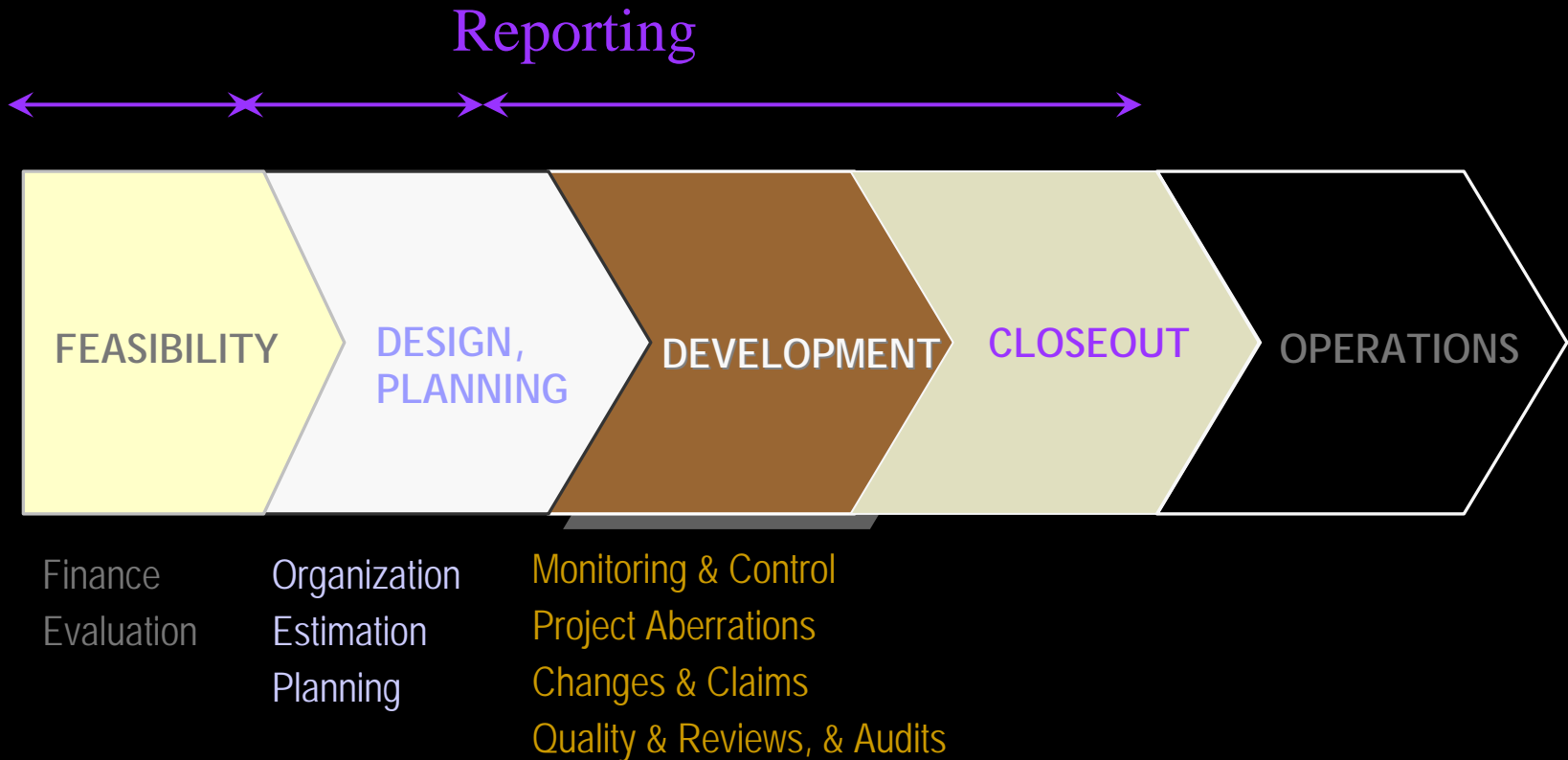


1.040/1.401/ESD.018  
Project Management

Lecture 22  
Project Reporting  
Project Close-out

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# Recall: The 5 Phases of Project Management



# Project Reporting

# Main Focus on Reports: Performance

- Main categories of performance metrics:
  - Scope
  - Time
  - Money
  - Quality
  - Productivity
  - Safety
- Performance Metrics typically are defined in preparation for project monitoring before project control.
- Must facilitate the project control process as well as the reporting functions of project monitoring

