Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: BS&A Development Budget 2023-2024   **Project ID: D93182DB**

Leadership Group: Land			
Department: Information Technology		**Division:** Application Services	
Project Sponsor: Tammi Shepherd	**Date Requested:** 3/8/2022		**PM Customer No. 182**
Request Type: *New Development X* *Enhancement* *Customer Support* *Planned System Maintenance or Upgrade*			
IT Team Name: Assessing and Taxation		**IT Team No: 9**	
Project Manager/Leader: Addie Hankins			

Account Number:	50000	Account Description:	BS&A Annual Process	Customer Name:	Application Services
Grant Funded? Yes No X			**Mandate? X** No X **Mandate Source:**		

Project Goal

To implement enterprise enhancements and apply BS&A database processes so that new application functionality can be leveraged to gain efficiency in the Equalization, Treasurer and Local Municipality Offices and databases are created for the 2023 & 2024 assessment and tax calendar years.

Business Objective

To implement non-customer specific enterprise enhancements that will provide participating local units and county departments increased functionality.

To implement process improvements and technology updates which will result in more efficient delivery of system support and maintenance.

To administer unscheduled updates and annual processes to ensure that the data and utilities are processed in a standard format by the database administrators in a timely fashion following the State Tax Commission Property Tax, Collections and Equalization calendar.

To create BSA production databases (Tax, Assessing, MYSA, PREA Countywide, Equalization Samples, Commercial Sales and Equalization Personal Property Audit) and then update throughout the calendar year with processes that are needed by the database users to produce reports and information data backups for the State Tax Commission, County Treasurer, Equalization and Local Municipalities.

Major Deliverables
- System enhancements
- Annual database rollover
- Addition/Deletion of user accounts
- Add / Remove local units from the application

Project Name: BS&A Development Budget 2023-2024   **Project ID: D93182DB**

- New or updated enterprise reports
- Administrative Utilities Performed
- Optimize/Automate BS&A database processes
- Export & Import Improvements
- External process Improvements

Approach

- Determine, document and implement enterprise application enhancements and improvements to internal or external processes.
- Perform end of year roll-over for each database
- Create Change Orders to add / remove user accounts
- Follow process to add a new CVT or remove a CVT from the database
- Review current annual processes and requirements for potential improvements
- Perform administrative utilities
- Research new collaboration opportunities, and evaluate their value
- Release new processes, system/data into production

Research & Analysis

Gartner Research Recommendation

Research Conducted – Nothing found

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users   <500

Divisions   Equalization, Treasurer, Local Units

Leadership Groups Land

Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: BS&A Development Budget 2023-2024   **Project ID: D93182DB**

Risk

Business Environment   Low – Little or no impact to existing business processes.

Technical Environment   Low – Proven and previously implemented technologies.

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

Facilities

- N/A

Technical

- N/A

Funding

- Information Technology

Other

- N/A

Priority

- TBD

Constraints

- N/A

Exclusions

- N/A

Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: BS&A Development Budget 2023-2024   **Project ID: D93182DB**

PROJECT PHASE AUTHORIZATION

Phase(s): All		
Total Estimated Application Services	**Hours:** 1611	
Total Estimated Technical Systems	**Hours:** 39	
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: 1650**	**Cost: $272,250**

Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: BS&A Development Budget 2023-2024   **Project ID: D93182DB**

PROJECT COMPLETION AUTHORIZATION

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

BS&A Development Budget 2023-2024 - Size Estimate (+/- 10% to 50%) (Read-Only) ✕

	Type	ID	Task Name	Estimated Hours	Estimate Notes
1	Phase	000000	⊟ BS&A DEVELOPMENT BUDGET 2023-2024	1,650	
2					
1				1,650	

Oakland County -- BSA Development Budget 2023-2024

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	1,716	1,716	1,716	1,716	1,716	8,580
Costs:							
Development Services Subtotal:	136,125	138,167	4,250	4,313	4,378	4,444	291,677
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	0	1,716	1,716	1,716	1,716	1,716	8,580
Annual Total Costs	136,125	138,167	4,250	4,313	4,378	4,444	291,677
Annual Return on Investment	(136,125)	(136,451)	(2,534)	(2,597)	(2,662)	(2,728)	(283,097)
Annual Costs/Savings Ratio	0.00%	8051.68%	247.65%	251.36%	255.14%	258.96%	
Project Cumulative Statistics:							
Cumulative Total Savings	0	1,716	3,432	5,148	6,864	8,580	8,580
Cumulative Total Costs	136,125	274,292	278,542	282,855	287,233	291,677	291,677
Cumulative Return on Investment	(136,125)	(272,576)	(275,110)	(277,707)	(280,369)	(283,097)	(283,097)
Cumulative Cost/Savings Ratio	0.00%	15984.38%	8116.01%	5494.46%	4184.63%	3399.50%	3399.50%
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 -- BSA Development Budget 2023-2024

