

PRM – TUT 7

Part 4: Project Cost Management

Tony Prince and his team are working on the Recreation and Wellness Intranet Project. They have been asked to refine the existing cost estimate for the project so they can evaluate supplier bids and have a solid cost baseline for evaluating project performance. Recall that your schedule and cost goals are to complete the project in six months for under \$200,000.

Tasks

1. Prepare and print a one-page cost model for this project using spreadsheet software. Use the following WBS, and be sure to document your assumptions in preparing the cost model. Assume a labor rate of \$100/hour for the project manager and \$60/hour for other project team members. Assume that none of the work is outsourced, labor costs for users are not included, and there are no additional hardware costs. The total estimate should be \$200,000.

1. Project management
2. Requirements definition
3. Web site design
 - 3.1 Registration for recreational programs
 - 3.2 Registration for classes and programs
 - 3.3 Tracking system
 - 3.4 Incentive system
4. Web site development
 - 4.1 Registration for recreational programs
 - 4.2 Registration for classes and programs
 - 4.3 Tracking system
 - 4.4 Incentive system
5. Testing
6. Training, rollout, and support

Recreation and Wellness Project Cost Estimate

	# Units/Hrs.	Cost/Unit/Hr.	Subtotals	WBS Level 1 Totals	% of Total
WBS Items					
1. Project Management				\$44,000	22%
Project manager*	320	\$100	\$32,000		
Project team members	200	\$60	\$12,000		
2. Requirements Definition	150	\$60	\$9,000	\$9,000	5%
3. Web Site Design				\$36,000	18%
3.1 Registration for recreational programs	150	\$60	\$9,000		
3.2 Registration for classes and programs	150	\$60	\$9,000		
3.3 Tracking system	150	\$60	\$9,000		
3.4 Incentive system	150	\$60	\$9,000		
4. Web Site Development				\$72,000	36%
4.1 Registration for recreational programs	300	60	\$18,000		
4.2 Registration for classes and programs	300	60	\$18,000		
4.3 Tracking system	300	60	\$18,000		
4.4 Incentive system	300	60	\$18,000		
5. Testing	250	60	\$15,000	\$15,000	8%
6. Training, Roll Out, and Support	400	60	\$24,000	\$24,000	12%
Total project cost estimate				\$200,000	

2. Using the cost model you created in Task 1, prepare a cost baseline by allocating the costs by WBS for each month of the project.

Recreation and Wellness Project Cost Baseline

	Month						
	1	2	3	4	5	6	Total
WBS Items							
1. Project Management							\$ -
Project manager*	\$5,333	\$5,333	\$5,333	\$5,333	\$5,333	\$5,333	\$ 32,000
Project team members	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$ 12,000
2. Requirements Definition	\$8,000	\$1,000					\$ 9,000
3. Web Site Design							
3.1 Registration for recreational programs		\$6,000	\$3,000				\$ 9,000
3.2 Registration for classes and programs		\$6,000	\$3,000				\$ 9,000
3.3 Tracking system			\$ 9,000				\$ 9,000
3.4 Incentive system			\$ 5,000	\$ 4,000			\$ 9,000
4. Web Site Development							\$ -
4.1 Registration for recreational programs			\$3,000	\$ 15,000			\$ 18,000
4.2 Registration for classes and programs			\$3,000	\$ 15,000			\$ 18,000
4.3 Tracking system				\$8,000	\$10,000		\$ 18,000
4.4 Incentive system					\$18,000		\$ 18,000
5. Testing					\$ 15,000		\$ 15,000
6. Training, Roll Out, and Support						\$ 24,000	\$ 24,000
Total project cost estimate	\$15,333	\$20,333	\$33,333	\$49,333	\$50,333	\$31,333	\$ 200,000

3. Assume that you have completed three months of the project. The BAC was \$200,000 for this six-month project. You can also make the following assumptions:

$$PV = \$120,000 \quad EV = \$100,000$$

$$AC = \$90,000$$

- a. What is the cost variance, schedule variance, cost performance index (CPI), and schedule performance index (SPI) for the project?

b. How is the project doing? Is it ahead of schedule or behind schedule? Is it under budget or over budget?

c. Use the CPI to calculate the estimate at completion (EAC) for this project. Is the project performing better or worse than planned?

d. Use the SPI to estimate how long it will take to finish this project.

e. Sketch an earned value chart using the preceding information. See Figure 7-5 as a guide.

a.

- Cost variance = $EV - AC = \$100,000 - \$90,000 = \$10,000$
- Schedule variance = $EV - PV = \$100,000 - \$120,000 = -\$20,000$
- $CPI = EV / AC = \$100,000 / \$90,000 = 1.11$ or 1.11.
- $SPI = EV / PV = \$100,000 / \$120,000 = 0.83$ or .83

b. The project is under budget and behind schedule.

c. $EAC = BAC / CPI = \$200,000 / 1.11 = \$180,180$.

The project is performing better than planned since the new estimate to complete it is almost \$20,000 less than planned.

d. The estimated time to complete the project = $6 \text{ months} / .83 = 7.23 \text{ months}$. The project is projected to take 1.23 months longer than planned.

e. The chart should resemble Figure 7-5, but the EV line will be above the AC line.