Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: CLEMIS Location-based Enterprise Program (23-24)   Project ID: DF3183LM

Leadership Group: CLEMIS		
Department: Information Technology	**Division:** CLEMIS	
Project Sponsor: Jim Manning	**Date Requested:** 5/10/22	**PM Customer No.** 183
Request Type: *New Development* *Enhancement* *Customer Support* *Planned System Maintenance or Upgrade*		
IT Team Name: Public Safety Applications	**IT Team No:** F	
Project Manager/Leader: Brian Smith / Paul Megge		
Account Number: 63500 **Account Description:** CLEMIS Fund		**Customer Name:** CLEMIS
Grant Funded? Yes **No**	**Mandate?** Yes **No** **Mandate Source:**	

Project Goal

To provide a progressive location-based solution so that CLEMIS public safety partners have best of breed data data-driven solutions and tools to mitigate threats and/or hazards in their communities.

Business Objective

To replace the current CLEMIS mapping applications so that CLEMIS can utilize industry standard products, as well as, to leverage CLEMIS location-based data to support and enhance decision making by CLEMIS public safety partners.

Major Deliverables
- Location GPS Mapping in CAD
- Crime Analytics Application
- Crime Analytics Reports
- Enhancements, as needed
- Detailed Project Plan with WBS
- Business Requirements Documents
- Functional testing
- Implementation Plan
- Training/User Manual
- Service Level Agreement
- Disaster Recovery Toolkit
- Service Center Knowledge Documents
- Rewrite Application

Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: CLEMIS Location-based Enterprise Program (23-24)   Project ID: DF3183LM

Approach
- Develop Detailed Project Plans, as Needed
- Review Current Business Processes
- Document Business Requirements
- Document Data Policy Changes
- Assess Hardware and Software Requirements
- Develop Implementation Plans
- Develop New Systems/Data
- Develop User Acceptance Test Plans
- Test New System/Data
- Develop User Training
- Develop User Documentation, SLA, Disaster Recovery Toolkit, Service Center Knowledge Documents
- Train/Notify Users of New System/Data
- Conduct Change Control
- Release New System/Data into Production

Research & Analysis

Gartner Research Recommendation

Nothing found

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users   Approximately 3000 MDC / CAD users and 275 workstations

Divisions   CLEMIS

Leadership Groups   CLEMIS

Risk

Business Environment   Medium - Project will require some changes to existing business processes.

Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: CLEMIS Location-based Enterprise Program (23-24)   Project ID: DF3183LM

Technical Environment   Medium – Previously implemented technologies with new aspects and/or new requirements.

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:	Jim Manning	As Needed

Facilities

- None

Technical

- Additional hardware purchases will be required.

Funding

- CLEMIS Fund

Other

- None

Priority

- TBD

Constraints

- None

Exclusions

- None

Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: CLEMIS Location-based Enterprise Program (23-24)   Project ID: DF3183LM

PROJECT PHASE AUTHORIZATION

Phase(s): All		
Total Estimated Application Services	**Hours:**	
Total Estimated Technical Systems	**Hours: 110**	
Total Estimated CLEMIS	**Hours: 4,877**	
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: 4,987**	**Cost: $822,855**

Project Name: CLEMIS Location-based Enterprise Program (23-24)   Project ID: DF3183LM

PROJECT COMPLETION AUTHORIZATION

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

CLEMIS Location-based Enterprise Program (23-24) - Size Estimate (+/- 10% to 50%)

	Type	ID	Task Name	Estimated	Estimate Notes
1				Hours	
2					
3	3	000000	**CLEMIS LOCATION-BASED ENTERPRISE PROGRAM (23-24)**	4,987	
4				4,987	

