

# Oakland County Department of Information Technology Project Scope and Approach

**Project Name: FM GIS Indoors**

**Project ID:**

<b>Leadership Group:</b> Land					
<b>Department:</b> Facilities Management			<b>Division:</b> Facilities Planning and Engineering		
<b>Project Sponsor:</b> Art Holdsworth		<b>Date Requested:</b> 5/1/21		<b>PM Customer No.</b> 148	
<b>Request Type:</b> <u>New Development</u>		<i>Enhancement</i>		<i>Customer Support</i>	
<i>Planned System Maintenance or Upgrade</i>					
<b>IT Team Name:</b> Infrastructure and GIS			<b>IT Team No:</b> 1		
<b>Project Manager/Leader:</b> Dennis Faustich					
<b>Account Number:</b>		<b>Account Description:</b>		<b>Customer Name:</b>	Facilities Mgmt
<b>Grant Funded?</b>		Yes <u>No</u>		<b>Mandate?</b> Yes <u>No</u>	
		<b>Mandate Source:</b>			

## **Project Goal**

To implement an automated solution to convert CAD data to GIS data so that Facilities Management staff can easily and accurately report on department space allocations, streamline their data maintenance workflow and provide up to date GIS applications & dashboards to support building maintenance throughout the county campus.

## **Business Objective**

To use the best workflows and technologies to automate the conversion of CAD data to GIS data so that Facilities Management can easily create and accurately report out Space Allocations to departments and provide up to date GIS applications and dashboards for staff working on the county campus.

## **Major Deliverables**

- Business Requirement Documentation
- License GIS Indoors Software, Geoprocessing tools and Training
- Coordinate and attend Esri training
- Standup New data model
- Install Geoprocessing tool solution for automated conversion of CAD data to GIS data
- Implement and support data migration
- Modify CAMS to support new GIS Indoors workflows
- Configure GIS Indoors apps/dashboard
- Train FM staff on new systems and workflows
- Go-Live Preparations
- Post Implementation Support

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## **Approach**

- Develop Detailed Project Plan
- Document Business Requirements
- Standup GIS Indoors data model
- Install and configure GIS Indoors geoprocessing tools
- Coordinate with the customer and vendor on training and use of the geoprocessing tools
- Perform data migration
- Configure AGO applications & dashboards
- Modify CAMS to support new GIS Indoors workflows
- Acquire User Acceptance Sign off
- Conduct Change Control
- Train users on new system and new workflows
- Release new changes/data into production
- Post-Implementation Support

## **Research & Analysis**

**Gartner Research Recommendation – No Results Found**

## **Benefits**

***See Return on Investment (ROI) Analysis Document***

## **Impact**

**Number of Users** 65+

**Divisions** FM Staff & County Department Leads

**Leadership Groups** Land

## **Risk**

**Business Environment** Medium – Project requires some changes to existing business processes

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

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**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:

<b><u>Role:</u></b>	<b><u>Name</u></b>	<b><u>Hours per Day</u></b>
Project Sponsor:	Art Holdsworth	As Needed
	Jason Warner	As Needed
FM Data/Content Editors	Rob Mabe	As Needed

**Facilities**

- None

**Technical**

- 

**Funding**

- TBD

**Other**

- None

**Priority**

**Constraints**

- Can CAMS consume map services from GIS Indoors?

**Exclusions**

-

# Oakland County Department of Information Technology Project Scope and Approach

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## PROJECT PHASE AUTHORIZATION

<b>Phase(s):</b>	
<b>Total Estimated Application Services</b>	<b>Hours:</b>
<b>Total Estimated Technical Systems</b>	<b>Hours:</b>
<b>Total Estimated CLEMIS</b>	<b>Hours:</b>
<b>Total Estimated Internal Services</b>	<b>Hours:</b>
<b>IT Application Services Division Manager Approval:</b>	<b>Date:</b>
<b>IT Technical Systems Division Manager Approval:</b>	<b>Date:</b>
<b>IT CLEMIS Division Manager Approval:</b>	<b>Date:</b>
<b>IT Internal Services Division Manager Approval:</b>	<b>Date:</b>
<b>IT Management Approval:</b>	
Approved: <span style="margin-left: 100px;">Yes</span> <span style="margin-left: 100px;">No</span>	<b>Date:</b>
Reason:	
<b>Project Sponsor Approval:</b>	
Title:	<b>Date:</b>

## PROJECT SUMMARY

<b>Authorized Development (see above)</b>	<b>Hours:</b>
<b>Previously Authorized Development</b>	<b>Hours:</b>
<b>Preliminary Estimated Development for Future Phases</b>	<b>Hours:</b>
<b>Grand Total Estimated Development</b>	<b>Hours:</b> <span style="margin-left: 100px;"><b>Cost:</b></span>

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**PROJECT COMPLETION AUTHORIZATION**

<b>Customer Acceptance of Product:</b>	
Title:	Date:
<b>Project Office Review:</b>	Date:

**Oakland County -- FM GIS Indoors**  
Return on Investment Analysis

Project Summary

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
<b>Benefits/Savings:</b>							
Tangible Benefits Subtotal:	0	0	0	0	0	0	0
Cost Avoidance Subtotal:	0	28,730	28,730	28,730	28,730	28,730	143,650
<b>Costs:</b>							
Development Services Subtotal:	0	0	0	0	0	0	0
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
<b>Annual Statistics:</b>							
Annual Total Savings	0	28,730	28,730	28,730	28,730	28,730	143,650
Annual Total Costs	0	0	0	0	0	0	0
Annual Return on Investment		28,730	28,730	28,730	28,730	28,730	143,650
Annual Costs/Savings Ratio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Project Cumulative Statistics:</b>							
Cumulative Total Savings	0	28,730	57,460	86,190	114,920	143,650	143,650
Cumulative Total Costs	0	0	0	0	0	0	0
Cumulative Return on Investment		28,730	57,460	86,190	114,920	143,650	143,650
Cumulative Cost/Savings Ratio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Year Positive Payback Achieved							NO PAYBACK
State or Federal Mandate?							
<b>Signatures:</b>							
Benefits Reviewed By Project Sponsor	_____			Date:	_____		
Costs (including IT Resources) Reviewed By Information Technology Project Manager	_____			Date:	_____		

Savings Detail

Benefit/Savings Description	Project Savings Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Savings	Annual Multiplier
Staff time saved editing GIS features in ArcMap	Cost Avoidance			390	34	13,260	1.000
Staff time saved updating and preparing Space Allocation documentation for departments	Cost Avoidance			350	34	11,900	1.000
Staff time saved not updating and configuring AGO Applications	Cost Avoidance			105	34	3,570	1.000
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	

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
Staff time saved editing GIS features in ArcMap	Cost Avoidance	x	x	x	x	x			13,260.00	13,260.00	13,260.00	13,260.00	13,260.00
Staff time saved updating and preparing Space Allocation documentation for departments	Cost Avoidance	x	x	x	x	x			11,900.00	11,900.00	11,900.00	11,900.00	11,900.00
Staff time saved not updating and configuring AGO Applications	Cost Avoidance	x	x	x	x	x			3,570.00	3,570.00	3,570.00	3,570.00	3,570.00



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Return on Investment Analysis

Savings Summary

Benefit/Savings Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
<b>Tangible Benefit:</b>							
<i>Tangible Benefits Subtotal:</i>							
<b>Cost Avoidance:</b>							
Staff time saved editing GIS features in ArcMap		13,260	13,260	13,260	13,260	13,260	66,300
Staff time saved updating and preparing Space Allocation documentation for		11,900	11,900	11,900	11,900	11,900	59,500
Staff time saved not updating and configuring AGO Applications		3,570	3,570	3,570	3,570	3,570	17,850
<i>Cost Avoidance Subtotal:</i>		<b>28,730</b>	<b>28,730</b>	<b>28,730</b>	<b>28,730</b>	<b>28,730</b>	<b>143,650</b>
<b>Intangible Benefit:</b>							
<b>Savings Total:</b>		<b>28,730</b>	<b>28,730</b>	<b>28,730</b>	<b>28,730</b>	<b>28,730</b>	<b>143,650</b>

**Oakland County -- FM GIS Indoors**  
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 Development Hours	Development Svcs				165	0								
IT Hours - System Maintenance	Development Svcs				165	0	1.000							
IT Hours - Customer Support	Development Svcs				165	0	1.000							
IT Hours - Planned Maintenance	Development Svcs				165	0	1.000							
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 -- FM GIS Indoors**  
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								

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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				976	0									
DBA MS SQL Database Creation on Existing 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												

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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												
Medium - 8 Core 32GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$1,702 On Premise Physical Server = \$9,751	Infrastructure		ANN												
Large - 16 Core 64GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$3,167 On Premise Physical Server = \$10,446	Infrastructure		ANN												
Extra Large - 40 Core 160GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$7,564 On Premise Physical Server = \$12,906	Infrastructure		ANN												
Project Staff Training	Training														
User Training	Training														

**Oakland County -- FM GIS Indoors**  
Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
IT Development Hours	Development Svcs						
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						

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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						

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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 Existing 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 -- FM GIS Indoors**  
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						
Project Staff Training	Training						
User Training	Training						

**Oakland County -- FM GIS Indoors**

Return on Investment Analysis

Cost Summary

Cost Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
<b>Development Services:</b>							
IT Development Hours							
IT Hours - System Maintenance							
IT Hours - Customer Support							
IT Hours - Planned Maintenance							
User Hours - New Development							
User Hours - PTNE/OT							
Contractor Professional Services							
<i>Development Services Subtotal:</i>							
<b>Hardware:</b>							
<i>Hardware Subtotal:</i>							
<b>Software:</b>							
<i>Software Subtotal:</i>							
<b>Infrastructure:</b>							
<i>Infrastructure Subtotal</i>							
<b>Training:</b>							
<i>Training Subtotal:</i>							
<b>Other:</b>							
<i>Other Subtotal:</i>							
<b>Costs Total:</b>							

