Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: HSD GIS Data Consolidation **Project ID: D59166DC**

Leadership Group: Finance/Admin			
Department: Health and Human Services		**Division: Homeland Security**	
Project Sponsor: Thomas Hardesty	**Date Requested: 02/15/08**	**PM Customer No. 166**	
Request Type:	**XX *New Development***	***Enhancement***	***Customer Support***
	Planned System Maintenance or Upgrade		
IT Team Name: Public and Environmental Services		**IT Team No: 5**	
Project Manager/Leader: Shashi Gowda			
Account Number: 98990	**Account Description:** Homeland Security	**Customer Name:** Homeland Security	
Grant Funded? Yes	**No XX**	**Mandate?**	**Yes** **No XX**
		Mandate Source:	

Project Goal

To develop a system and process within the enterprise GIS so that data relevant to Emergency Response (hospitals, day care centers, schools, etc.) is collected and maintained in a centralized manner.

Business Objective

The main business objective of this project is to consolidate the GIS data from different sources (schools, daycare centers, hospitals, etc.) into one source and avoid redundant, incomplete and out-of-date data sources so that it will be easy for the Emergency Management team to pull/map data during emergency situations

- Ensure data in layers of GIS is current and accurate
- Eliminate duplicate and out of date data
- Indexing of various GIS layers
- Consistent naming conventions for files and layers

Major Deliverables

- Detailed Project Plan
- Implementation Plan
- System Requirements
- Consolidated GIS data
- Technical Architecture Diagram(s)
- User Acceptance Test Plan
- Disaster Recovery Toolkit
- Service Level Agreement
- Service Center Knowledge Documents

- Training/User Manuals

Approach

- Develop Detailed Project Plan
- Collect/Research various GIS data sources
- Document system requirements
- Determine and document system architecture and diagram
- 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

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users 25+

Divisions Homeland Security

Leadership Groups Finance/Admin

Project Name: HSD GIS Data Consolidation **Project ID: D59166DC**

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.

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
Sponsor	Thomas Hardesty	As Needed
Business Lead	Kevin Scheid	As Needed
Subject Matter Expert	Tracey McGee	As Needed

Facilities

-

Technical

- None anticipated

Funding

- Information Technology

Other

-

Priority

Project Name: HSD GIS Data Consolidation **Project ID: D59166DC**

Constraints

- None Applicable

Exclusions

-

Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: HSD GIS Data Consolidation **Project ID: D59166DC**

PROJECT PHASE AUTHORIZATION

Phase(s):	
Total Estimated Application Services **Hours: 584**	
Total Estimated Technical Systems **Hours: 11**	
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: 595**	**Cost: $98,175**

Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: HSD GIS Data Consolidation **Project ID: D59166DC**

PROJECT COMPLETION AUTHORIZATION

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

HSD GIS Data Consolidation - Size Estimate (+/- 10% to 50%)

	Type	ID	Task Name	Estimated	Estimate Notes
2				Hours	
3	**3**	**000000**	**PROJECT MANAGEMENT**	**145**	
4	**Phase**	**200000**	**DEFINE BUSINESS REQUIREMENTS**	**127**	
5	**Phase**	**300000**	**DESIGN PROCESS AND LAYER SELECTION**	**125**	
6	**Phase**	**500000**	**DEVELOP AND DEPLOYMENT**	**168**	
7	**Phase**	**600000**	**IMPLEMENTATION PHASE**		
8	**Phase**	**080000**	**POST IMPLEMENTATION SUPPORT**	**30**	
9				595	

