Project Name: HSD Learning Management System Project ID: D59166LM

Leadership Group: Fina	nce/Admin							
Department: Health and Technology	d Human Serv	ices	Division: Homel	land Security				
Project Sponsor: Thom	as Hardesty	Date Reque	ested: 02/15/08	PM Custom	er No. 166			
Request Type:	New Develo	<u>pment</u>	Enhancemen	t Cu	stomer Support			
	Planned Sys	stem Mainten	ance or Upgrade					
IT Team Name: Public a	and Environme	ental Services	s IT Team No: 5					
Project Manager/Leader	: Stu Smith							
Account 98990 Number:	Account Description:		d Security	Customer Name:	Homeland Security			
Grant Funded? Yes	<u>No</u>		Mandate?	date? Yes				
			Mandate Source:					

Project Goal

To implement a Class/Training registration and learning management system so that Homeland Security can effectively manage their training programs. Training programs are either conducted at Homeland Security or offsite (CVT). Training is not conducted online.

Business Objective

The main business objective of the class registration and learning management system is to implement a system that will effectively manage the class/training registrations and learning materials offered by the Homeland Security department (HSD) for both employees and the public. This system will allow for improved tracking and management of attendees, certifications and credentials, and continuing education credits/certificates. Increased functionality will also include the ability for end users to register online for classes, reducing the number of calls to HSD and manual registration/tracking by HSD staff.

Major Deliverables

- Detailed Project Plan
- Implementation Plan
- Application and/or System Requirements
- Technical Architecture Diagram(s)
- User Acceptance Test Plan
- Disaster Recovery Toolkit
- Service Level Agreement
- Service Center Knowledge Documents
- Training/User Manuals

Project Name: HSD Learning Management System Project ID: D59166LM

- Participate in creation of requirements document
- Participate in distribution RFP to potential vendors
- · Develop and populate scoring matrix
- Approved Tech Review of selected solution
- Contract with selected vendor
- Implemented system with CAMS integration
- Provide training and support documentation

Approach

- Develop Detailed Project Plan
- Document system requirements and validate E-Learning viability
- Determine and document system architecture and diagram
- Assess User Hardware and Software Requirements
- Conduct Tech Review
- Formulate and distribute RFP to potential vendors
- Evaluate responses
- Select vendor and solution
- Order hardware and software if needed
- Develop Implementation Plan
- Develop new system
- Develop User Acceptance Test Plan
- Test new system
- Acquire User Acceptance Sign off
- Conduct Change Control
- Develop User Documentation, SLA, Disaster Recovery Toolkit, Service Center Knowledge Documents
- Train users on new system
- Release new system into production

Research & Analysis

Gartner Research Recommendation

- Develop your five-year learning strategy as part of a broader human capital management plan to prioritize your scheduling priorities.
- Place the learner's experience and the solutions usability at the top of the priority list for any new learning project.

Benefits

See Return on Investment (ROI) Analysis Document

Project Name: HSD Learning Management System Project ID: D59166LM

Impact

Number of Users 5 HSD + Public

Divisions Homeland Security

Leadership Groups Finance/Admin

Risk

Business Environment Medium – Project will require some changes to existing business

processes.

Technical Environment Medium – Previously implemented technologies with new aspects

and/or new requirements.

Project Name: HSD Learning Management System Project ID: D59166LM

Assumptions

Staffing IT Staffing: resources will be available for the hours indicated per the attached

project plan.

