Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: CDR/HHSCP Application Re-write   **Project ID: D99161CD**

Leadership Group: Finance/Administration	
Department: Health & Human Services	**Division:** Admin
Project Sponsor: Leigh-Anne Stafford	**Date Requested:** 2/26/18 **PM Customer No.** 161

Request Type: ***New Development***   Enhancement   Customer Support

Planned System Maintenance or Upgrade

IT Team Name: Assessing and Taxation	**IT Team No:** 9

Project Manager/Leader: Scott Kaiser

Account Number: 96842	**Account Description:** Health Administration	**Customer Name:** Health

Grant Funded? Yes   **No**   **Mandate?**   Yes   **No**

Mandate Source:

Project Goal

To re-write the current CDR/ HHSCP (Communicable Disease Reporting/Health and Human Services Portal) program to upgrade the code base and operating system so that it is modernized and standardized to the current IT code template and IAP services can continue allowing our schools to report disease information to the Health Division as well as the Oakland County Homeland Security Division to use for emergency preparedness drill reporting.

Business Objective

Update the application that allows schools to report to the county vital information required by the various state mandates. The system will maintain current functionality and may explore integrations with other systems to streamline reporting from the County to the State.

Major Deliverables
- Detailed Project Plan
- Application and/or System Requirements
- End User Hardware and Software Requirements Document
- Technical Design Document
- Technical Architecture Diagram
- Training Plan
- User Acceptance Test Plan
- Implementation Plan
- Single app for schools to report all required information to the County
- Training/User Manual(s)
- Application Code
- Service Level Agreement
- Disaster Recovery Toolkit
- Service Center Knowledge Documents

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Approach
- Develop Detailed Project Plan
- Review current business process and conduct needs assessment with customer, ensuring current manual processes are refined and automated.
- Document system requirements
- Determine and document system architecture and diagram
- Assess User Hardware and Software Requirements
- Conduct Tech Review
- 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 – "Care delivery organizations should adopt clinical systems that support LOINC (Logical Observation Identifiers Names and Codes) and SNOMED not only to support NEDSS (National Electronic Disease Surveillance System), but also to contract more easily with regional laboratories that have already generally adopted LOINC and SNOMED for external interfaces, and to facilitate compliance with future HIPAA claims attachment regulations." This ascertains that the need for CDR needed is to maintain compliance with the State and ensure a consistent tool is online for submittal of disease surveillance data.

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users: 30 internal users at the Health Division and over 500 schools in Oakland County use the system to report information.

Divisions: Admin**,** Health, and Homeland Security Division

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Leadership Groups: Finance/Administration

Risk

Business Environment   Low - Little or no impact to existing business processes.

Technical Environment   Low - Proven and previously implemented technologies.

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:	Name	Hours per Day
Project Sponsor:	Leigh-Anne Stafford	As Needed

Facilities

- TBD

Technical

- None

Funding

- Information Technology

Other

- N/A

Priority

- TBD

Constraints

- N/A

Exclusions

- N/A

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Project Scope and Approach

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PROJECT PHASE AUTHORIZATION

Phase(s): All		
Total Estimated Application Services	**Hours:** 990	
Total Estimated Technical Systems	**Hours:** 121	
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:**	
Preliminary Estimated Development for Future Phases	**Hours:**	
Grand Total Estimated Development	**Hours: 1,111**	**Cost: $183,315**

Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: CDR/HHSCP Application Re-write   **Project ID: D99161CD**

PROJECT COMPLETION AUTHORIZATION

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

CDR/HHSCP Application Re-write - Size Estimate (+/- 10% to 50%)

	Type	ID	Task Name	Estimated	Estimate Notes
1					
2				Hours	
3	3	000000	PROJECT MANAGEMENT	276	
4	Phase	200000	DEFINE BUSINESS REQUIREMENTS	89	
5	Phase	300000	DESIGN SYSTEM ARCHITECTURE	89	
6	Phase	500000	DEVELOP APPLICATION	505	
7	Phase	600000	IMPLEMENTATION PHASE	81	
8	Phase	080000	POST IMPLEMENTATION SUPPORT	71	
9				1,111	

