

Answers: Earned Value Exercise 1

You are responsible for calculating the project progress indicators for your project team. Below is the baseline time-phased budget for the project.

Task	Activity Budget (Total PV)	Month							
		1	2	3	4	5	6	7	8
A	\$8,000	\$4,000	\$4,000						
B	\$18,000		\$6,000	\$6,000	\$6,000				
C	\$6,900			\$2,300	\$2,300	\$2,300			
D	\$25,000			\$5,000	\$5,000	\$5,000	\$5,000	5000	
E	\$4,000					\$1,000	\$1,000	\$1,000	\$1,000
F	\$14,900					\$7,500	\$7,400		
G	\$10,000							\$5,000	\$5,000
H	\$9,000					\$4,500	\$4,500		
I	\$31,200	\$7,800	\$7,800	\$7,800	\$7,800				
J	\$11,700					\$3,900	\$3,900	\$3,900	
K	\$2,000					\$500	\$500	\$500	\$500
L	\$9,600			\$2,400	\$2,400	\$2,400	\$1,200	\$1,200	
Week Total		\$11,800	\$17,800	\$23,500	\$23,500	\$27,100	\$23,500	\$16,600	\$6,500
Cumulative		\$11,800	\$29,600	\$53,100	\$76,600	\$103,700	\$127,200	\$143,800	\$150,300

1. What is the BAC for this project?

BAC is the total PV for the project, in this case \$150,300.

2. In which month will the majority of the project work be completed?

Month 5

3. Which month will the least amount of work be completed?

Month 8

4. At the end of Month 3, you get the following data about how work is progressing:
- Activity A is 100% complete and has cost \$8,400.
 - Activity B is 50% complete and has cost \$10,000.
 - Activity C is 33% complete and has cost \$2,000.
 - Activity D is 20% complete and has cost \$3,500.
 - Activity I is 100% complete and has cost \$35,000.
 - Activity L is 10% complete and has cost \$1,000.
 - None of the other tasks have started.

Use this information to complete the calculations for the Month 3 status report below and answer the related questions

Status Report: Month 3

Task	Percent Complete	End of Month 3						
		EV	AC	PV	CV	SV	CPI	SPI
A	100%	\$8,000	\$8,400	\$8,000	-\$400	\$0	0.95	1.00
B	50%	\$9,000	\$10,000	\$12,000	-\$1,000	-\$3,000	0.90	0.75
C	33%	\$2,277	\$2,000	\$2,300	\$277	-\$23	1.14	0.99
D	20%	\$5,000	\$3,500	\$5,000	\$1,500	\$0	1.43	1.00
I	100%	\$31,200	\$35,000	\$23,400	-\$3,800	\$7,800	0.89	1.33
L	10%	\$960	\$1,000	\$2,400	-\$40	-\$1,440	0.96	0.40
Cumulative Totals		\$56,437	\$59,900	\$53,100	-\$3,463	\$3,337		

Using the cumulative totals for EV, AC, and PV calculate the CPI, SPI, TCPI, and PCIB for the project.

End of Month 3	
CPI	0.94
SPI	1.06
TCPI	1.04
PCIB	37.55%

How is this project doing in terms of cost ?

Slightly over-budget. Several activities are over budget but some are under budget, so it appears that the entire budget has been under-estimated.

How is this project doing in terms of schedule?

Slightly ahead of schedule.

If everything keeps going as well as it has to this point in terms of cost, what will be the cost to complete the remaining work?

$$ETC = (BAC - EV) / CPI \text{ or } ETC = (BAC - EV) / (EV / AC)$$

$$ETC = (\$150,300 - \$56,437) / 0.94$$

$$= \$93,863 / 0.94$$

$$= \$99,854$$

If everything keeps going as well as it has to this point in terms of cost, what will be the final cost of the project?

$$EAC = AC + ETC$$

$$EAC = \$59,900 + \$99,854$$

$$= \$159,754$$