Other Staffing: additional staffing will be available as follows:

Role:	<u>Name</u>	<u>Hours per Day</u>
Sponsor	Thomas Hardesty	As Needed
Business Lead	Kevin Scheid	As Needed
Subject Matter Expert	Tracey McGee	As Needed

Facilities

•

Technical

• . E-learning product will be analyzed to determine appropriate fit for HSD needs

Funding

• Information Technology

Other

• Ability to verify previous training obtained with other entities

Priority

• TBD

Constraints

•

Exclusions

•

Project Name: HSD Learning Management System Project ID: D59166LM

PROJECT PHASE AUTHORIZATION

Phase(s):		
Total Estimated Application Services	Hours: 786	
Total Estimated Technical Systems	Hours: 55	
Total Estimated CLEMIS	Hours:	
Total Estimated Internal Services	Hours:	
IT Application Services Division Manager Approval:		Date:
IT Technical Systems Division Manager Approval:		Date:
IT CLEMIS Division Manager Approval:		Date:
IT Internal Services Division Manager Approval:		Date:
IT Management Approval:		
Approved: Yes No		Date:
Reason:		
Project Sponsor Approval:		
Title:		Date:

PROJECT SUMMARY

Authorized Development (see above)	Hours: 841	
Preliminary Estimated Development for Future Phases	Hours:	
Grand Total Estimated Development	Hours: 841	Cost: \$138,765

Project Name: HSD Learning Management System Project ID: D59166LM

PROJECT COMPLETION AUTHORIZATION

Customer Acceptance of Product:	
Title:	Date:
Project Office Review:	Date:

HSD Learning Management System - Size Estimate (+/- 10% to 50%)

1	Туре	ID	Task Name	Estimated	Estimate Notes
2				Hours	
3	3	000000	PROJECT MANAGEMENT	192	
4	Phase	100000	DEVELOP RFP & SELECT VENDOR	177	
5	Phase	200000	BUSINESS REQUIREMENTS	27	
6	Phase	300000	DESIGN SYSTEM ARCHITECTURE	97	
7	Phase	400000	DEVELOP APPLICATION	213	
8	Phase	500000	IMPLEMENTATION PHASE	87	
9	Phase	600000	POST IMPLEMENTATION SUPPORT	48	
10				841	

Project Summary

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Benefits/Savings:							
Tangible Benefits Subtotal:	0	0	0	0	0	0	0
Cost Avoidance Subtotal:	44,250	45,105	45,977	46,867	47,774	48,699	278,672
Costs:					·		·
Development Services Subtotal:	138,765	3,300	3,300	3,300	3,300	3,300	155,265
Hardware Subtotal:	0	0	0	0	0	0	0
Software Subtotal:	9,000	9,000	9,000	9,000	9,000	9,000	54,000
Infrastructure Subtotal	0	0	0	0	0	0	0
Training Subtotal:	0	0	0	0	0	0	0
Other Subtotal:	0	0	0	0	0	0	0
Annual Statistics:							
Annual Total Savings	44,250	45,105	45,977	46,867	47,774	48,699	278,672
Annual Total Costs	147,765	12,300	12,300	12,300	12,300	12,300	209,265
Annual Return on Investment	(103,515)	32,805	33,677	34,567	35,474	36,399	69,407
Annual Costs/Savings Ratio	333.93%	27.27%		26.24%	25.75%	25.26%	·
Project Cumulative Statistics:							
Cumulative Total Savings	44,250	89,355	135,332	182,199	229,973	278,672	278,672
Cumulative Total Costs	147,765	160,065	172,365	184,665	196,965	209,265	209,265
Cumulative Return on Investment	(103,515)	(70,710)	(37,033)	(2,466)	33,008	69,407	69,407
Cumulative Cost/Savings Ratio	333.93%	179.13%	127.36%	101.35%	85.65%	75.09%	75.09%
Year Positive Payback Achieved State or Federal Mandate?					Year 5		Year 5
Signatures:							
Benefits Reviewed By Project Sponsor				Date:			
Costs (including IT Resources) Reviewed By Information Technology Project Manager				Date:			

