Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: Medical Examiner FCMS Enhancements   **Project ID: DJ2176FE**

Leadership Group: Courts		
Department: Public Services	**Division: Medical Examiner**	
Project Sponsor: Casimir Miarka	**Date Requested: 2/14/2022**	**PM Customer No. 176**
Request Type: *New Development* *Enhancement* **X** *Customer Support* *Planned System Maintenance or Upgrade*		
IT Team Name: eCommerce	**IT Team No: J**	
Project Manager/Leader: Dawn Clark		
Account Number: 87202 **Account Description:** Medical Exam-Cust Supp		**Customer Name:** Medical Examiner
Grant Funded? Yes **No**	**Mandate?** Yes **No** **Mandate Source:**	

Project Goal

To implement enhancements to Forensic Case Management System (FCMS), for additional process efficiencies for the intake calls, improved toxicology lab result processing, and barcoding for tracking of evidence and associated property to a case, so that the OCME team can further streamline the processing of ME and Non-ME cases.

Business Objective

To provide enhancements to the Forensic Case Management System (FCMS) that will provide further efficiencies and functionality for the staff by allowing more efficient case tracking, capture of toxicology information through an integration with NMS labs, body and property tracking, and more detailed reporting for KPI measurements.

Major Deliverables

- Detailed Project Plan
- Vendor SOW
- 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
- Training/User Manual(s)
- Application Code
- Service Level Agreement

Project Name: Medical Examiner FCMS Enhancements   **Project ID: DJ2176FE**

- Disaster Recovery Toolkit
- Service Center Knowledge Documents

Approach
- Develop Detailed Project Plan
- Review current business process and conduct needs assessment with customer, ensuring current manual processes are refined and automated.
- Collaborate with vendor on contract and SOW
- Document system requirements
- Determine and document system architecture and diagram
- Assess User Hardware and Software Requirements
- Conduct Tech Review
- 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

Research Recommendation - TBD

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users	32 (OCME staff and two non-county certifying scientists)
Divisions	Medical Examiner
Leadership Groups	Courts

Project Name: Medical Examiner FCMS Enhancements   **Project ID: DJ2176FE**

Risk

Business Environment   LOW – project will require some changes to existing business processes

Technical Environment   LOW – Proven or 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:	Casimir Miarka	As Needed

Facilities

- None
-

Technical

-
- NMS Labs system interface into FCMS to provide toxicology testing results, preferably an API.

Funding

- IT

Other

-

Priority

Project Name: Medical Examiner FCMS Enhancements   **Project ID: DJ2176FE**

Constraints

- None

-

Exclusions

- None

-

Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: Medical Examiner FCMS Enhancements   **Project ID: DJ2176FE**

PROJECT PHASE AUTHORIZATION

Phase(s): All		
Total Estimated Application Services	**Hours: 967**	
Total Estimated Technical Systems	**Hours: 119**	
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: 1,086**	
Previously Authorized Development	**Hours:**	
Preliminary Estimated Development for Future Phases	**Hours:**	
Grand Total Estimated Development	**Hours: 1,086**	**Cost: $179,190**

Project Name: Medical Examiner FCMS Enhancements   **Project ID: DJ2176FE**

PROJECT COMPLETION AUTHORIZATION

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

Medical Examiner FCMS Enhancement - Size Estimate (+/- 10% to 50%)

	Type	ID	Task Name	Estimated Hours	Estimate Notes
1	Type	ID	Task Name	Estimated	Estimate Notes
2				Hours	
3	Phase	000000	PROJECT MANAGEMENT	324	
4	Phase	100000	DEVELOP RFP & SELECT VENDOR	65	
5	Phase	200000	DEFINE BUSINESS REQUIREMENTS	96	
6	Phase	300000	DESIGN SYSTEM ARCHITECTURE	66	
7	Phase	400000	IMPLEMENT VENDOR APPLICATION	310	
8	Phase	500000	IMPLEMENTATION PHASE	149	
9	Phase	600000	POST IMPLEMENTATION SUPPORT	76	
10				1,086	