Oakland County -- CDR/HHSCP Application Re-write

Return on Investment Analysis

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:	20,513	8,974	9,154	9,337	9,524	9,714	67,216
Costs:							
Development Services Subtotal:	183,315	3,300	9,240	3,300	9,240	3,300	211,695
Hardware Subtotal:	0	0	0	0	0	0	0
Software Subtotal:	0	0	0	0	0	0	0
Infrastructure Subtotal	19,194	3,300	3,300	3,300	3,300	3,300	35,694
Training Subtotal:	0	0	0	0	0	0	0
Other Subtotal:	0	0	0	0	0	0	0
Annual Statistics:							
Annual Total Savings	20,513	8,974	9,154	9,337	9,524	9,714	67,216
Annual Total Costs	202,509	6,600	12,540	6,600	12,540	6,600	247,389
Annual Return on Investment	(181,996)	2,374	(3,386)	2,737	(3,016)	3,114	(180,173)
Annual Costs/Savings Ratio	987.20%	73.54%	136.99%	70.69%	131.67%	67.94%	
Project Cumulative Statistics:							
Cumulative Total Savings	20,513	29,488	38,642	47,979	57,502	67,216	67,216
Cumulative Total Costs	202,509	209,109	221,649	228,249	240,789	247,389	247,389
Cumulative Return on Investment	(181,996)	(179,621)	(183,007)	(180,270)	(183,287)	(180,173)	(180,173)
Cumulative Cost/Savings Ratio	987.20%	709.14%	573.60%	475.73%	418.75%	368.05%	368.05%
Year Positive Payback Achieved							NO PAYBACK
State or Federal Mandate?							
Signatures:							
Benefits Reviewed By Project Sponsor				Date:			
Costs (including IT Resources) Reviewed By Information Technology Project Manager				Date:			

Oakland County -- CDR/HHSCP Application Re-write

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
System is limited in capability and requires the User Support Specialists to make changes. A new system would allow the a more efficient way of making changes such as adding new accounts.	Cost Avoidance			260	34	8,798	1.020
New system would allow the expansion of the portal to provide messages, handouts and additional guideance through an enhanced software.	Intangible Benefit					0	
Planned Maintenance - Remove flash dependancy for file uploads	Cost Avoidance			6	165	990	
Planned Maintenance - server OS upgrade from 2008	Cost Avoidance			20	165	3,300	
Planned Maintenance - migrate from Siteminder to NGINX	Cost Avoidance			15	165	2,475	
Planned Maintenance - upgrade .net version	Cost Avoidance			30	165	4,950	
						0	
						0	
						0	

Oakland County -- CDR/HHSCP Application Re-write

Return on Investment Analysis

Savings Detail

Benefit/Savings Description	Project Savings Category	Affects Project ROI?						Potential Savings Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6	Y1	Y2	Y3	Y4	Y5	Y6
System is limited in capability and requires the User Support Specialists to make changes. A new system would allow the a more efficient way of making changes such as adding new accounts.	Cost Avoidance	X	X	X	X	X	X	8,798.40	8,974.37	9,153.86	9,336.93	9,523.67	9,714
New system would allow the expansion of the portal to provide messages, handouts and additional guideance through an enhanced software.	Intangible Benefit												
Planned Maintenance - Remove flash dependancy for file uploads	Cost Avoidance	x						990.00					
Planned Maintenance - server OS upgrade from 2008	Cost Avoidance	x						3,300.00					
Planned Maintenance - migrate from Siteminder to NGINX	Cost Avoidance	x						2,475.00					
Planned Maintenance - upgrade .net version	Cost Avoidance	x						4,950.00					