As Of: 2/15/18

Oakland County -- HSD Learning Management System

Return on Investment Analysis

Savings Detail

Benefit/Savings Description	Project Savings Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Savings	Annual Multiplier
Time spent by HSD staff tracking							
emails for compiling the list of							
attendees	Cost Avoidance		HR	300	65	19,500	1.020
Time spent by HSD staff taking							
telephone calls from people to register							
for classes	Cost Avoidance		HR	400	50	20,000	1.020
Time spent by HSD staff printing							
training materials	Cost Avoidance		HR	50	65	3,250	1.020
Printing and purchase of training							
materials	Cost Avoidance		ANN	1,500	1	1,500	
						0	
						0	
						0	

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Oakland County -- HSD Learning Management System

Return on Investment Analysis

Savings Detail

		Affects Project RO) ?		Po	tential Savir	ngs Extensio	ns		
Benefit/Savings Description	Project Savings Category	Y1	Y2	Y 3	Y	4 ١	Y5	Y6	Y1	Y2	Y 3	Y4	Y5	Y6
Time spent by HSD staff tracking			İ	Ī	ī	T	Ī							
emails for compiling the list of				1	1	ı	į							
attendees	Cost Avoidance	х	Х	Х	х	х	(Х	19,500.00	19,890.00	20,287.80	20,693.56	21,107.43	21,530
Time spent by HSD staff taking			Ī											
telephone calls from people to register			ĺ		Ì	ı	I							
for classes	Cost Avoidance	х	Х	Х	Х	х		х	20,000.00	20,400.00	20,808.00	21,224.16	21,648.64	22,082
Time spent by HSD staff printing			Ī	į	Ī	Ţ	I							
training materials	Cost Avoidance	х	Х	х	х	х	(х	3,250.00	3,315.00	3,381.30	3,448.93	3,517.90	3,588
Printing and purchase of training			Ī				Ī							
materials	Cost Avoidance	х	Х	Х	х	Х	(Х	1,500.00	1,500.00	1,500.00	1,500.00	1,500.00	1,500
				Į	Ţ									
			İ]	i	Ī	Ī							
			İ	İ	i	Ī	i							

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Savings Summary

Benefit/Savings Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Tangible Benefit:							
Tangible Benefits Subtotal:							
Cost Avoidance:							
Time spent by HSD staff tracking emails for							
compiling the list of attendees	19,500	19,890	20,288	20,694	21,107	21,530	123,008
Time spent by HSD staff taking telephone							
calls from people to register for classes	20,000	20,400	20,808	21,224	21,649	22,082	126,162
Time spent by HSD staff printing training							
materials	3,250	3,315	3,381	3,449	3,518	3,588	20,501
Printing and purchase of training materials	1,500	1,500	1,500	1,500	1,500	1,500	9,000
Cost Avoidance Subtotal:	44,250	45,105	45,977	46,867	47,774	48,699	278,672
Intangible Benefit:							
Savings Total:	44,250	45,105	45,977	46,867	47,774	48,699	278,672