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

Date: 06/10/2022

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:	0	142,309	130,868	134,530	138,297	142,174	688,178
Costs:							
Development Services Subtotal:	882,855	248,745	247,455	263,894	262,525	279,965	2,185,438
Hardware Subtotal:	0	0	0	0	0	0	0
Software Subtotal:	325,000	325,000	325,000	325,000	325,000	325,000	1,950,000
Infrastructure Subtotal	57,798	42,098	43,361	44,662	46,002	47,382	281,303
Training Subtotal:	0	0	0	0	0	0	0
Other Subtotal:	0	0	0	0	0	0	0
Annual Statistics:							
Annual Total Savings	0	142,309	130,868	134,530	138,297	142,174	688,178
Annual Total Costs	1,265,653	615,843	615,816	633,556	633,527	652,347	4,416,741
Annual Return on Investment	(1,265,653)	(473,534)	(484,948)	(499,026)	(495,229)	(510,172)	(3,728,563)
Annual Costs/Savings Ratio	0.00%	432.75%	470.56%	470.94%	458.09%	458.84%	
Project Cumulative Statistics:							
Cumulative Total Savings	0	142,309	273,177	407,707	546,004	688,178	688,178
Cumulative Total Costs	1,265,653	1,881,496	2,497,312	3,130,868	3,764,394	4,416,741	4,416,741
Cumulative Return on Investment	(1,265,653)	(1,739,187)	(2,224,135)	(2,723,161)	(3,218,390)	(3,728,563)	(3,728,563)
Cumulative Cost/Savings Ratio	0.00%	1322.12%	914.17%	767.92%	689.44%	641.80%	641.80%
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 -- CLEMIS Location-based Enterprise Program (23-24)

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
Increased public safety and awareness by analyzing data to uncover hidden vulnerabilities.	Intangible Benefit					0	
Increase officer safety by identifying location of vehicle and their person.	Intangible Benefit					0	
Analytics Software Licensing	Cost Avoidance			1	53,000	53,000	1.030
Improve Comunnity Oriented Policing (COP) by publishing local crime data to the public.	Intangible Benefit					0	
Increase protection to communities by identifing threats, hazards, and patterns by mapping data.	Intangible Benefit					0	
Increase prevention of threats and hazards in communities by mapping data to increase understanding of where to focus efforts.	Intangible Benefit					0	
Increase mitigation of complex threats and hazards found in communities.	Intangible Benefit					0	
Improve response to threats that pose the greatest risk to keeping CLEMIS member communities safe.	Intangible Benefit					0	
Increase public safety and security by identifying patterns that help prioritize CLEMIS agencies' efforts.	Intangible Benefit					0	
Mapping Software Licensing	Cost Avoidance			3	5,000	15,000	
Mapping Application Licensing	Cost Avoidance			1	45,000	45,000	1.030
Support & Maintenance for Software	Cost Avoidance			50	175	8,750	1.030
Public Crime Analytics Service	Cost Avoidance			57	300	17,100	1.015
Quick turn around by leveraging off-the-shelf tools and applications for unforseen threats and hazzards.	Intangible Benefit					0	
Securely access the tools despite the device.	Intangible Benefit					0	
Reduce Tech Debt by using off-the-shelf application and minimizing customizations.	Intangible Benefit					0	

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

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
Expanded access to tools and data in-office and in-the-A8field, as well as, to public users.	Intangible Benefit					0	
Improved identity based security.	Intangible Benefit					0	
Provide quicker access to current data assisting in more informed decisions	Intangible Benefit					0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

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
Increased public safety and awareness by analyzing data to uncover hidden vulnerabilities.	Intangible Benefit												
Increase officer safety by identifying location of vehicle and their person.	Intangible Benefit												
Analytics Software Licensing	Cost Avoidance		x	x	x	x	x		54,590.00	56,227.70	57,914.53	59,651.97	61,442
Improve Comunnity Oriented Policing (COP) by publishing local crime data to the public.	Intangible Benefit												
Increase protection to communities by identifing threats, hazards, and patterns by mapping data.	Intangible Benefit												
Increase prevention of threats and hazards in communities by mapping data to increase understanding of where to focus efforts.	Intangible Benefit												
Increase mitigation of complex threats and hazards found in communities.	Intangible Benefit												
Improve response to threats that pose the greatest risk to keeping CLEMIS member communities safe.	Intangible Benefit												
Increase public safety and security by identifying patterns that help prioritize CLEMIS agencies' efforts.	Intangible Benefit												
Mapping Software Licensing	Cost Avoidance		x						15,000.00				
Mapping Application Licensing	Cost Avoidance		x	x	x	x	x		46,350.00	47,740.50	49,172.72	50,647.90	52,167
Support & Maintenance for Software	Cost Avoidance		x	x	x	x	x		9,012.50	9,282.88	9,561.36	9,848.20	10,144
Public Crime Analytics Service	Cost Avoidance		x	x	x	x	x		17,356.50	17,616.85	17,881.10	18,149.32	18,422
Quick turn around by leveraging off-the-shelf tools and applications for unforseen threats and hazzards.	Intangible Benefit												
Securely access the tools despite the device.	Intangible Benefit												
Reduce Tech Debt by using off-the-shelf application and minimizing customizations.	Intangible Benefit												