Oakland County -- Medical Examiner FCMS Enhancement

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:	18,942	18,942	18,942	18,942	18,942	18,942	113,652
Cost Avoidance Subtotal:	26,411	26,675	26,942	27,211	27,483	27,758	162,481
Costs:							
Development Services Subtotal:	259,190	5,024	5,100	5,176	5,254	5,333	285,076
Hardware Subtotal:	0	0	0	0	0	0	0
Software Subtotal:	0	0	0	0	0	0	0
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	45,353	45,617	45,884	46,153	46,425	46,700	276,133
Annual Total Costs	259,190	5,024	5,100	5,176	5,254	5,333	285,076
Annual Return on Investment	(213,837)	40,593	40,784	40,977	41,172	41,368	(8,943)
Annual Costs/Savings Ratio	571.49%	11.01%	11.11%	11.22%	11.32%	11.42%	
Project Cumulative Statistics:							
Cumulative Total Savings	45,353	90,970	136,854	183,007	229,433	276,133	276,133
Cumulative Total Costs	259,190	264,214	269,314	274,490	279,744	285,076	285,076
Cumulative Return on Investment	(213,837)	(173,244)	(132,460)	(91,483)	(50,311)	(8,943)	(8,943)
Cumulative Cost/Savings Ratio	571.49%	290.44%	196.79%	149.99%	121.93%	103.24%	103.24%
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 -- Medical Examiner FCMS Enhancement

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
Quick creation of an OCME case number, and as necessary assign an investigator	Intangible Benefit		ANN			0	1.010
Update the toxicology section of FCMS to better capture the specimen detail for internal testing, and reporting of the results	Intangible Benefit		ANN			0	1.010
Establish a barcoding method in order to capture necessary data related to tracking the location of bodies and associated property	Intangible Benefit		ANN			0	1.010
Establish a method to electronically capture signatures and other data, utilizing auto-fill and verification capabilities, e.g. address verification with USPS	Intangible Benefit		ANN			0	1.010
Improve data output related to KPI measurements for case processing, property management, other ME processes	Intangible Benefit		ANN			0	1.010
Create Additional Requirement Fields for Mandatory Reporting, (i.e. Child Death Review, Domestic Violence)	Intangible Benefit		ANN			0	1.010
Abitlity to have address verification with USPS	Intangible Benefit		ANN			0	1.010
Establish an integration with NMS Labs in order to update the specimen property record(s) in FCMS	Tangible Benefit		ANN	275	69	18,942	1.000
Update Photo Gallery	Cost Avoidance		HR	183	141	25,803	1.010
Reduction in Printing	Cost Avoidance		ANN	16	38	608	1.010
						0	
						0	
						0	
						0	
						0	

Oakland County -- Medical Examiner FCMS Enhancement

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
Quick creation of an OCME case number, and as necessary assign an investigator	Intangible Benefit	X	X	X	X	X	X	0.00	0.00	0.00	0.00	0.00	0
Update the toxicology section of FCMS to better capture the specimen detail for internal testing, and reporting of the results	Intangible Benefit	X	X	X	X	X	X	0.00	0.00	0.00	0.00	0.00	0
Establish a barcoding method in order to capture necessary data related to tracking the location of bodies and associated property	Intangible Benefit	X	X	X	X	X	X	0.00	0.00	0.00	0.00	0.00	0
Establish a method to electronically capture signatures and other data, utilizing auto-fill and verification capabilities, e.g. address verification with USPS	Intangible Benefit	X	X	X	X	X	X	0.00	0.00	0.00	0.00	0.00	0
Improve data output related to KPI measurements for case processing, property management, other ME processes	Intangible Benefit	X	X	X	X	X	X	0.00	0.00	0.00	0.00	0.00	0
Create Additional Requirement Fields for Mandatory Reporting, (i.e. Child Death Review, Domestic Violence)	Intangible Benefit	X	X	X	X	X	X	0.00	0.00	0.00	0.00	0.00	0
Abitlity to have address verification with USPS	Intangible Benefit	X	X	X	X	X	X	0.00	0.00	0.00	0.00	0.00	0
Establish an integration with NMS Labs in order to update the specimen property record(s) in FCMS	Tangible Benefit	X	X	X	X	X	X	18,942.00	18,942.00	18,942.00	18,942.00	18,942.00	18,942
Update Photo Gallery	Cost Avoidance	X	X	X	X	X	X	25,803.00	26,061.03	26,321.64	26,584.86	26,850.71	27,119
Reduction in Printing	Cost Avoidance	X	X	X	X	X	X	608.00	614.08	620.22	626.42	632.69	639

