Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: Equalization Photo Automation **Project ID: D99125PH**

Leadership Group: Land		
Department: Management & Budget	**Division:** Equalization	
Project Sponsor: David Hieber	**Date Requested:** 5/30/18	**PM** Customer No. 125
Request Type:	***New Development*** ✔ ***Enhancement*** ***Customer Support*** ***Planned System Maintenance or Upgrade***	
IT Team Name: Assessing and Taxation	**IT Team No**: 9	
Project Manager/Leader: Wendy Conklin		
Account Number: 31075	**Account Description:** Equal - Development	**Customer Name:** Equalization
Grant Funded? Yes **No** ✔	**Mandate?** **Yes** **No** ✔ **Mandate Source:**	

Project Goal

To automatically load appraiser photos to the Land Address Management System (LAMS), so that the current manual work flow can be eliminated.

Business Objective

To save time and resources for staff by not having to input manually which would reduce errors of mislabeled photos and wrong parcel numbers.

Major Deliverables

- Detailed Project Plan
- Application and/or System Requirements
- End User Hardware and Software Requirements Document
- Technical Design Document
- Technical Architecture Diagram
- Training Plan
- User Acceptance Test Plan
- Implementation Plan
- Training/User Manual(s)
- Application Code
- Service Level Agreement
- Disaster Recovery Toolkit
- Service Center Knowledge Documents

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Approach

- Develop Detailed Project Plan
- Review current business process and conduct needs assessment with customer, ensuring current manual processes are refined and automated.
- Document system requirements
- Determine and document system architecture and diagram
- Assess User Hardware and Software Requirements
- Conduct Tech Review
- Order hardware and software if needed
- Develop Implementation Plan
- Develop new system
- Develop User Acceptance Test Plan
- Test new system
- Acquire User Acceptance Sign off
- Conduct Change Control
- Develop User Documentation, SLA, Disaster Recovery Toolkit, Service Center Knowledge Documents
- Train users on new system
- Release new system into production

Research & Analysis

Gartner Research Recommendation

Research Conducted – Nothing Found.

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users 47

Divisions Equalization

Leadership Groups Land

Risk

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Business Environment High - Project will dramatically change existing business processes or will negatively affect the business environment if implementation is unsuccessful.

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 project plan.
- Equalization Staffing: clerical and appraiser staff will be available as needed.

Role:	Name	Hours per Day
Project Sponsor	Dave Hieber	6:30am – 3:30pm
Application Knowledge Expert	Brenda Firestine	As Needed

Facilities

Technical

- The current LAMS system will be used for this project.
- The current Survey123 photo taking process may need to be replaced as part of this project.

Funding

- Information Technology

Other

-

Priority

- TBD

Constraints

-
-

Exclusions

- This project will update the process for loading real (land) parcel photos into LAMS. Structures, personal property (business account), and special act parcels are not included.
-

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PROJECT PHASE AUTHORIZATION

Phase(s):		
Total Estimated Application Services	**Hours: 532**	
Total Estimated Technical Systems	**Hours: 29**	
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: 561**	
Preliminary Estimated Development for Future Phases	**Hours:**	
92,565 **Grand Total Estimated Development**	**Hours: 561**	**Cost: $92,565**

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PROJECT COMPLETION AUTHORIZATION

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

Equalization Photo Automation - Size Estimate (+/- 10% to 50%)

	Type	ID	Task Name	Estimated	Estimate Notes
2				Hours	
3	**3**	**000000**	**PROJECT MANAGEMENT**	**139**	
4	**Phase**	**200000**	**DEFINE BUSINESS REQUIREMENTS**	**45**	
5	**Phase**	**300000**	**DESIGN SYSTEM ARCHITECTURE**	**50**	
6	**Phase**	**500000**	**DEVELOP APPLICATION**	**274**	
7	**Phase**	**600000**	**IMPLEMENTATION PHASE**	**36**	
8	**Phase**	**080000**	**POST IMPLEMENTATION SUPPORT**	**17**	
9				561	