Oakland County -- CDR/HHSCP Application Re-write

Return on Investment Analysis

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:							
System is limited in capability and requires the User Support Specialists to make changes. A new system would allow the a more efficient way of making changes such as adding new accounts.	8,798	8,974	9,154	9,337	9,524	9,714	55,501
Planned Maintenance - Remove flash dependancy for file uploads	990						
Planned Maintenance - server OS upgrade from 2008	3,300						
Planned Maintenance - migrate from Siteminder to NGINX	2,475						
Planned Maintenance - upgrade .net version	4,950						
Cost Avoidance Subtotal:	*20,513*	*8,974*	*9,154*	*9,337*	*9,524*	*9,714*	*67,216*
Intangible Benefit:							
New system would allow the expansion of the portal to provide messages, handouts and additional guideance through an enhanced software.							
Savings Total:	*20,513*	*8,974*	*9,154*	*9,337*	*9,524*	*9,714*	*67,216*

Oakland County -- CDR/HHSCP Application Re-write

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Cost	Annual Multiplier	Y1	Y2	Y3	Y4	Y5	Y6
										Affects Project ROI?			
IT Hours - New Development	Development Svcs		HR	1,111	165	183,315		x					
IT Hours - System Maintenance	Development Svcs		HR	10	165	1,650			x	x	x	x	x
IT Hours - Customer Support	Development Svcs		HR	10	165	1,650			x	x	x	x	x
IT Hours - Planned Maintenance	Development Svcs		HR	36	165	5,940				x		x	
User Hours - New Development	Development Svcs					0							
User Hours - PTNE/OT	Development Svcs					0							
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							
Laserprinter - Acquisition	Hardware				1,432	0							
Laserprinter - Maintenance	Hardware				1,104	0							
Image Workstations - Acquisition	Hardware					0							
Image Workstations - Maintenance	Hardware				3,496	0							
PC Maintenance User Owned	Hardware				2,304	0							
Printer Maintenance User Owned	Hardware				1,072	0							
File Space (100GB)	Hardware		ANN		173	0							
Internet Bandwidth per MB	Hardware		ANN		750	0							
Package Software - Acquisition	Software					0							
Package Software - Maintenance	Software					0							
Business Objects Access	Software					0							
Term Emulation SFTW-Acquisition	Software					0							
Term Emulation SFTW-Maintenance	Software					0							
Server - Acquisition/Upgrade	Infrastructure				8,000	0							
Server - Maintenance	Infrastructure				360	0							
Server Sftwre - Acquisition/Upgrade	Infrastructure				335	0							
Server Sftwre - Maintenance	Infrastructure					0							
Server Rack Mount	Infrastructure				400	0							
Oracle Enterprise Per Processor - Includes Year 1 Maintenance	Infrastructure				21,372	0							
Oracle Enterprise Per Processor - Year 2 and Beyond	Infrastructure				3,432	0							

Oakland County -- CDR/HHSCP Application Re-write

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Cost	Annual Multiplier	Affects Project ROI?					
								Y1	Y2	Y3	Y4	Y5	Y6
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019	Infrastructure				24,533	0							
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2017-Aug 2018 - Includes Maintenance thru Aug 2019	Infrastructure	;			20,759	0							
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2018-Aug 2019 - Includes Maintenance thru Aug 2019	Infrastructure				16,985	0							
SQL Server Enterprise - Maintenance, Per Processor (4 cores) - Sept 2019 and Beyond	Infrastructure				4,218	0							
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019	Infrastructure		EA	3	6,398	19,194		x					
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2017-Aug 2018 - Includes Maintenance thru Aug 2019	Infrastructure				5,414	0							
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2018-Aug 2019 - Includes Maintenance thru Aug 2019	Infrastructure				4,429	0							
SQL Server - Standard Maintenance, Per Processor (4 cores) - Sept 2019 and Beyond	Infrastructure		EA	3	1,100	3,300			x	x	x	x	x
Websphere Basic Per Processor Single/Dual Core - Includes Year 1 Maintenance	Infrastructure				3,506	0							

