



Solution Analysis Report Maintenance Simulator

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Generates a comprehensive report of all options that have been considered for a specific solution including viability, ratings, costs and recommendations.

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Solution

Solution	
Solution Title	Navigation Simulator
Reference Code	
Solution Type	Tools
Expected Life of Solution [years]	2
Solution Implementation Date	01/01/2018
Solution Start-up Costs	Implementation Date
Number of Options	2
Client	ABC Corp
Manager	Bahlis Jay
Estimate Number of Trainees in	Years
Sequence	120

Options

Options	
Option	Title
1	ABC Simulator
2	XYZ Simulator

Individuals per Year

Individuals Per Year	
Year	Number of Individuals
2018	300
2019	300

Feasibility Analysis

Management

Management		
	ABC Simulator	XYZ Simulator
Management Aware of Problem	Yes	Yes
Management Believe Solution can Correct Problem	Yes	Yes
Solution Sponsored by Management	Yes	Yes
Management Receptive to Change	Yes	Yes

Employees

Employees		
	ABC Simulator	XYZ Simulator
Employees Aware of Problem	Yes	Yes
Employees Believe Solution can Correct Problem	Yes	Yes
Solution Supported by Employees	Yes	Yes
Employees Receptive to Change	Somewhat	Somewhat
Percentage of Employees Affected	High	High

Supervisors

Supervisors		
	ABC Simulator	XYZ Simulator
Supervisors Aware of Problem	Yes	Yes
Supervisors Believe Solution can Correct Problem	Yes	Yes
Solution Supported by Supervisors	Yes	Somewhat
Supervisors Receptive to Change	Yes	Yes
Percentage of Supervisors Affected	High	High

Resources

Limitations		
	ABC Simulator	XYZ Simulator
Funds Available	Yes	Somewhat
Time Available	Yes	Yes
Experienced Personnel Available	Yes	Somewhat
Facilities/Equipment Available	Somewhat	Somewhat

Implications		
	ABC Simulator	XYZ Simulator
Impact of Delays	Medium	Medium
Solution Difficult to Maintain	No	Somewhat
Solution Compatible with Existing Programs	Yes	No
Solution Compatible with Infrastructure	Yes	Somewhat
Solution Acceptable within Culture	Yes	Somewhat

Effectiveness Result

Solution	Rating
ABC Simulator	90
XYZ Simulator	67

Reasons for reducing the effectiveness of the following options:	
ABC Simulator	
Percentage of Supervisors Affected	High
Percentage of Employees Affected	High
Impact of Delays	Medium
Facilities/Equipment Available	Somewhat
Employees Receptive to Change	Somewhat
XYZ Simulator	
Solution Supported by Supervisors	Somewhat
Solution Difficult to Maintain	Somewhat
Solution Compatible with Infrastructure	Somewhat
Solution Compatible with Existing Programs	No
Solution Acceptable within Culture	Somewhat
Percentage of Supervisors Affected	High
Percentage of Employees Affected	High
Impact of Delays	Medium
Funds Available	Somewhat
Facilities/Equipment Available	Somewhat
Experienced Personnel Available	Somewhat
Employees Receptive to Change	Somewhat

Cost Analysis

Basic Variables

Basic Variables	
Annual Productive Days	230
Working Hours per Day	8.00
Display Recurring Cost for Year	2015

Development

Development				
	ABC Simulator		XYZ Simulator	
Total Development Time [hours]				
Average Daily Cost for Developer	\$ 0	I	\$ 0	I
Total Personnel Cost	\$ 0		\$ 0	
Unit Cost of Off-the-Shelf Solution	\$ 800,000	I	\$ 1,000,000	I
Number of Items Required	1		1	
Total Cost of Off-the-Shelf Solution	\$ 800,000		\$ 1,000,000	
Contracting Costs	\$ 0	I	\$ 0	I
Master Copy Production	\$ 0	I	\$ 0	I
Evaluation Costs	\$ 0	I	\$ 0	I
Miscellaneous Costs	\$ 0	I	\$ 0	I
Total Development Costs	\$ 800,000		\$ 1,000,000	