D99125PH

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Return on Investment Analysis

As Of: 05/30/2018

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:	43,181	44,044	44,925	45,824	46,740	47,675	272,390
Costs:							
Development Services Subtotal:	92,565	13,200	9,900	13,200	9,900	13,200	151,965
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	43,181	44,044	44,925	45,824	46,740	47,675	272,390
Annual Total Costs	92,565	13,200	9,900	13,200	9,900	13,200	151,965
Annual Return on Investment	(49,384)	30,844	35,025	32,624	36,840	34,475	120,425
Annual Costs/Savings Ratio	214.37%	29.97%	22.04%	28.81%	21.18%	27.69%	
Project Cumulative Statistics:							
Cumulative Total Savings	43,181	87,225	132,151	177,974	224,715	272,390	272,390
Cumulative Total Costs	92,565	105,765	115,665	128,865	138,765	151,965	151,965
Cumulative Return on Investment	(49,384)	(18,540)	16,486	49,109	85,950	120,425	120,425
Cumulative Cost/Savings Ratio	214.37%	121.26%	87.53%	72.41%	61.75%	55.79%	55.79%
Year Positive Payback Achieved			Year 3				Year 3
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

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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
Reduce the manual effort for 1 full time Supervisor in the Land Description section of Equalization from manually downloading photos from Survey 123, verifying photos to parcels and sending to clerical staff.	Cost Avoidance		ANN	624	40	24,835	1.020
Reduce the manual effort for 2 full time Clerks from the Clerical section of Equalization that relabels and up-loads the photos into LAMS.	Cost Avoidance		ANN	1,248	15	18,346	1.020
						0	
						0	
						0	

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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
Reduce the manual effort for 1 full time Supervisor in the Land Description section of Equalization from manually downloading photos from Survey 123, verifying photos to parcels and sending to clerical staff.	Cost Avoidance	x	x	x	x	x	x	24,835.20	25,331.90	25,838.54	26,355.31	26,882.42	27,420
Reduce the manual effort for 2 full time Clerks from the Clerical section of Equalization that relabels and up-loads the photos into LAMS.	Cost Avoidance	x	x	x	x	x	x	18,345.60	18,712.51	19,086.76	19,468.50	19,857.87	20,255

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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
Tangible Benefit:							
Tangible Benefits Subtotal:							
Cost Avoidance:							
Reduce the manual effort for 1 full time Supervisor in the Land Description section of Equalization from manually downloading photos from Survey 123, verifying photos to parcels and sending to clerical staff.	24,835	25,332	25,839	26,355	26,882	27,420	156,663
Reduce the manual effort for 2 full time Clerks from the Clerical section of Equalization that relabels and up-loads the photos into LAMS.	18,346	18,713	19,087	19,468	19,858	20,255	115,726
Cost Avoidance Subtotal:	***43,181***	***44,044***	***44,925***	***45,824***	***46,740***	***47,675***	***272,390***
Intangible Benefit:							
Savings Total:	***43,181***	***44,044***	***44,925***	***45,824***	***46,740***	***47,675***	***272,390***