Oakland County -- CDR/HHSCP Application Re-write

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Cost	Annual Multiplier	Affects Project ROI?					
								Y1	Y2	Y3	Y4	Y5	Y6
Websphere Basic Per Processor Single/Dual Core - Year 2 and Beyond	Infrastructure				701	0							
Websphere ND Per Processor Single/Dual Core - Includes Year 1 Maintenance	Infrastructure				13,180	0							
Websphere ND Per Processor Single/Dual Core - Year 2 and Beyond	Infrastructure				2,635	0							
SSL Certificate	Infrastructure				845	0							
Internet Access	Infrastructure				180	0							
Imperva Web Application Firewall (External Web Applications Only)	Infrastructure		ANN		500	0							
App Code Directories on Consolidated IIS Server (Virtual)	Infrastructure		ANN		415	0							
Database (5 GB) on Consolidated SQL Instance Server	Infrastructure		ANN		930	0							
Database Instance (125 GB DB) on Consolidated SQL Server	Infrastructure		ANN		2,395	0							
Database SQL Maint Server	Infrastructure		ANN		834	0							
Database SQL Server Physical	Infrastructure		ANN		19,158	0							
DB Maintenance (Annual Cycle $610)	Infrastructure		ANN		610	0							
DB Maintenance (Semi-Annual Cycle $1220)	Infrastructure		ANN		1,220	0							
DB Maintenance (Semi-Annual Cycle $2440)	Infrastructure		ANN		2,440	0							
Dedicated Virtual Server	Infrastructure		ANN		4,150	0							
DB Instance Setup	Infrastructure		EA		976	0							
DBA MS SQL Database Creation on Exisitng Instance	Infrastructure				366	0							
Extra Small - 2 Core 8GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $601 On Premise Physical Server = N/A	Infrastructure		ANN			0							

Oakland County -- CDR/HHSCP Application Re-write

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Cost	Annual Multiplier	Y1	Y2	Y3	Y4	Y5	Y6
								Affects Project ROI?					
Small - 4 Core 16GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $951 On Premise Physical Server = $9,288	Infrastructure		ANN		951	0							
Medium - 8 Core 32GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $1,702 On Premise Physical Server = $9,751	Infrastructure		ANN			0							
Large - 16 Core 64GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $3,167 On Premise Physical Server = $10,446	Infrastructure		ANN			0							
Extra Large - 40 Core 160GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $7,564 On Premise Physical Server = $12,906	Infrastructure		ANN			0							

Oakland County -- CDR/HHSCP Application Re-write

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
IT Hours - New Development	Development Svcs	183,315.00					
IT Hours - System Maintenance	Development Svcs		1,650.00	1,650.00	1,650.00	1,650.00	1,650.00
IT Hours - Customer Support	Development Svcs		1,650.00	1,650.00	1,650.00	1,650.00	1,650.00
IT Hours - Planned Maintenance	Development Svcs			5,940.00		5,940.00	
User Hours - New Development	Development Svcs						
User Hours - PTNE/OT	Development Svcs						
Contractor Professional Services	Development Svcs						
PC System - Acquisition	Hardware						
PC System - Maintenance	Hardware						
Notebook - Acquisition	Hardware						
Notebook - Maintenance	Hardware						
Tablet Notebook - Acquisition	Hardware						
Tablet Notebook - Maintenance	Hardware						
Laserprinter - Acquisition	Hardware						
Laserprinter - Maintenance	Hardware						
Image Workstations - Acquisition	Hardware						
Image Workstations - Maintenance	Hardware						
PC Maintenance User Owned	Hardware						
Printer Maintenance User Owned	Hardware						
File Space (100GB)	Hardware						
Internet Bandwidth per MB	Hardware						
Package Software - Acquisition	Software						
Package Software - Maintenance	Software						
Business Objects Access	Software						
Term Emulation SFTW-Acquisition	Software						
Term Emulation SFTW-Maintenance	Software						
Server - Acquisition/Upgrade	Infrastructure						
Server - Maintenance	Infrastructure						
Server Sftwre - Acquisition/Upgrade	Infrastructure						
Server Sftwre - Maintenance	Infrastructure						
Server Rack Mount	Infrastructure						
Oracle Enterprise Per Processor - Includes Year 1 Maintenance	Infrastructure						
Oracle Enterprise Per Processor - Year 2 and Beyond	Infrastructure						