Oakland County -- HSD Learning Management System

Return on Investment Analysis

								Af	fect	s Pr	ojec	t RC)l?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual						
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3	Y4	Y5	Y6
IT Hours - New Development	Development Svcs			841	165	138,765		Х					
IT Hours - System Maintenance	Development Svcs				165	0			1 ! !		,		
IT Hours - Customer Support	Development Svcs			20	165	3,300			Х	Х	Х	Х	Х
IT Hours - Planned Maintenance	Development Svcs				165	0							
User Hours - New Development	Development Svcs					0				[;		
User Hours - PTNE/OT	Development Svcs					0					j		
Contractor Professional Services	Development Svcs					0					,		
PC System - Acquisition	Hardware				814	0					, ,		
PC System - Maintenance	Hardware				2,304	0							
Notebook - Acquisition	Hardware				1,223	0					, ,		
Notebook - Maintenance	Hardware				2,372	0							
Tablet Notebook - Acquisition	Hardware				2,012	0					, ,		
Tablet Notebook - Maintenance	Hardware					0					j		
Laserprinter - Acquisition	Hardware				1,432	0							
Laserprinter - Maintenance	Hardware				1,104	0							
Image Workstations - Acquisition	Hardware					0			Î		,		
Image Workstations - Maintenance	Hardware				3,496	0					<u> </u>		
PC Maintenance User Owned	Hardware				2,304	0			İ		,		
Printer Maintenance User Owned	Hardware				1,072	0			Î				
File Space (100GB)	Hardware		ANN		173	0			İ		;		
Internet Bandwidth per MB	Hardware		ANN		750	0			İ		į		
Package Software - Acquisition	Software		ANN	5	1,800	9,000		Х					
Package Software - Maintenance	Software			5	1,800	9,000			Х	Х	Х	Х	Х
Business Objects Access	Software					0					j		
Term Emulation SFTW-Acquisition	Software					0					!		
Term Emulation SFTW-Maintenance	Software					0			Î				
Server - Acquisition/Upgrade	Infrastructure				8,000	0			i				
Server - Maintenance	Infrastructure				360	0			İ		į		
Server Sftwre - Acquisition/Upgrade	Infrastructure				335	0							
Server Sftwre - Maintenance	Infrastructure					0			Î				
Server Rack Mount	Infrastructure				400	0					<u> </u>		
Oracle Enterprise Per Processor -											i		
Includes Year 1 Maintenance	Infrastructure				21,372	0			İ		, ,		
Oracle Enterprise Per Processor - Year											j		
2 and Beyond	Infrastructure		1		3,432	0					<u>. </u>		

								Af	fect	s Pro	iect	ROI?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual					
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y 3	Y4	Y5 Y6
SQL Server Enterprise - Per Processor											T	
(4 cores) - Purchased Sept 2016-Aug												
2017 - Includes Maintenance thru Aug											į	
2019	Infrastructure				24,533	0					į	
SQL Server Enterprise - Per Processor										Î		
(4 cores) - Purchased Sept 2017-Aug											į	l
2018 - Includes Maintenance thru Aug											- 1	
2019	Infrastructure				20,759	0					ı	
SQL Server Enterprise - Per Processor												
(4 cores) - Purchased Sept 2018-Aug												
2019 - Includes Maintenance thru Aug											į	
	Infrastructure				16,985	0					į	
SQL Server Enterprise - Maintenance,					·							
Per Processor (4 cores) - Sept 2019												
and Beyond	Infrastructure				4,218	0					į	
SQL Server Standard - Per Processor					,					i		
(4 cores) - Purchased Sept 2016-Aug											Ì	İ
2017 - Includes Maintenance thru Aug											į	
	Infrastructure				6,398	0					į	
SQL Server Standard - Per Processor					,							
(4 cores) - Purchased Sept 2017-Aug												
2018 - Includes Maintenance thru Aug											į	
2019	Infrastructure				5,414	0					į	
SQL Server Standard - Per Processor					·							
(4 cores) - Purchased Sept 2018-Aug											ŀ	
2019 - Includes Maintenance thru Aug											į	
2019	Infrastructure				4,429	0					ĺ	İ
SQL Server - Standard Maintenance,												
Per Processor (4 cores) - Sept 2019											į	
· · · · · · · · · · · · · · · · · · ·	Infrastructure				1,100	0					į	
Websphere Basic Per Processor											- †	
Single/Dual Core - Includes Year 1												
Maintenance	Infrastructure				3,506	0					į	