# More on Performance Metrics

Categories	Performance measurements	Targets	Units of measurement
Scope	Amount of work accomplished	Amount of work to be accomplished	M, M <sup>2</sup> , M <sup>3</sup> , Tons, \$
Time	Completion dates	Milestones, Deadline	Day, Week, Month
Money	Cost, Cash flow	Budget, Profit, Cash flow	\$, Net Present Value (NPV)
Quality	Quality achieved (Appearance, Durability, Strength, Suitability)	Target quality level (Appearance, Durability, Strength, Suitability)	Number of defects, Value of defects, Number of change orders
Safety	Actual accidents and injuries, delays and economic damages occurred	Goaled accidents and injuries level	Person, \$, Day, Week, Month
Productivity	Actual productivity	Planned productivity	Work unit/worker/time

# Reporting

- Often delayed
  - minimizing delay critical in effectiveness of feedback systems
- Selective reporting widely used:  
Example: Some reports contain only problems encountered during project
- Frequent reporting for
  - Important items (e.g. high cost)
  - Uncertainty (Unfamiliar procedure, ...)
  - Critical
  - Scope

# Kinds of Reports

- Internal reports:
  - Cost control report
  - Risks/Opportunities report
- Contract Reports (Contractor/Owner):
  - Schedule review
  - Schedule of value and certificate of payment
  - Request for extra works

# Internal Reporting

- Monthly Cost Control Report
  - Describe project cost at current date:
    - Budget cost
    - Actual cost
    - Accounted cost
    - Cash out
    - Estimates to completion
  - Contains:
    - Variances and indexes
    - Revised schedule
    - Revenues Control Summary (issued invoices)
    - Other select performance indexes
  - Better if represented with graphical S-Curves
- Risk/Opportunity plan
  - Reports on planned activities and anticipated threats/opportunities during the following reporting period

# Contract Reports

- Revised schedule
  - Detail of progress report (each activity, total progress)
  - Progress s-curves (actual, scheduled, forecast)
  - Resource use profiles (actual, scheduled, forecast)
- Schedule of values and certificate of payment
  - Quantities book
  - Account register
  - Main summary account- after approval
  - Certificate of payment of work done – amount of money the contractor can charge (value-retention-guarantees/liabilities).
- Change order (for extra scope or works)
  - Request of extra works
  - Extra work report
  - Extra work schedule of values and CoP

# Example 1: Job Status Report

Factor	Budgeted Cost	Cost Committed	Cost Exposure	Cost To Date	Estimated Total Cost	Over or (Under)
Labor	\$99,406	\$49,596	---	\$52,746	\$102,342	\$2,936
Material	88,499	42,506	45,993	---	88,499	0
Subcontracts	198,458	83,352	97,832	15,139	196,323	(2,135)
Equipment	37,543	23,623	---	13,920	37,543	0
Other	<u>72,693</u>	<u>49,356</u>	---	<u>32,076</u>	<u>81,432</u>	<u>8,739</u>
Total	496,509	248,433	143,825	113,881	506,139	5,950

# Example 2: Performance Report

	Planned	Earned	Cost					Performance Index	
WBS Element	Budget	Earned Value	Actual Cost	Cost Variance		Schedule Variance		Cost	Schedule
	(\$)	(\$)	(\$)	(\$)	(%)	(\$)	(%)	CPI	SPI
	(PV)	(EV)	(AC)	(EV-AC)	(CV/EV)	(EV-PV)	(SV/PV)	(EV/AC)	(EV/PV)
1.0 Pre-Pilot Plan	63,000	58,000	62,500	-4,500	-7.8	-5,000	-7.9	0.93	0.92
2.0 Checklists	64,000	48,000	46,800	1,200	2.5	-16,000	-25.0	1.03	0.75
3.0 Curriculum	23,000	20,000	23,500	-3,500	-17.5	-3,000	-13.0	0.85	0.87
4.0 Mid-Term Evaluation	68,000	68,000	72,500	-4,500	-6.6	0	0.0	0.94	1.00
5.0 Implementation Support	12,000	10,000	10,000	0	0.0	-2,000	-16.7	1.00	0.83
6.0 Manual of Practice	7,000	6,200	6,000	200	3.2	-800	-11.4	1.03	0.89
7.0 Roll-Out Plan	20,000	13,500	18,100	-4,600	-34.1	-6,500	-32.5	.075	0.68
<b>Totals</b>	<b>257,000</b>	<b>223,700</b>	<b>239,400</b>	<b>-15,700</b>	<b>-7.0</b>	<b>-33,300</b>	<b>-13.0</b>	<b>0.93</b>	<b>0.87</b>

Figure by MIT OCW.