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

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
Expanded access to tools and data in-office and in-the-A8field, as well as, to public users.	Intangible Benefit												
Improved identity based security.	Intangible Benefit												
Provide quicker access to current data assisting in more informed decisions	Intangible Benefit												

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

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:							
Mapping Application Licensing		46,350	47,741	49,173	50,648	52,167	246,078
Mapping Software Licensing		15,000					15,000
Analytics Software Licensing		54,590	56,228	57,915	59,652	61,442	289,826
Support & Maintenance for Software		9,013	9,283	9,561	9,848	10,144	47,849
Public Crime Analytics Service		17,357	17,617	17,881	18,149	18,422	89,425
Cost Avoidance Subtotal:		*142,309*	*130,868*	*134,530*	*138,297*	*142,174*	*688,178*
Intangible Benefit:							
Increased public safety and awareness by analyzing data to uncover hidden vulnerabilities.							
Increase officer safety by identifying location of vehicle and their person.							
Improve Comunnity Oriented Policing (COP) by publishing local crime data to the public.							
Increase protection to communities by identifing threats, hazards, and patterns by mapping data.							
Increase prevention of threats and hazards in communities by mapping data to increase understanding of where to focus efforts.							
Increase mitigation of complex threats and hazards found in communities.							
Improve response to threats that pose the greatest risk to keeping CLEMIS member communities safe.							

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

Return on Investment Analysis

Savings Summary

Benefit/Savings Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Increase public safety and security by identifying patterns that help prioritize CLEMIS agencies' efforts.							
Quick turn around by leveraging off-the-shelf tools and applications for unforseen threats and hazzards.							
Securely access the tools despite the device.							
Reduce Tech Debt by using off-the-shelf application and minimizing customizations.							
Expanded access to tools and data in-office and in-the-A8field, as well as, to public users.							
Improved identity based security.							
Provide quicker access to current data assisting in more informed decisions							
Savings Total:		*142,309*	*130,868*	*134,530*	*138,297*	*142,174*	*688,178*

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

Date: 06/10/2022

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
IT Hours - New Development	Development Svcs			4,987	165	822,855	1.030	x					
IT Hours- Previous Project - CLEMIS Location-Based Project - Research & Design	Development Svcs			2,472	165	407,880	1.030						
IT Hours - System Maintenance	Development Svcs			50	165	8,250	1.030		x	x	x	x	x
IT Hours - Customer Support	Development Svcs			1,000	165	165,000	1.030		x	x	x	x	x
IT Hours - Planned Maintenance	Development Svcs			50	165	8,250	1.030		x		x		x
CLEMIS - New Development Professional Services	Development Svcs					0							
User Hours - PTNE/OT	Development Svcs					0							
Contractor Professional Services - Credits	Development Svcs			100	600	60,000	1.030	x	x	x	x	x	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			1	325,000	325,000		x	x	x	x	x	x
Package Software - Training and Services - Credits	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	1.030						
Server Sftwre - Acquisition/Upgrade	Infrastructure				335	0	1.030						
Server Sftwre - Maintenance	Infrastructure					0							
Server Rack Mount	Infrastructure				400	0							

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

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
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						
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			2	8,463	16,926	1.030	x					
SQL Server Enterprise - Support, Per Processor (4 cores) - Sept 2022 and Beyond	Infrastructure			2	4,261	8,522	1.030		x	x	x	x	x
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							

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

Return on Investment Analysis

Date: 06/10/2022

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 - Includes Year 1 Maintenance	Infrastructure				3,506	0							
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			3	910	2,730	1.030	x	x	x	x	x	x
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	24	951	22,824	1.030	x	x	x	x	x	x
Medium - 8 Core 32GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $1,702 On Premise Physical Server = $9,751	Infrastructure		ANN	9	1,702	15,318	1.030	x	x	x	x	x	x
Large - 16 Core 64GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $3,167 On Premise Physical Server = $10,446	Infrastructure		ANN		3,167	0	1.030						