								Af	fects	Pro	ject	ROI?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual					
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3	Y4 `	Y5 Y6
Websphere Basic Per Processor										į		
•	Infrastructure				701	0			ļ	Ì	ĺ	
Websphere ND Per Processor	iiiiasiiuciule				701	U						_
Single/Dual Core - Includes Year 1										į	į	
Maintenance	Infrastructure				13,180	0				į	į	
Maintenance	mirastructure				13,180	U				- i	- i	
Websphere ND Per Processor										Į		
•	Infrastructure				2,635	0				i	İ	
SSL Certificate	Infrastructure				845	0				ı	i	
Internet Access	Infrastructure				180	0					Ţ	
App Code Directories on Consolidated										1	- [
1	Infrastructure		ANN		415	0				į	İ	
Database (5 GB) on Consolidated SQL										- 1	- 1	
` '	Infrastructure		ANN		930	0				İ	İ	
Database Instance (125 GB DB) on												
Consolidated SQL Server	Infrastructure		ANN		2,395	0				į	i	
Database SQL Maint Server	Infrastructure		ANN		834	0				İ		
Database SQL Server Physical	Infrastructure		ANN		19,158	0				Î	i	
DB Maintenance (Annual Cycle \$610)	Infrastructure		ANN		610	0				ŀ		
DB Maintenance (Semi-Annual Cycle										ı	ı	
\$1220)	Infrastructure		ANN		1,220	0				į	į	
DB Maintenance (Semi-Annual Cycle										- 1		
\$2440)	Infrastructure		ANN		2,440	0					į	
Dedicated Virtual Server	Infrastructure		ANN		4,150	0				Ī	ŀ	
DB Instance Setup	Infrastructure				976	0				İ	į	
DBA MS SQL Database Creation on										Ī	ı	
Exisitng Instance	Infrastructure				366	0				İ	İ	
Extra Small - 2 Core 8GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$601 On Premise Physical Server = N/A	Infrastructure		ANN			0						
On Fremise Physical Server – N/A	mmastructure		AININ			U			j			

Oakland County -- HSD Learning Management System Return on Investment Analysis

As Of: 2/15/18

								Af	fect	s Pr	ojec	t RO)l?
Cost Description	Project Cost Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Cost	Annual Multiplier	Y1	Y2	Y 3	Y4	Y5	Y6
											i	i	
Small - 4 Core 16GB RAM, 500GB											i	ļ	
Drive, 10 GB NIC - Cloud/Virtual = \$951											į	ļ	
On Premise Physical Server = \$9,288	Infrastructure		ANN			0					j		
Medium - 8 Core 32GB RAM, 500GB											ļ	ļ	
Drive, 10 GB NIC - Cloud/Virtual =												ļ	
\$1,702 On Premise Physical Server =											į	į	
\$9,751	Infrastructure		ANN			0					İ	į	
Large - 16 Core 64GB RAM, 500GB											ĺ	Ī	
Drive, 10 GB NIC - Cloud/Virtual =												į	
\$3,167 On Premise Physical Server =											į	į	
\$10,446	Infrastructure		ANN			0					į	į	
Extra Large - 40 Core 160GB RAM,											ŀ	ŀ	
500GB Drive, 10 GB NIC - Cloud/Virtual												ļ	
= \$7,564 On Premise Physical Server =											į	į	1
\$12,906	Infrastructure		ANN			0					į	į	