D59166DC

Oakland County -- HSD GIS Data Consolidation

Return on Investment Analysis

As Of: 2/15/18

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:	13,000	13,260	13,525	13,796	14,072	14,353	82,006
Costs:							
Development Services Subtotal:	98,175	0	0	0	0	0	98,175
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	13,000	13,260	13,525	13,796	14,072	14,353	82,006
Annual Total Costs	98,175	0	0	0	0	0	98,175
Annual Return on Investment	(85,175)	13,260	13,525	13,796	14,072	14,353	(16,169)
Annual Costs/Savings Ratio	755.19%	0.00%	0.00%	0.00%	0.00%	0.00%	
Project Cumulative Statistics:							
Cumulative Total Savings	13,000	26,260	39,785	53,581	67,653	82,006	82,006
Cumulative Total Costs	98,175	98,175	98,175	98,175	98,175	98,175	98,175
Cumulative Return on Investment	(85,175)	(71,915)	(58,390)	(44,594)	(30,522)	(16,169)	(16,169)
Cumulative Cost/Savings Ratio	755.19%	373.86%	246.76%	183.23%	145.12%	119.72%	119.72%
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:			

REV: January 22, 2018

Oakland County -- HSD GIS Data Consolidation

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 in searching various data points in GIS	Cost Avoidance		HR	200	65	13,000	1.020
Having accurate data a necessity during an emergency	Intangible Benefit					0	
Quicker emergency response	Intangible Benefit					0	
						0	
						0	

Oakland County -- HSD GIS Data Consolidation

Return on Investment Analysis

Savings Detail

Benefit/Savings Description	Project Savings Category	Affects Project ROI? Y1	Y2	Y3	Y4	Y5	Y6	Potential Savings Extensions Y1	Y2	Y3	Y4	Y5	Y6
Time spent in searching various data points in GIS	Cost Avoidance	x	x	x	x	x	x	13,000.00	13,260.00	13,525.20	13,795.70	14,071.62	14,353
Having accurate data a necessity during an emergency	Intangible Benefit												
Quicker emergency response	Intangible Benefit												

Oakland County -- HSD GIS Data Consolidation

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:							
Time spent in searching various data points in GIS	13,000	13,260	13,525	13,796	14,072	14,353	82,006
Cost Avoidance Subtotal:	***13,000***	***13,260***	***13,525***	***13,796***	***14,072***	***14,353***	***82,006***
Intangible Benefit:							
Having accurate data a necessity during an emergency							
Quicker emergency response							
Savings Total:	***13,000***	***13,260***	***13,525***	***13,796***	***14,072***	***14,353***	***82,006***

Oakland County -- HSD GIS Data Consolidation

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			595	165	98,175		x					
IT Hours - System Maintenance	Development Svcs				165	0							
IT Hours - Customer Support	Development Svcs				165	0							
IT Hours - Planned Maintenance	Development Svcs				165	0							
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 -- HSD GIS Data Consolidation

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				6,398	0							
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				1,100	0							
Websphere Basic Per Processor Single/Dual Core - Includes Year 1 Maintenance	Infrastructure				3,506	0							

Oakland County -- HSD GIS Data Consolidation

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							
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				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 -- HSD GIS Data Consolidation

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
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							
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 -- HSD GIS Data Consolidation

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	98,175.00					
IT Hours - System Maintenance	Development Svcs						
IT Hours - Customer Support	Development Svcs						
IT Hours - Planned Maintenance	Development Svcs						
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 -- HSD GIS Data Consolidation

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						
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						
Websphere Basic Per Processor Single/Dual Core - Includes Year 1 Maintenance	Infrastructure						

Oakland County -- HSD GIS Data Consolidation

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						
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 -- HSD GIS Data Consolidation

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 -- HSD GIS Data Consolidation

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	98,175						98,175
IT Hours - System Maintenance							
IT Hours - Customer Support							
IT Hours - Planned Maintenance							
User Hours - New Development							
User Hours - PTNE/OT							
Contractor Professional Services							
Development Services Subtotal:	***98,175***						***98,175***
Hardware:							
Hardware Subtotal:							
Software:							
Software Subtotal:							
Infrastructure:							
Infrastructure Subtotal							
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	***98,175***						***98,175***

Oakland County -- HSD GIS Data Consolidation

Return on Investment Analysis

Assumptions

Date	Assumption Description