Hardware

Purchase				
	ABC Simulator		XYZ Simulator	
Number of Units				
Cost per Unit	\$ 0	D	\$ 0	D
Availability [hours per year]				
Sub-Total Hardware Costs	\$ 0		\$ 0	
Internal Set-up and Miscellaneous Costs	\$ 0	I	\$ 0	I
External Set-up and Miscellaneous Costs	\$ 0	D	\$ 0	D
Total Hardware Costs	\$ 0		\$ 0	
Solution Allocation [%]	100 %		100 %	
Hardware Cost for Solution	\$ 0		\$ 0	

Operation				
	ABC Simulator		XYZ Simulator	
Cost of Equipment Operation [per hour]	\$ 300	I	\$ 250	I
Number of Hours Equipment Used [per year]	800		800	
Solution Allocation [%]	100 %		100 %	
Total Cost of Equipment Operation [over life]	\$ 480,000		\$ 400,000	
Annual Equipment Maintenance Costs	\$ 0	I	\$ 0	I
Total Equipment Maintenance Costs [over life]	\$ 0		\$ 0	
Total Equipment Operation Costs [over life]	\$ 480,000		\$ 400,000	

Software

Purchase				
	ABC Simulator		XYZ Simulator	
Number of Units				
Cost per Unit	\$ 0	D	\$ 0	D
Sub-Total Software Costs	\$ 0		\$ 0	
Internal Set-up and Miscellaneous Costs	\$ 0	I	\$ 0	I
External Set-up and Miscellaneous Costs	\$ 0	D	\$ 0	D
Total Software Costs	\$ 0		\$ 0	
Solution Allocation [%]	100 %		100 %	
Software Cost for Solution	\$ 0		\$ 0	

Maintenance				
	ABC Simulator		XYZ Simulator	
Annual Software Maintenance Costs [per unit]	\$ 0	I	\$ 0	I
Solution Allocation [%]	100 %		100 %	
Total Software Maintenance Costs [over life]	\$ 0		\$ 0	

Administrative

Administrative				
	ABC Simulator		XYZ Simulator	
Annual Salary of Administrative Staff	\$ 60,000	I	\$ 60,000	I
Fringe Benefits Factor	30 %		30 %	
Annual Cost	\$ 78,000		\$ 78,000	
Annual Productive Days	230		230	
Daily Cost	\$ 339		\$ 339	
Days on Project [per year]	50		20	
Annual Personnel Costs	\$ 16,957		\$ 6,783	
Annual Miscellaneous Costs	\$ 0	I	\$ 0	I
Total Administrative Costs [over life]	\$ 33,913		\$ 13,565	

Management

Management				
	ABC Simulator		XYZ Simulator	
Annual Salary of Management Staff	\$ 85,000	I	\$ 85,000	I
Fringe Benefits Factor	30 %		30 %	
Annual Cost	\$ 110,500		\$ 110,500	
Annual Productive Days	230		230	
Daily Cost	\$ 480		\$ 480	
Days on Project [per year]	60		60	
Annual Personnel Costs	\$ 28,826		\$ 28,826	
Annual Miscellaneous Costs	\$ 0	I	\$ 0	I
Total Management Costs [over life]	\$ 57,652		\$ 57,652	

Support

Maintenance		
	ABC Simulator	XYZ Simulator
Material Costs [per individual]	\$ 500 I	\$ 400 I
Total Material Costs	\$ 300,000	\$ 240,000
Total Development Costs	\$ 800,000	\$ 1,000,000
Revision Factor	0 %	0 %
First Year Maintenance Cost	Exclude	Exclude
Total Revision Costs [over life]	\$ 0 I	\$ 0 I
Annual Miscellaneous Costs	\$ 0 I	\$ 0 I
Total Maintenance Costs [over life]	\$ 300,000	\$ 240,000