			Po	otential Cost	Extensions		
	Project Cost		[
Cost Description	Category	Y1	Y2	Y3	Y4	Y5	Y6
IT Hours - New Development	Development Svcs	138,765.00	į.				
IT Hours - System Maintenance	Development Svcs						
IT Hours - Customer Support	Development Svcs		3,300.00	3,300.00	3,300.00	3,300.00	3,300.00
IT Hours - Planned Maintenance	Development Svcs		i	i			
User Hours - New Development	Development Svcs		į	<u> </u>	i		
User Hours - PTNE/OT	Development Svcs		į	į			
Contractor Professional Services	Development Svcs		į	į			
PC System - Acquisition	Hardware	į	į	į	ĺ	İ	
PC System - Maintenance	Hardware		į	į			
Notebook - Acquisition	Hardware		į				
Notebook - Maintenance	Hardware		į		Ī		
Tablet Notebook - Acquisition	Hardware		ļ	į			
Tablet Notebook - Maintenance	Hardware		į	į			
Laserprinter - Acquisition	Hardware		i !				
Laserprinter - Maintenance	Hardware				Î		
Image Workstations - Acquisition	Hardware		ĺ			Î	
Image Workstations - Maintenance	Hardware		į	į			
PC Maintenance User Owned	Hardware		İ		1		
Printer Maintenance User Owned	Hardware						
File Space (100GB)	Hardware		į	į			
Internet Bandwidth per MB	Hardware		į				
Package Software - Acquisition	Software	9,000.00			Î		
Package Software - Maintenance	Software		9,000.00	9,000.00	9,000.00	9,000.00	9,000.00
Business Objects Access	Software						
Term Emulation SFTW-Acquisition	Software		į.	į			
Term Emulation SFTW-Maintenance	Software		i			Ì	
Server - Acquisition/Upgrade	Infrastructure		į	į			
Server - Maintenance	Infrastructure		i !				
Server Sftwre - Acquisition/Upgrade	Infrastructure				Î		
Server Sftwre - Maintenance	Infrastructure		Í		ĺ	Î	
Server Rack Mount	Infrastructure						
Oracle Enterprise Per Processor -			i				
Includes Year 1 Maintenance	Infrastructure		į	į		į	
Oracle Enterprise Per Processor - Year			į				
2 and Beyond	Infrastructure				 		

		Potential Cost Extensions						
Coat Description	Project Cost	V4	Va	Va	V4	VE	Y6	
Cost Description	Category	Y1	Y2	Y3	Y4	Y5	10	
SQL Server Enterprise - Per Processor		 	İ	İ	İ	•		
(4 cores) - Purchased Sept 2016-Aug						•		
2017 - Includes Maintenance thru Aug						}	! !	
2019	Infrastructure		<u> </u>	<u> </u>	<u> </u>			
SQL Server Enterprise - Per Processor				ļ	ļ			
(4 cores) - Purchased Sept 2017-Aug				•	•	•		
2018 - Includes Maintenance thru Aug				İ	İ			
2019	Infrastructure							
SQL Server Enterprise - Per Processor				[[
(4 cores) - Purchased Sept 2018-Aug				ļ	ļ			
2019 - Includes Maintenance thru Aug				•	•	•		
2019	Infrastructure							
SQL Server Enterprise - Maintenance,			-				! !	
Per Processor (4 cores) - Sept 2019								
and Beyond	Infrastructure			•	•	•		
SQL Server Standard - Per Processor							i	
(4 cores) - Purchased Sept 2016-Aug								
2017 - Includes Maintenance thru Aug				ļ	ļ			
2019	Infrastructure			•	•	•		
SQL Server Standard - Per Processor								
(4 cores) - Purchased Sept 2017-Aug						•		
2018 - Includes Maintenance thru Aug				ļ	ļ			
2019	Infrastructure			İ	İ	•		
SQL Server Standard - Per Processor			1				i !	
(4 cores) - Purchased Sept 2018-Aug				!	!			
2019 - Includes Maintenance thru Aug				•	•	į		
2019	Infrastructure			İ	İ	•		
SQL Server - Standard Maintenance,			1	!	!	!	!	
Per Processor (4 cores) - Sept 2019								
and Beyond	Infrastructure					•	<u> </u>	
Websphere Basic Per Processor			1					
Single/Dual Core - Includes Year 1							<u> </u>	
Maintenance	Infrastructure		İ				<u> </u>	