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

Date: 06/10/2022

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							

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

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	822,855.00					
IT Hours- Previous Project - CLEMIS Location-Based Project - Research & Design	Development Svcs						
IT Hours - System Maintenance	Development Svcs		8,497.50	8,752.43	9,015.00	9,285.45	9,564.01
IT Hours - Customer Support	Development Svcs		169,950.00	175,048.50	180,299.96	185,708.95	191,280.22
IT Hours - Planned Maintenance	Development Svcs		8,497.50		9,015.00		9,564.01
CLEMIS - New Development Professional Services	Development Svcs						
User Hours - PTNE/OT	Development Svcs						
Contractor Professional Services - Credits	Development Svcs	60,000.00	61,800.00	63,654.00	65,563.62	67,530.53	69,556.44
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	325,000.00	325,000.00	325,000.00	325,000.00	325,000.00	325,000.00
Package Software - Training and Services - Credits	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						

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
Oracle Enterprise Software Purchase - Per Processor (4 Cores) - Requires Annual Support Below	Infrastructure						
Oracle Enterprise Software Support - Per Processor (4 Cores)	Infrastructure						
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	16,926.00					
SQL Server Enterprise - Support, Per Processor (4 cores) - Sept 2022 and Beyond	Infrastructure		8,777.66	9,040.99	9,312.22	9,591.59	9,879.33
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						

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

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 - Includes Year 1 Maintenance	Infrastructure						
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	2,730.00	2,811.90	2,896.26	2,983.14	3,072.64	3,164.82
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	22,824.00	23,508.72	24,213.98	24,940.40	25,688.61	26,459.27
Medium - 8 Core 32GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $1,702 On Premise Physical Server = $9,751	Infrastructure	15,318.00	15,777.54	16,250.87	16,738.39	17,240.54	17,757.76
Large - 16 Core 64GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $3,167 On Premise Physical Server = $10,446	Infrastructure						

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

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 -- CLEMIS Location-based Enterprise Program (23-24)

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	822,855						822,855
IT Hours - System Maintenance		8,498	8,752	9,015	9,285	9,564	45,114
IT Hours - Customer Support		169,950	175,049	180,300	185,709	191,280	902,288
IT Hours - Planned Maintenance		8,498		9,015		9,564	27,077
CLEMIS - New Development Professional Services							
User Hours - PTNE/OT							
Contractor Professional Services - Credits	60,000	61,800	63,654	65,564	67,531	69,556	388,105
Development Services Subtotal:	*882,855*	*248,745*	*247,455*	*263,894*	*262,525*	*279,965*	*2,185,438*
Hardware:							
Hardware Subtotal:							
Software:							
Package Software - Acquisition	325,000	325,000	325,000	325,000	325,000	325,000	1,950,000
Software Subtotal:	*325,000*	*325,000*	*325,000*	*325,000*	*325,000*	*325,000*	*1,950,000*
Infrastructure:							
SQL Server Enterprise Software Purchase - Per Processor (4 cores) - Purchased Sept 2021-Aug 2022 - Includes Support thru Aug 2022	16,926						16,926
SSL Certificate	2,730	2,812	2,896	2,983	3,073	3,165	17,659
Small - 4 Core 16GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $951 On Premise Physical Server = $9,288	22,824	23,509	24,214	24,940	25,689	26,459	147,635
Medium - 8 Core 32GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $1,702 On Premise Physical Server = $9,751	15,318	15,778	16,251	16,738	17,241	17,758	99,083

Oakland County -- CLEMIS Location-based Enterprise Program (23-24)

Return on Investment Analysis

Cost Summary

Cost Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Infrastructure Subtotal	*57,798*	*42,098*	*43,361*	*44,662*	*46,002*	*47,382*	*281,303*
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	*1,265,653*	*615,843*	*615,816*	*633,556*	*633,527*	*652,347*	*4,416,741*

Oakland County -- CLEMIS Location-based Enterprise Program (23-24) Date: 06/10/2022

Return on Investment Analysis

Assumptions

Date	Assumption Description
20-May-22	Assuming 50 hours of Support and Maintenance each year for Analytics Software
20-May-22	Assuming average of $70 per hour for CLEMIS Professional Service
20-May-22	Assuming average of $165 per hour for OCIT / CLEMIS Full Time Employee
20-May-22	Assuming Package Software is $325,000 per year
20-May-22	Estimated 5000+ user (5000 MDC / CAD users and 275 workstations) in addition the public will have access also.
20-May-22	Assuming that CLEMIS adds 5 agencies per year.
04-Jun-22	Contractor Professional Service Credits are sold in bunches of 100 credits or 50 credtis
04-Jun-22	This a carryover program from 2021-2022 Master Plan.