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
Enhance existing BSA custom developed applications and provide additional functionality and time saving features to all supported applications.	Intangible Benefit		ANN			0	
Provide enhancements to IT processes that result in reduced cost of ownership for the BSA applications.	Intangible Benefit		ANN			0	
Implement new functionality available in latest vendor release	Intangible Benefit		ANN			0	
Provide security enhancements for a more secure system and better user experience.	Intangible Benefit		ANN			0	
Implement new data collection card. Reduce the amount of time clerical staff will spend to manually write up the additional fields that are not on the record card	Cost Avoidance		HR	78	22	1,716	
						0	
						0	
						0	
						0	
						0	
						0	
						0	

Oakland County -- BSA Development Budget 2023-2024

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
Enhance existing BSA custom developed applications and provide additional functionality and time saving features to all supported applications.	Intangible Benefit	x	x					0.00	0.00				
Provide enhancements to IT processes that result in reduced cost of ownership for the BSA applications.	Intangible Benefit	x	x					0.00	0.00				
Implement new functionality available in latest vendor release	Intangible Benefit	x	x					0.00	0.00				
Provide security enhancements for a more secure system and better user experience.	Intangible Benefit	x	x					0.00	0.00				
Implement new data collection card. Reduce the amount of time clerical staff will spend to manually write up the additional fields that are not on the record card	Cost Avoidance		x	x	x	x	x		1,716.00	1,716.00	1,716.00	1,716.00	1,716

Oakland County -- BSA Development Budget 2023-2024

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:							
Implement new data collection card. Reduce the amount of time clerical staff will spend to manually write up the additional fields that are not on the record card		1,716	1,716	1,716	1,716	1,716	8,580
Cost Avoidance Subtotal:		*1,716*	*1,716*	*1,716*	*1,716*	*1,716*	*8,580*
Intangible Benefit:							
Enhance existing BSA custom developed applications and provide additional functionality and time saving features to all supported applications.	*0*	*0*					
Provide enhancements to IT processes that result in reduced cost of ownership for the BSA applications.	*0*	*0*					
Implement new functionality available in latest vendor release	*0*	*0*					
Provide security enhancements for a more secure system and better user experience.	*0*	*0*					
Savings Total:		*1,716*	*1,716*	*1,716*	*1,716*	*1,716*	*8,580*

Oakland County -- BSA Development Budget 2023-2024

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		HR	1,650	165	272,250	1.015	X	X				
IT Hours - System Maintenance	Development Svcs		HR	5	165	825	1.015			X	X	X	X
IT Hours - Customer Support	Development Svcs		ANN	20	165	3,300	1.015			X	X	X	X
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				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							
Laser printer - Acquisition	Hardware				1,432	0							
Laser printer - 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					0							
Package Software - Customization	Software				1,000	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 -- BSA Development Budget 2023-2024

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 -- BSA Development Budget 2023-2024

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							
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			0							

Oakland County -- BSA Development Budget 2023-2024

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 -- BSA Development Budget 2023-2024
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	136,125.00	138,166.88				
IT Hours - System Maintenance	Development Svcs			849.94	862.68	875.62	888.76
IT Hours - Customer Support	Development Svcs			3,399.74	3,450.74	3,502.50	3,555.04
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						
Laser printer - Acquisition	Hardware						
Laser printer - Maintenance	Hardware						
PC Maintenance User Owned	Hardware						
Printer Maintenance User Owned	Hardware						
File Space (100GB)	Hardware						
Package Software - Acquisition	Software						
Package Software - Customization	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 -- BSA Development Budget 2023-2024

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 -- BSA Development Budget 2023-2024

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 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 -- BSA Development Budget 2023-2024

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 -- BSA Development Budget 2023-2024

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	136,125	138,167					274,292
IT Hours - System Maintenance			850	863	876	889	3,477
IT Hours - Customer Support			3,400	3,451	3,502	3,555	13,908
IT Hours - Planned Maintenance							
User Hours - New Development							
User Hours - PTNE/OT							
Contractor Professional Services							
Development Services Subtotal:	*136,125*	*138,167*	*4,250*	*4,313*	*4,378*	*4,444*	*291,677*
Hardware:							
Hardware Subtotal:							
Software:							
Package Software - Customization							
Software Subtotal:							
Infrastructure:							
Infrastructure Subtotal							
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	*136,125*	*138,167*	*4,250*	*4,313*	*4,378*	*4,444*	*291,677*

Oakland County -- BSA Development Budget 2023-2024

Return on Investment Analysis

Assumptions

Date	Assumption Description
01-May-18	Estimate is based on the 2017 & 2018 Year End Annual Processes Budget projects and includes all tasks.
01-May-18	Estimate includes hours for 12 enhancement tasks for enhancements needed by Local CVTs, Equalization & Treasurer Offices
01-May-18	This development budget will replace the Year End Annual Processes projects and the BS&A EB budget
01-May-18	Hours are included for creating, removing and updating user accounts. Hours were averaged from Service Center CO's for 9/2016 - 5/2018.
22-Mar-20	Reduce the amount of time clerical staff will spend to manually write up the additional fields that are not on the record card. 468 field reviews*10 min. each=4,680/60min=78 hrs*22= $1,716. savings detail=468 units, $22 rate, $1,716 total savings.