		Potential Cost Extensions							
Cost Description	Project Cost	Y1	Y2	Y3	Y4	Y5	Y6		
Cost Description	Category	11	1 12	1 13	14	1 15	10		
Websphere Basic Per Processor		-					•		
<u> </u>	Infrastructure		!		! ! !		! !		
Websphere ND Per Processor	iiiiasiiuotule	 		•		!			
Single/Dual Core - Includes Year 1						•	!		
Maintenance	Infrastructure		į	İ		İ			
Iviaintenance	Illiasiluciule		i 	i 	i 	<u> </u>	<u> </u>		
Websphere ND Per Processor									
i i	Infrastructure		! !	<u> </u>] 	-	! !		
SSI Certificate	Infrastructure								
Internet Access	Infrastructure					<u> </u>			
App Code Directories on Consolidated			<u> </u> 	<u> </u>) 	 	1		
IIS Server (Virtual)	Infrastructure					•			
Database (5 GB) on Consolidated SQL			İ	İ		<u> </u>			
Instance Server	Infrastructure								
Database Instance (125 GB DB) on					} !	<u> </u>			
Consolidated SQL Server	Infrastructure			İ	ī ! !		İ		
Database SQL Maint Server	Infrastructure		į						
Database SQL Server Physical	Infrastructure								
DB Maintenance (Annual Cycle \$610)	Infrastructure		1		1 1 1		!		
DB Maintenance (Semi-Annual Cycle									
\$1220)	Infrastructure		į	İ		İ			
DB Maintenance (Semi-Annual Cycle			!) ! !				
\$2440)	Infrastructure								
Dedicated Virtual Server	Infrastructure								
DB Instance Setup	Infrastructure) ! !) ! !	!	ĺ		
DBA MS SQL Database Creation on									
Exisitng Instance	Infrastructure								
					•		[
Extra Small - 2 Core 8GB RAM, 500GB							•		
Drive, 10 GB NIC - Cloud/Virtual = \$601				İ					
On Premise Physical Server = N/A	Infrastructure								

	Potential Cost Extensions								
Cost Description	Project Cost Category	Y1	Y2	Y3	Y4	Y5	Y6		
			I I I						
Small - 4 Core 16GB RAM, 500GB									
Drive, 10 GB NIC - Cloud/Virtual = \$951									
On Premise Physical Server = \$9,288	Infrastructure								
Medium - 8 Core 32GB RAM, 500GB			i I I	i !					
Drive, 10 GB NIC - Cloud/Virtual =									
\$1,702 On Premise Physical Server =									
\$9,751	Infrastructure								
Large - 16 Core 64GB RAM, 500GB									
Drive, 10 GB NIC - Cloud/Virtual =									
\$3,167 On Premise Physical Server =				į	•	İ			
\$10,446	Infrastructure		 		•				
Extra Large - 40 Core 160GB RAM,									
500GB Drive, 10 GB NIC - Cloud/Virtual			: 	į	•	İ			
= \$7,564 On Premise Physical Server =									
\$12,906	Infrastructure			!					

Cost Summary

Cost Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Development Services:							
IT Hours - New Development	138,765						138,765
IT Hours - System Maintenance							
IT Hours - Customer Support		3,300	3,300	3,300	3,300	3,300	16,500
IT Hours - Planned Maintenance							
User Hours - New Development							
User Hours - PTNE/OT							
Contractor Professional Services							
Development Services Subtotal:	138,765	3,300	3,300	3,300	3,300	3,300	155,265
Hardware:							
Hardware Subtotal:							
Software:							
Package Software - Acquisition	9,000						9,000
Package Software - Maintenance		9,000	9,000	9,000	9,000	9,000	45,000
Software Subtotal:	0.000	0.000	0.000	0.000	0.000	0.000	F4 000
L L	9,000	9,000	9,000	9,000	9,000	9,000	54,000
Infrastructure:							
Infrastructure Subtotal							
Training:							
Project Staff Training							
User Training							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	147,765	12,300	12,300	12,300	12,300	12,300	209,265

Oakland County -- HSD Learning Management System

As Of: 2/15/18

Return on Investment Analysis

Assumptions

Date	Assumption Description
30-May-18	Assumes 5 users at Homeland Security. The system would allow public users to access and sign up, etc.
04-Jun-18	Research indicates that SaaS options would cost approximately \$150 per month per user.
04-Jun-18	SaaS solution being planned due to potential requirements limitations possessed by e-learning.

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