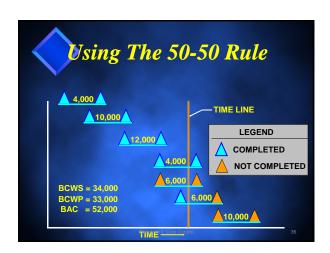
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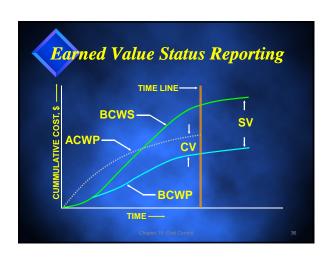


WBS/Des							As of		
Co:	st perf	ormano BCWS		ACWP	Varia SCHED	COST	At c Budget	omple EAC	tion Var.
Ionth to d	ate (\$)	BCWS	BCWF	ACWF	SCHED	COSI	Duuget	EAC	vai.
Contract (
date (\$k)									
Corrective	action	(includ	ling exp	pected i	recovery	date)			

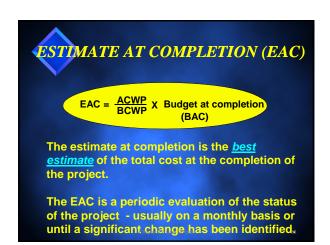
The 50/50 rule
HALF OF THE BUDGET FOR EACH ELEMENT IS RECORDED AT THE TIME THAT THE WORK IS SCHEDULED TO BEGIN AND THE OTHER HALF AT THE TIME THE WORK IS SCHEDULED TO BE COMPLETED.
FOR A PROJECT WITH A LARGE NUMBER OF ELEMENTS THE AMOUNT OF DISTORTION FROM SUCH A PROCEDURE IS MINIMAL.
Chapter 16: Cred Corest 33





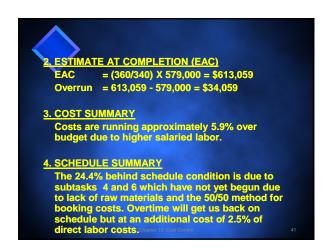






PROGRESS REPORTING Progress reporting needs to answer four fundamental questions: 1. Where are we today (time and cost)? 2. Where will we end up (time and cost)? 3. What are the present and future risks? 4. Are there any special problems that need to be addressed and what can management do to help?

1. VAR	IANCE ANALY	_	Project Re	μοιτ	1 June 199	7
Subtask	Milestone Status	Budgeted Cost Work Scheduled	Budgeted Cost Work Performed	Actual Cost	Variance Schedule	
1	Completed	100	100	100	0	0
2	Completed	50	50	55	0	-10
3	Completed	50	50	40	0	20
4	Not Started	70	0	0	-100	
5	Completed	90	90	140	0	-55.5
6	Not started	40	0	0	-100	
7	Started	50	50	25	0	50
8	Not started	0	0	0	-	-
Total		450	340	360	-24.4	-5.9
		Chapte	r 15: Cost Control			40



. MILESTO	NE REPORT		
Milestone/	Scheduled	Projected	Actual
Subtask	Completion	Completion	Completion
1	4/1/97		4/1/97
2	5/1/97		5/1/97
3	5/1/97		4/23/97
4	7/1/97	7/1/97	
5	6/1/97		6/1/97
6	8/1/97	8/1/97	
7	9/1/97	9/1/97	
8	10/1/97	10/1/97	

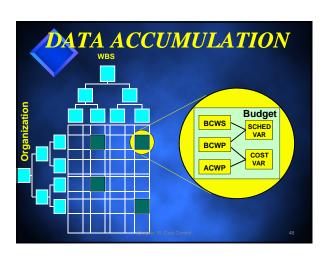
















Cost Problems Poor estimating techniques and/or standards, resulting in unrealistic budgets Out-of-sequence starting and completion of activities and events Inadequate work breakdown structure No management policy on reporting and control practices Poor work definition at the lower levels of the organization

Cost Problems (Continued) Management reducing budgets or bids to

- be competitive or to eliminate "fat"
- Inadequate formal planning that results in unnoticed, or often uncontrolled, increases in scope of effort
- Poor comparison of actual and planned costs
- Comparison of actual and planned costs at the wrong level of management
- Unforeseen technical problems

Cost Problems (Continued)

- Schedule delays that require overtime or idle time costing
- Material escalation factors that are unrealistic

Problem Areas in Cost Control

- Inadequate Work Breakdown Structure
 Poor work definition at working levels
 Lack of formal system procedures

- Planning and budgeting:
 - Inadequate forward planningOver-allocation of budget
- Poor integration of budget, schedule, work authorization
 Accounting:
- Inability to account for cost of material on applied basis
- Determination of status not based on work package completion
- Comparison of actual vs. planned costs at improper level Revisions:
- Failure to maintain valid measurement baseline

Chapter	15:	Cost	Contro	
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