# Example 3: Progress Report

PROJECT NUMBER: 198301	START DATE: 04/21/83
PROJECT TITLE: EXAMPLE CONCRETE BRIDGE	DATA DATE: 07/11/83
PROJECT LOCATION: STANFORD, CALIFORNIA	REPORT DATE: 07/14/83

LAB. CODE	ACTIVITY DESCRIPTION		UNIT	ESTI-MATED	ACTUAL TO DATE	EST. TO COMPL.	EST. TTL @ COMPL.	PERCENT COMPL.	FORECAST VARIANCE	PERCENT VARIANCE	TREND
CFF. 0310	CONCRETE FORMWORK FOR FOUNDATION		SF								
EST START:	06/02/83	DURATION:		34	29	9	38	76%	4	11.8%	HIGH
ACT START:	06/02/83	COSTS:		\$49800	\$47600	\$14900	\$62500	76%	\$12700	25.5%	HIGH
EST FINISH:	07/18/83	QUANTITIES:		15860	13600	4150	17750	77%	1890	11.9%	HIGH
ACT FINISH:	/	UNIT COSTS:		\$3.14	\$3.50	\$3.59	\$3.52		\$0.38	12.1%	HIGH
CRF. 0320	CONCRETE RE-STEEL FOR FOUNDATION		LB								
EST START:	06/09/83	DURATION:		29	21	9	30	70%	1	3.5%	
ACT START:	06/12/83	COSTS:		\$39400	\$31700	\$13610	\$45310	70%	\$5910	15.0%	HIGH
EST FINISH:	07/18/83	QUANTITIES:		82400	74410	31890	106300	70%	23900	29.0%	HIGH
ACT FINISH:	/	UNIT COSTS:		\$0.48	\$0.43	\$0.43	\$0.43		-\$0.05	-10.4%	LOW
CPF. 0330	CONCRETE PLACING FOR FOUNDATION		CT								
EST START:	06/16/83	DURATION:		34	16	21	37	43%	3	8.8%	
ACT START:	06/19/83	COSTS:		\$73400	\$35540	\$46660	\$82200	43%	\$8800	12.0%	HIGH
EST FINISH:	08/01/83	QUANTITIES:		1200	690	850	1540	45%	340	28.0%	HIGH
ACT FINISH:	/	UNIT COSTS:		\$61.17	\$51.51	\$54.89	\$53.38		-\$7.79	-12.7%	LOW
CRW. 0320	CONCRETE RE-STEEL FOR WALLS		LB								
EST START:	06/30/83	DURATION:		34	9	26	35	26%	1	2.9%	
ACT START:	06/30/83	COSTS:		\$37800	\$8320	\$24940	\$33260	25%	-\$4540	-12.0%	LOW
EST FINISH:	08/15/83	QUANTITIES:		78750	19730	59170	78900	25%	150	0.2%	
ACT FINISH:	/	UNIT COSTS:		\$0.48	\$0.42	\$0.42	\$0.42		-\$0.06	-12.2%	LOW

# Beware of Reporting Delays

- Financial, time indicators are necessary but not sufficient to alert to problems
- In most cases of serious problems and “normal” reporting, the problem may be **very** serious by the time that it is noticed in the formal reports
- Rapid qualitative judgment is often much more effective than delayed quantitative reporting

# Project Close- out

# Project Close-out

- Defines the last set of activities associated with a project.
- Essentially is a small project in itself, sometimes requiring a “close out manager”
- Requires careful planning and logistical management
- May require special attention to emotional issues of the personnel in the project.
- Presents learning opportunities for the organization through the project final review and report.

# Close-out Activities

- Project commissioning
- Project termination
- Project feedback

# Project Commissioning

- Closing the contract:
  - Claims' resolution (owner and subs)
  - As-built drawings, certificates, paperwork
  - Certificate of final payment
  - Cash flow checked out
  - Maintenance and insurances
- Commissioning the works:
  - Final completion review
  - Testing

# Project Termination

- Operations
  - Mobilization of resources to some new project
    - Human resources
    - Equipment
  - Logistics, installations and temporary facilities
- Administration
  - Book keeping and financial close-out
  - Insurance arrangements

# Project Feedback

- Database updating
  - Standard WBS (list of work packages)
  - Estimates (unit costs)
  - Duration of activities, productivity rates
- Process improvement
  - Methods and tools
- Final review
  - Lessons learnt

Questions?