Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: BS&A Cash Receipting Integration   **Project ID: D99182CI**

Leadership Group: Land	
Department: Information Technology	**Division:** Application Services
Project Sponsor: Tammi Shepherd	**Date Requested:** 02/05/2018 **PM Customer No.** 182

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: 36600	**Account Description:** Land System Enhancements	**Customer Name:**	Application Services
Grant Funded? Yes No ✔		**Mandate? Yes No ✔** **Mandate Source:**	

Project Goal

To implement real-time posting of cash receipting data to the enterprise Oakland County Tax database, so that that there is no lag between the entry of a receipt and the update of the processed tax payment.

Business Objective

To implement real-time service between local units BS&A cash receipting data to the enterprise Oakland County BS&A tax database. By implementing the real-time service Oakland County can retain the CVTs that currently are a part of the enterprise Oakland County BS&A tax database and eliminate the time, effort and cost for CVTs pulling off the enterprise Oakland County Tax database to a local version. Which will, result in more efficient delivery of taxpayer payments greatly reducing the volume of duplicate payments and refund checks issued.

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Major Deliverables
- Detailed Project Plan
- Application and/or System Requirements
- Software Requirements Document
- Technical Design Document
- Technical Architecture Diagram
- User Acceptance Test Plan
- Implementation Plan
- User Manual(s)
- Application Code
- 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.
- Document system requirements
- Determine and document system architecture and diagram
- Assess Software Requirements
- Conduct Tech Review
- Order software
- Develop Implementation Plan
- Develop new system interface
- Develop User Acceptance Test Plan
- Test new system interface
- Acquire User Acceptance Sign off
- Conduct Change Control
- Develop User Documentation, Disaster Recovery Toolkit, Service Center Knowledge Documents
- Demo system to users
- Release new system into production

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Research & Analysis

Gartner Research Recommendation – Research yielded no results

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users   <300

Divisions   Local Units – Treasurer's

Leadership Groups Land

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: Local Units will be available for testing and review as needed throughout the project plan.

Facilities

- NA

Technical

- NA

Funding

- Information Technology

Project Name: BS&A Cash Receipting Integration   **Project ID: D99182CI**

Other

- NA

Priority

- TBD

Constraints

- NA

Exclusions

- NA

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Project Scope and Approach

Project Name: BS&A Cash Receipting Integration   **Project ID: D99182CI**

PROJECT PHASE AUTHORIZATION

Phase(s): All		
Total Estimated Application Services	**Hours: 565**	
Total Estimated Technical Systems	**Hours: 31**	
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: 596**	
Preliminary Estimated Development for Future Phases	**Hours:**	
Grand Total Estimated Development	**Hours: 596**	**Cost: $98,340**

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Project Scope and Approach

Project Name: BS&A Cash Receipting Integration   **Project ID: D99182CI**

PROJECT COMPLETION AUTHORIZATION

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

BS&A Cash Receipting Integration - Size Estimate (+/- 10% to 50%)

	Type	ID	Task Name	Estimated
1				
2				Hours
3	3	000000	**PROJECT MANAGEMENT**	191
4	Phase	200000	**DEFINE BUSINESS REQUIREMENTS**	56
5	Phase	300000	**DESIGN SYSTEM ARCHITECTURE**	29
6	Phase	500000	**DEVELOP APPLICATION**	232
7	Phase	600000	**IMPLEMENTATION PHASE**	62
8	Phase	080000	**POST IMPLEMENTATION SUPPORT**	26
9				596

Oakland County -- BS&A Cash Receipting Integration

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:	58,239	59,404	60,592	61,804	63,040	64,301	367,378
Costs:							
Development Services Subtotal:	184,965	0	0	0	0	0	184,965
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	58,239	59,404	60,592	61,804	63,040	64,301	367,378
Annual Total Costs	184,965	0	0	0	0	0	184,965
Annual Return on Investment	(126,726)	59,404	60,592	61,804	63,040	64,301	182,413
Annual Costs/Savings Ratio	317.60%	0.00%	0.00%	0.00%	0.00%	0.00%	
Project Cumulative Statistics:							
Cumulative Total Savings	58,239	117,643	178,235	240,038	303,078	367,378	367,378
Cumulative Total Costs	184,965	184,965	184,965	184,965	184,965	184,965	184,965
Cumulative Return on Investment	(126,726)	(67,322)	(6,730)	55,073	118,113	182,413	182,413
Cumulative Cost/Savings Ratio	317.60%	157.23%	103.78%	77.06%	61.03%	50.35%	50.35%
Year Positive Payback Achieved				Year 4			Year 4
State or Federal Mandate?							
Signatures:							
Benefits Reviewed By Project Sponsor				Date:			
Costs (including IT Resources) Reviewed By Information Technology Project Manager				Date:			