Oakland County -- Medical Examiner FCMS Enhancement

Return on Investment Analysis

Savings Summary

Benefit/Savings Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Tangible Benefit:							
Establish an integration with NMS Labs in order to update the specimen property record(s) in FCMS	18,942	18,942	18,942	18,942	18,942	18,942	113,652
Tangible Benefits Subtotal:	*18,942*	*18,942*	*18,942*	*18,942*	*18,942*	*18,942*	*113,652*
Cost Avoidance:							
Update Photo Gallery	25,803	26,061	26,322	26,585	26,851	27,119	158,740
Reduction in Printing	608	614	620	626	633	639	3,740
Cost Avoidance Subtotal:	*26,411*	*26,675*	*26,942*	*27,211*	*27,483*	*27,758*	*162,481*
Intangible Benefit:							
Quick creation of an OCME case number, and as necessary assign an investigator							
Update the toxicology section of FCMS to better capture the specimen detail for internal testing, and reporting of the results							
Establish a barcoding method in order to capture necessary data related to tracking the location of bodies and associated property							
Establish a method to electronically capture signatures and other data, utilizing auto-fill and verification capabilities, e.g. address verification with USPS							
Improve data output related to KPI measurements for case processing, property management, other ME processes							
Create Additional Requirement Fields for Mandatory Reporting, (i.e. Child Death Review, Domestic Violence)							
Abitlity to have address verification with USPS							
Savings Total:	*45,353*	*45,617*	*45,884*	*46,153*	*46,425*	*46,700*	*276,133*

Oakland County -- Medical Examiner FCMS Enhancement

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
IT Hours - New Development	Development Svcs		HR	1,086	165	179,190		X					
IT Hours - System Maintenance	Development Svcs		ANN	10	165	1,650	1.015		X	X	X	X	X
IT Hours - Customer Support	Development Svcs		ANN	20	165	3,300	1.015		x	x	x	x	x
IT Hours - Planned Maintenance	Development Svcs		HR			0							
User Hours - New Development	Development Svcs					0							
User Hours - PTNE/OT	Development Svcs					0							
Contractor Professional Services	Development Svcs		EA	1	80,000	80,000		x					
PC System - Acquisition	Hardware				687	0							
PC System - Maintenance	Hardware				2,936	0							
Notebook - Acquisition	Hardware				1,115	0							
Notebook - Maintenance	Hardware				3,024	0							
Tablet Notebook - Acquisition	Hardware				1,421	0							
Tablet Notebook - Maintenance	Hardware				2,800	0							
Laserprinter - Acquisition	Hardware				1,432	0							
Laserprinter - Maintenance	Hardware				1,408	0							
PC Maintenance User Owned	Hardware				2,720	0							
Printer Maintenance User Owned	Hardware				1,264	0							
File Space (100GB)	Hardware		ANN		23	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 Software Purchase - Per Processor (4 Cores) - Requires Annual Support Below	Infrastructure				42,280	0							
Oracle Enterprise Software Support - Per Processor (4 Cores)	Infrastructure				9,293	0	1.030						

Oakland County -- Medical Examiner FCMS Enhancement

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 Software Purchase - Per Processor (4 cores) - Purchased Sept 2019-Aug 2020 - Includes Support thru Aug 2022	Infrastructure				16,985	0							
SQL Server Enterprise Software Purchase - Per Processor (4 cores) - Purchased Sept 2020-Aug 2021 - Includes Support thru Aug 2022	Infrastructure				12,724	0							
SQL Server Enterprise Software Purchase - Per Processor (4 cores) - Purchased Sept 2021-Aug 2022 - Includes Support thru Aug 2022	Infrastructure				8,463	0							
SQL Server Enterprise - Support, Per Processor (4 cores) - Sept 2022 and Beyond	Infrastructure				4,261	0							
SQL Server Standard Software Purchase - Per Processor (4 cores) - Purchased Sept 2019-Aug 2020 - Includes Support thru Aug 2022	Infrastructure				4,429	0							
SQL Server Standard Software Purchase - Per Processor (4 cores) - Purchased Sept 2020-Aug 2021 - Includes Support thru Aug 2022	Infrastructure				3,317	0							
SQL Server Standard Software Purchase - Per Processor (4 cores) - Purchased Sept 2021-Aug 2022 - Includes Support thru Aug 2022	Infrastructure				2,205	0							
SQL Server - Standard Support, Per Processor (4 cores) - Sept 2022 and Beyond	Infrastructure				1,112	0							
Websphere Basic Per Processor Single/Dual Core - Includes Year 1 Maintenance	Infrastructure				3,506	0							

Oakland County -- Medical Examiner FCMS Enhancement

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							
Dedicated Virtual Server	Infrastructure		ANN		4,150	0							
Extra Small - 2 Core 8GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $601 On Premise Physical Server = N/A	Infrastructure		ANN			0							
Small - 4 Core 16GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $951 On Premise Physical Server = $9,288	Infrastructure		ANN			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							

Oakland County -- Medical Examiner FCMS Enhancement

Date: 06/14/2022

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
Extra Large - 40 Core 160GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $7,564 On Premise Physical Server = $12,906	Infrastructure		ANN			0							