Oakland County -- CDR/HHSCP Application Re-write

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019	Infrastructure						
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2017-Aug 2018 - Includes Maintenance thru Aug 2019	Infrastructure						
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2018-Aug 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 (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019	Infrastructure	19,194.00					
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2017-Aug 2018 - Includes Maintenance thru Aug 2019	Infrastructure						
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2018-Aug 2019 - Includes Maintenance thru Aug 2019	Infrastructure						
SQL Server - Standard Maintenance, Per Processor (4 cores) - Sept 2019 and Beyond	Infrastructure		3,300.00	3,300.00	3,300.00	3,300.00	3,300.00
Websphere Basic Per Processor Single/Dual Core - Includes Year 1 Maintenance	Infrastructure						

Oakland County -- CDR/HHSCP Application Re-write

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
Websphere Basic Per Processor Single/Dual Core - Year 2 and Beyond	Infrastructure						
Websphere ND Per Processor Single/Dual Core - Includes Year 1 Maintenance	Infrastructure						
Websphere ND Per Processor Single/Dual Core - Year 2 and Beyond	Infrastructure						
SSL Certificate	Infrastructure						
Internet Access	Infrastructure						
Imperva Web Application Firewall (External Web Applications Only)	Infrastructure						
App Code Directories on Consolidated IIS Server (Virtual)	Infrastructure						
Database (5 GB) on Consolidated SQL Instance Server	Infrastructure						
Database Instance (125 GB DB) on Consolidated SQL Server	Infrastructure						
Database SQL Maint Server	Infrastructure						
Database SQL Server Physical	Infrastructure						
DB Maintenance (Annual Cycle $610)	Infrastructure						
DB Maintenance (Semi-Annual Cycle $1220)	Infrastructure						
DB Maintenance (Semi-Annual Cycle $2440)	Infrastructure						
Dedicated Virtual Server	Infrastructure						
DB Instance Setup	Infrastructure						
DBA MS SQL Database Creation on Exisitng Instance	Infrastructure						
Extra Small - 2 Core 8GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $601 On Premise Physical Server = N/A	Infrastructure						

Oakland County -- CDR/HHSCP Application Re-write

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
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 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 = $10,446	Infrastructure						
Extra Large - 40 Core 160GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $7,564 On Premise Physical Server = $12,906	Infrastructure						

Oakland County -- CDR/HHSCP Application Re-write

Return on Investment Analysis

Cost Summary

Cost Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Development Services:							
IT Hours - New Development	183,315						183,315
IT Hours - System Maintenance		1,650	1,650	1,650	1,650	1,650	8,250
IT Hours - Customer Support		1,650	1,650	1,650	1,650	1,650	8,250
IT Hours - Planned Maintenance			5,940		5,940		11,880
User Hours - New Development							
User Hours - PTNE/OT							
Contractor Professional Services							
Development Services Subtotal:	*183,315*	*3,300*	*9,240*	*3,300*	*9,240*	*3,300*	*211,695*
Hardware:							
Hardware Subtotal:							
Software:							
Software Subtotal:							
Infrastructure:							
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019	19,194						19,194
SQL Server - Standard Maintenance, Per Processor (4 cores) - Sept 2019 and Beyond		3,300	3,300	3,300	3,300	3,300	16,500
Imperva Web Application Firewall (External Web Applications Only)							
Small - 4 Core 16GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $951 On Premise Physical Server = $9,288							
Infrastructure Subtotal	*19,194*	*3,300*	*3,300*	*3,300*	*3,300*	*3,300*	*35,694*
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	*202,509*	*6,600*	*12,540*	*6,600*	*12,540*	*6,600*	*247,389*

Oakland County -- CDR/HHSCP Application Re-write

Return on Investment Analysis

Assumptions

Date	Assumption Description
05-Mar-18	New system would allow the end user to more effiently add accounts and make changes reducing the User Support Specialist management (5 hrs per week x 52 weeks = 260 hours per year)