Oakland County -- BS&A Cash Receipting Integration

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
Eliminating the time 36 CVTs spend exporting cash receipting transactions and importing into BSA Tax.	Cost Avoidance		ANN	1,248	17	21,327	1.020
Improve user experience by reducing the time and effort spent by CVTs on fixing errors and duplication of payments.	Cost Avoidance		ANN	2,160	17	36,912	1.020
Eliminate manual effort for 10 CVTs entering G2GCS counter and online payments into Cash Receipting system.	Cost Avoidance		ANN	1,040	17	17,680	1.020
Eliminate inefficiences in the current manual process.	Intangible Benefit		ANN			0	1.020
Enhance existing Oakland County BSA Tax application and provide additional functionality and time saving features for processing tax payments.	Intangible Benefit		ANN			0	1.020

Oakland County -- BS&A Cash Receipting Integration

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
Eliminating the time 36 CVTs spend exporting cash receipting transactions and importing into BSA Tax.	Cost Avoidance	x	x	x	x	x	x	21,326.95	21,753.49	22,188.56	22,632.33	23,084.97	23,547
Improve user experience by reducing the time and effort spent by CVTs on fixing errors and duplication of payments.	Cost Avoidance	x	x	x	x	x	x	36,912.02	37,650.26	38,403.27	39,171.34	39,954.76	40,754
Eliminate manual effort for 10 CVTs entering G2GCS counter and online payments into Cash Receipting system.	Cost Avoidance	x	x	x	x	x	x	17,680.00	18,033.60	18,394.27	18,762.16	19,137.40	19,520
Eliminate inefficiences in the current manual process.	Intangible Benefit	x	x	x	x	x	x	0.00	0.00	0.00	0.00	0.00	0
Enhance existing Oakland County BSA Tax application and provide additional functionality and time saving features for processing tax payments.	Intangible Benefit	x	x	x	x	x	x	0.00	0.00	0.00	0.00	0.00	0

Oakland County -- BS&A Cash Receipting Integration

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:							
Eliminating the time 36 CVTs spend exporting cash receipting transactions and importing into BSA Tax.	21,327	21,753	22,189	22,632	23,085	23,547	134,533
Improve user experience by reducing the time and effort spent by CVTs on fixing errors and duplication of payments.	36,912	37,650	38,403	39,171	39,955	40,754	232,846
Cost Avoidance Subtotal:	*58,239*	*59,404*	*60,592*	*61,804*	*63,040*	*64,301*	*367,378*
Intangible Benefit:							
Eliminate inefficiencies in the current manual process.	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Enhance existing Oakland County BSA Tax application and provide additional functionality and time saving features for processing tax payments.	*0*	*0*	*0*	*0*	*0*	*0*	
Savings Total:	*58,239*	*59,404*	*60,592*	*61,804*	*63,040*	*64,301*	*367,378*

Oakland County -- BS&A Cash Receipting Integration

As Of:02/05/2018

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			1,121	165	184,965	1.020	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		EA	1	814	814		x					
PC System - Maintenance	Hardware		ANN	1	2,304	2,304			x	x	x	x	x
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			x	x	x	x	x
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		EA	1		0		x					
Package Software - Maintenance	Software		ANN	1		0			x	x	x	x	x
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 -- BS&A Cash Receipting Integration

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 -- BS&A Cash Receipting Integration

Return on Investment Analysis

Cost Detail

								Affects Project ROI?					
Cost Description	Project Cost Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Cost	Annual Multiplier	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 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 -- BS&A Cash Receipting Integration

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							
Project Staff Training	Training					0							
User Training	Training					0							

Oakland County -- BS&A Cash Receipting Integration

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	184,965.00					
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	814.40					
PC System - Maintenance	Hardware		2,304.00	2,304.00	2,304.00	2,304.00	2,304.00
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		0.00	0.00	0.00	0.00	0.00
PC Maintenance User Owned	Hardware						
Printer Maintenance User Owned	Hardware						
File Space (100GB)	Hardware						
Internet Bandwidth per MB	Hardware						
Package Software - Acquisition	Software	0.00					
Package Software - Maintenance	Software		0.00	0.00	0.00	0.00	0.00
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 -- BS&A Cash Receipting Integration

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 -- BS&A Cash Receipting Integration

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						
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 -- BS&A Cash Receipting Integration

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 -- BS&A Cash Receipting Integration

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	184,965						184,965
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:	**184,965**						**184,965**
Hardware:							
Hardware Subtotal:							
Software:							
Software Subtotal:							
Infrastructure:							
Infrastructure Subtotal:							
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	**184,965**						**184,965**

Oakland County -- BS&A Cash Receipting Integration

Return on Investment Analysis

Assumptions

Date	Assumption Description
26-Feb-18	BSA offers an integration solution for a multi-CVT Database