

Tutorial 3 solution

Activity 1

- 1. Describe project integration management in your own words. How does project integration management relate to the project life cycle, stakeholders, and the other project management knowledge areas?**

Project integration management means tying together all of the other aspects involved in a project to make it a success. Integration management relates to the project life cycle in that it is done in all of the project life cycle phases. As the project progresses, integration management becomes more focused. Integration management relates to stakeholders because it requires the project manager to know all of the project stakeholders, to know their interests and concerns about the project, and to manage relationships with them. Integration management pulls together information from all of the other knowledge areas.

- 2. Why is it important to select the right project in an organisation? Ensure you discuss costs vs business benefits!**

As organisations have limited budget and resources, they need to choose the most profitable and appropriate projects given the budget and resources. They need to select projects that align with their business objectives and that will bring the most value for the organisation in terms of profit, market share customer relationships, safety issues, environmental concerns and government regulations.

- 3. Discuss the different methods for selecting IT projects.**

There are usually more projects than available time and resources to implement them.

Methods for selecting projects include:

- focusing on broad organisational needs (slide 13)
- categorising information technology projects (slide 14)
- performing net present value or other financial analyses (slide 15 – 20)
- using a weighted scoring model (slide 21 – 22)
- implementing a balanced scorecard. (slide 23)

- 4. What are the 3 main objectives of performing an integrated change control? Discuss the importance of following a well-integrated change control process on IT projects.**

Three main objectives are:

- Influencing the factors that create changes to ensure that changes are beneficial
- Determining that a change has occurred
- Managing actual changes as they occur

It is important to follow a good integrated change control process on IT projects to avoid scope creep, incompatibility problems, and to make effective use of resources and new technologies.

Activity 2 (Refer to Tutorial 3 Model.xlsx)

a) Value at the end of year 8

Discount rate	20%								
PROJECT 1	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	TOTAL
Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Benefis	\$0	\$0	\$6,000	\$6,000	\$6,000	\$6,000	\$0	\$0	\$24,000
Net cash flow	\$0	\$0	\$6,000	\$6,000	\$6,000	\$6,000	\$0	\$0	\$24,000
invested no. years			5	4	3	2			
			=6000 * (1 + .2)^5	=6000 * (1 + .2)^4	=6000 * (1 + .2)^3	=6000 * (1 + .2)^2			
			14,930	12,442	10,368	8,640			\$46,380
FV = PV(1 + i)^n									

b) Present value of the cash inflows

PROJECT 1	Calculation	Discounted Cash Flow
YEAR 1		
YEAR 2		
YEAR 3	=6000/(1 + .2)^3	3472.22222
YEAR 4	=6000/(1 + .2)^4	2893.51852
YEAR 5	=6000/(1 + .2)^5	2411.26543
YEAR 6	=6000/(1 + .2)^6	2009.38786
YEAR 7		
YEAR 8		
NPV		\$10,786.39

Activity 3 (a) Refer to Tutorial 3 Model.xlsx

Discount rate	10%						
PROJECT A	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Costs	\$20,000	\$2,000	\$1,000	\$1,000	\$1,000	\$25,000	
Calculate discounted costs	=20000/(1 + .1)^1	=2000/(1 + .1)^2	=1000/(1 + .1)^3	=1000/(1 + .1)^4	=1000/(1 + .1)^5		
Discounted costs	\$18,182	\$1,653	\$751	\$683	\$621	\$21,890	
Benefits	\$0	\$5,000	\$10,000	\$10,000	\$10,000	\$35,000	
Calculate discounted benefits	\$0	=5000/(1 + .1)^2	=10000/(1 + .1)^3	=10000/(1 + .1)^4	=10000/(1 + .1)^5		
Discounted benefits	\$0	\$4,132	\$7,513	\$6,830	\$6,209	\$24,685	
Net cash flow	-\$20,000	\$3,000	\$9,000	\$9,000	\$9,000	\$10,000	
Calculation - net present value	=-20000/(1 + .1)^1	=3000/(1 + 0.1)^2	=9000/(1 + .1)^3	=9000/(1 + .1)^4	=9000/(1 + .1)^5		
Discounted cash flow	-\$18,182	2,479	6,762	6,147	5,588		
NPV						\$2,795	
	NOTE:	Discounted benefits - Discounted costs= NPV			Check	=24685 - 21890	\$2,795
PROJECT B	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	
Costs	\$10,000	\$5,000	\$5,000	\$3,000	\$2,000	\$25,000	
Calculate discounted costs	=10000/(1 + .1)^1	=5000/(1 + .1)^2	=5000/(1 + .1)^3	=3000/(1 + .1)^4	=2000/(1 + .1)^5		
Discounted costs	\$9,091	\$4,132	\$3,757	\$2,049	\$1,242	\$20,271	
Benefis	\$1,000	\$2,000	\$5,000	\$12,000	\$15,000	\$35,000	
Calculate discounted benefits	=1000/(1 + .1)^1	=2000/(1 + .1)^2	=5000/(1 + .1)^3	=12000/(1 + .1)^4	=15000/(1 + .1)^5		
Discounted benefits	\$909	\$1,653	\$3,757	\$8,196	\$9,314	\$23,829	
Net cash flow	-\$9,000	-\$3,000	\$0	\$9,000	\$13,000	\$10,000	
Calculation - net present value	=-9000/(1 + .1)^1	=-3000/(1 + .1)^2	0	=9000/(1 + .1)^4	=13000/(1 + .1)^5		
Discounted cash flow	-\$8,182	-\$2,479	0	6,147	8,072		
NPV						\$3,558	
	NOTE:	Discounted benefits - Discounted costs= NPV			Check	=23829 - 20271	\$3,558

Project A $NPV = \$2795$; Project B $NPV = \$3558$; Project B is more desirable

(b) $ROI = (\text{Discounted benefits} - \text{Discounted costs}) / \text{Discounted costs} = NPV / \text{Discounted costs}$

Project A $ROI = (2795) / 21890 = 12.77\% = 13\%$

Project B $ROI = (3558) / 20271 = 17.55\% = 18\%$

Project B is more desirable

c)

A	B	C	D	E
Criteria	Weight	Student 1	Student 2	Student 3
Exam 1	20%	100	70	90
Exam 2	15%	100	70	80
Exam 3	25%	100	70	75
Homework	15%	100	80	80
Group Project	25%	100	95	70
Weighted Scores		100	77.75	78.25