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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			561	165	92,565		x					
IT Hours - System Maintenance	Development Svcs			20	165	3,300			x	x	x	x	x
IT Hours - Customer Support	Development Svcs			40	165	6,600			x	x	x	x	x
IT Hours - Planned Maintenance	Development Svcs			20	165	3,300			x		x		x
User Hours - New Development	Development Svcs					0							
User Hours - PTNE/OT	Development Svcs					0							
Contractor Professional Services	Development Svcs					0							
PC System - Acquisition	Hardware				814	0							
PC System - Maintenance	Hardware				2,304	0							
Notebook - Acquisition	Hardware				1,223	0							
Notebook - Maintenance	Hardware				2,372	0							
Tablet Notebook - Acquisition	Hardware				2,012	0							
Tablet Notebook - Maintenance	Hardware					0							
Laserprinter - Acquisition	Hardware				1,432	0							
Laserprinter - Maintenance	Hardware				1,104	0							
Image Workstations - Acquisition	Hardware					0							
Image Workstations - Maintenance	Hardware				3,496	0							
PC Maintenance User Owned	Hardware				2,304	0							
Printer Maintenance User Owned	Hardware				1,072	0							
File Space (100GB)	Hardware		ANN		173	0							
Internet Bandwidth per MB	Hardware		ANN		750	0							
Package Software - Acquisition	Software					0							
Package Software - Maintenance	Software					0							
Business Objects Access	Software					0							
Term Emulation SFTW-Acquisition	Software					0							
Term Emulation SFTW-Maintenance	Software					0							
Server - Acquisition/Upgrade	Infrastructure				8,000	0							
Server - Maintenance	Infrastructure				360	0							
Server Sftwre - Acquisition/Upgrade	Infrastructure				335	0							
Server Sftwre - Maintenance	Infrastructure					0							
Server Rack Mount	Infrastructure				400	0							
Oracle Enterprise Per Processor - Includes Year 1 Maintenance	Infrastructure				21,372	0							
Oracle Enterprise Per Processor - Year 2 and Beyond	Infrastructure				3,432	0							

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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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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							

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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							

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Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
IT Hours - New Development	Development Svcs	92,565.00					
IT Hours - System Maintenance	Development Svcs		3,300.00	3,300.00	3,300.00	3,300.00	3,300.00
IT Hours - Customer Support	Development Svcs		6,600.00	6,600.00	6,600.00	6,600.00	6,600.00
IT Hours - Planned Maintenance	Development Svcs		3,300.00		3,300.00		3,300.00
User Hours - New Development	Development Svcs						
User Hours - PTNE/OT	Development Svcs						
Contractor Professional Services	Development Svcs						
PC System - Acquisition	Hardware						
PC System - Maintenance	Hardware						
Notebook - Acquisition	Hardware						
Notebook - Maintenance	Hardware						
Tablet Notebook - Acquisition	Hardware						
Tablet Notebook - Maintenance	Hardware						
Laserprinter - Acquisition	Hardware						
Laserprinter - Maintenance	Hardware						
Image Workstations - Acquisition	Hardware						
Image Workstations - Maintenance	Hardware						
PC Maintenance User Owned	Hardware						
Printer Maintenance User Owned	Hardware						
File Space (100GB)	Hardware						
Internet Bandwidth per MB	Hardware						
Package Software - Acquisition	Software						
Package Software - Maintenance	Software						
Business Objects Access	Software						
Term Emulation SFTW-Acquisition	Software						
Term Emulation SFTW-Maintenance	Software						
Server - Acquisition/Upgrade	Infrastructure						
Server - Maintenance	Infrastructure						
Server Sftwre - Acquisition/Upgrade	Infrastructure						
Server Sftwre - Maintenance	Infrastructure						
Server Rack Mount	Infrastructure						
Oracle Enterprise Per Processor - Includes Year 1 Maintenance	Infrastructure						
Oracle Enterprise Per Processor - Year 2 and Beyond	Infrastructure						

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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						

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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						

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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						

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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	92,565						92,565
IT Hours - System Maintenance		3,300	3,300	3,300	3,300	3,300	16,500
IT Hours - Customer Support		6,600	6,600	6,600	6,600	6,600	33,000
IT Hours - Planned Maintenance		3,300		3,300		3,300	9,900
User Hours - New Development							
User Hours - PTNE/OT							
Contractor Professional Services							
Development Services Subtotal:	***92,565***	***13,200***	***9,900***	***13,200***	***9,900***	***13,200***	***151,965***
Hardware:							
Hardware Subtotal:							
Software:							
Software Subtotal:							
Infrastructure:							
Infrastructure Subtotal							
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	***92,565***	***13,200***	***9,900***	***13,200***	***9,900***	***13,200***	***151,965***

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Return on Investment Analysis

Assumptions

Date	Assumption Description
04-Jun-18	The current version of LAMS will be used for this project.