REV: March 27, 2020

Oakland County -- Medical Examiner FCMS Enhancement

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	179,190.00					
IT Hours - System Maintenance	Development Svcs		1,674.75	1,699.87	1,725.37	1,751.25	1,777.52
IT Hours - Customer Support	Development Svcs		3,349.50	3,399.74	3,450.74	3,502.50	3,555.04
IT Hours - Planned Maintenance	Development Svcs						
User Hours - New Development	Development Svcs						
User Hours - PTNE/OT	Development Svcs						
Contractor Professional Services	Development Svcs	80,000.00					
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						
PC Maintenance User Owned	Hardware						
Printer Maintenance User Owned	Hardware						
File Space (100GB)	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 Software Purchase - Per Processor (4 Cores) - Requires Annual Support Below	Infrastructure						
Oracle Enterprise Software Support - Per Processor (4 Cores)	Infrastructure						

Oakland County -- Medical Examiner FCMS Enhancement

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
SQL Server Enterprise Software Purchase - Per Processor (4 cores) - Purchased Sept 2019-Aug 2020 - Includes Support thru Aug 2022	Infrastructure						
SQL Server Enterprise Software Purchase - Per Processor (4 cores) - Purchased Sept 2020-Aug 2021 - Includes Support thru Aug 2022	Infrastructure						
SQL Server Enterprise Software Purchase - Per Processor (4 cores) - Purchased Sept 2021-Aug 2022 - Includes Support thru Aug 2022	Infrastructure						
SQL Server Enterprise - Support, Per Processor (4 cores) - Sept 2022 and Beyond	Infrastructure						
SQL Server Standard Software Purchase - Per Processor (4 cores) - Purchased Sept 2019-Aug 2020 - Includes Support thru Aug 2022	Infrastructure						
SQL Server Standard Software Purchase - Per Processor (4 cores) - Purchased Sept 2020-Aug 2021 - Includes Support thru Aug 2022	Infrastructure						
SQL Server Standard Software Purchase - Per Processor (4 cores) - Purchased Sept 2021-Aug 2022 - Includes Support thru Aug 2022	Infrastructure						
SQL Server - Standard Support, Per Processor (4 cores) - Sept 2022 and Beyond	Infrastructure						
Websphere Basic Per Processor Single/Dual Core - Includes Year 1 Maintenance	Infrastructure						

Oakland County -- Medical Examiner FCMS Enhancement

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						
Dedicated Virtual Server	Infrastructure						
Extra Small - 2 Core 8GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $601 On Premise Physical Server = N/A	Infrastructure						
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						

Oakland County -- Medical Examiner FCMS Enhancement

Return on Investment Analysis

Cost Detail

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

Oakland County -- Medical Examiner FCMS Enhancement

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	179,190						179,190
IT Hours - System Maintenance		1,675	1,700	1,725	1,751	1,778	8,629
IT Hours - Customer Support		3,350	3,400	3,451	3,502	3,555	17,258
IT Hours - Planned Maintenance							
User Hours - New Development							
User Hours - PTNE/OT							
Contractor Professional Services	80,000						80,000
Development Services Subtotal:	*259,190*	*5,024*	*5,100*	*5,176*	*5,254*	*5,333*	*285,076*
Hardware:							
Hardware Subtotal:							
Software:							
Software Subtotal:							
Infrastructure:							
Infrastructure Subtotal							
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	**259,190**	**5,024**	**5,100**	**5,176**	**5,254**	**5,333**	**285,076**

Oakland County -- Medical Examiner FCMS Enhancement

Return on Investment Analysis

Assumptions

Date	Assumption Description
18-Feb-20	Integration for direct download of lab results from NMS would eliminate the need for a toxicologist to manually enter the information into FCMS. This will also ensure the accuracy of the data that is imported. It will average 15 minutes per case to manually enter the information. Average 1100 autopsies per year. 1100 x 15 minutes = 16500 minutes or 275 hours. Forensic Toxicologist hourly wage with benefits = $68.88 x 275 hours = $18,942
14-Feb-22	The result of the mobile app hosting and implementation research may result in hardware and/or software costs, as well as new project.
14-Feb-22	The enhancements will require the development services of Kevadiya (KVD), the vendor of the SaaS application (FCMS)
14-Feb-22	Currenlty the system requires the person viewing photos to download them before they can view them into a gallery. If the system allowed for viewing photos in a gallery the individual can save time by not having to download the photos. (1100 cases x 10 minutes) /60 = 183 hours. Doctors avg hourly rate is 140.80 = $25,620
14-Feb-22	16 cases of paper used/year @$38/case = $608 for printing 2 copies of the property release form(1 for receipent of the property and 1 for OCME records) for 10,000 ME Cases as well as the NMS lab reports for manual data entry into the FCMS system.
24-May-22	All vendor enhancements will be implemented, given ME budget is approved; otherwise features will be implemented based on ME defined priority list.
03-Jun-22	Assumes 10% of the development effort as increase in CS, due to new functionality