Technical Support		
	ABC Simulator	XYZ Simulator
Annual Salary of Support Staff	\$ 72,000 I	\$ 72,000 I
Fringe Benefits Factor	30 %	30 %
Annual Cost	\$ 93,600	\$ 93,600
Annual Productive Days	230	230
Daily Cost	\$ 407	\$ 407
Days on Project [per year]	20	38
Annual Personnel Costs	\$ 8,139	\$ 15,464
Annual Miscellaneous Costs	\$ 0 I	\$ 0 I
Total Support Costs [over life]	\$ 16,278	\$ 30,929

Summary

Distribution		
	ABC Simulator	XYZ Simulator
Development Costs	\$ 800,000	\$ 1,000,000
Hardware Costs	\$ 0	\$ 0
Hardware Operation Costs	\$ 480,000	\$ 400,000
Software Costs	\$ 0	\$ 0
Software Maintenance Costs	\$ 0	\$ 0
Administrative Costs	\$ 33,913	\$ 13,565
Management Costs	\$ 57,652	\$ 57,652
Maintenance Costs	\$ 300,000	\$ 240,000
Support Costs	\$ 16,278	\$ 30,929
Total Costs	\$ 1,687,843	\$ 1,742,146
Total Costs (PV)	\$ 1,687,843	\$ 1,742,146
Total Number of Employees	600	600
Cost per Employee	\$ 2,813	\$ 2,904
Cost per Employee (PV)	\$ 2,813	\$ 2,904

Direct/Indirect		
	ABC Simulator	XYZ Simulator
Total Direct Costs	\$ 0	\$ 0
Total Indirect Costs	\$ 1,687,843	\$ 1,742,146

Total Costs	\$ 1,687,843	\$ 1,742,146
Total Number of Employees	600	600
Cost per Employee	\$ 2,813	\$ 2,904

Up-Front		
	ABC Simulator	XYZ Simulator
Development Costs	\$ 0	\$ 0
Hardware Costs	\$ 0	\$ 0
Software Costs	\$ 0	\$ 0
Start-up Costs	\$ 0	\$ 0

Recurring		
	ABC Simulator	XYZ Simulator
Administrative Costs	\$ 0	\$ 0
Management Costs	\$ 0	\$ 0
Support Costs	\$ 0	\$ 0
Equipment Operation/Maintenance Costs	\$ 0	\$ 0
Software Maintenance Costs	\$ 0	\$ 0
Materials and Revision Costs	\$ 0	\$ 0
Annual Recurring Costs	\$ 0	\$ 0

Resources		
	ABC Simulator	XYZ Simulator
Start-up Development Staff [person days]	0	0
Start-up Support Staff [person days]	0	0
Solutions [number of units required]	1	1
Hardware [number of units required]	0	0
Software [number of units required]	0	0

Personnel		
	ABC Simulator	XYZ Simulator
Administrative Staff [person days per year]	50	20
Management Staff [person days per year]	60	60
Support Staff [person days per year]	20	38
Development Staff [person days per year]	0	0
Equipment [hours per year]	800	800

Summary

ADVISOR Recommendations Result

Solution	Cost Effectiveness Rating	Total Cost	Effectiveness Rating	Up-front	Recurring Costs	Developers [days]	Administrators [days/year]
ABC Simulator	90.0%	\$ 1,687,843	90 %	\$ 0	\$ 0		50
XYZ Simulator	67.0%	\$ 1,742,146	67 %	\$ 0	\$ 0		20

User Recommendation

User Recommendation	
Analyst Recommendation	ABC Simulator
Reassess	Yes

Projected ROI

Return on Investment (ROI)	
Solution Impact	\$2,225,000
Total Solution Costs	\$ 1,687,843
Solution Benefits	\$537,157
Expected Life of Solution [years]	2
Annual ROI	15.91 %