Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: Data Center Operations Implementation   **Project ID:TN2186DI**

Leadership Group: Information Technology Steering Committee	
Department: Information Technology	**Division:** Technical Systems and Networking
Project Sponsor: Joe Tabor	**Date Requested:** 06/10/2022 **PM Customer No.** 186
Request Type: New Development	
IT Team Name: Workstation Services	**IT Team No:** N
Project Manager/Leader: Mike Zemina	

Account Number:	17030	Account Description:	Technical Systems and Networking	Customer Name:	Information Technology
Grant Funded?	No		**Mandate?** No **Mandate Source:**		

Project Goal

To implement a Data Operations Center solution so that IT can improve and streamline monitoring and management of the network infrastructure, associated nodes and services. Additionally, implement system intelligence to produce automated responses based on the type of issue or outage that's seen by the NOC solution.

Business Objective

To implement an infrastructure and application monitoring system that provides real time data that helps IT expediate business continuity. Additionally, IT will gain efficiency with the consolidation of the monitoring tool suite.

Major Deliverables
- Business Requirements
- RFP process
- Technical Review and Approval
- Monitoring solution for County systems
- System documentation, including knowledge documents
- Trained staff
- Baseline performance
- Disaster Recovery Toolkit (DR Toolkit)

Approach
- Document technical design
- Work with vendor to setup / configure system
- Develop SOP (Standard Operating Procedure)
- Have appropriate staff attend training on selected solution
- Utilize auto-discovery to obtain original network device list.
- Document performance baseline for trending

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Research & Analysis

IT Research & Advisory Services Recommendation

- Research not Required

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users   All

Divisions   All

Leadership Groups   All

Risk

Business Environment   **Medium** - Project will require some changes to existing business processes (for IT teams only).

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:

Role:	Name	Hours per Day
Project Sponsor:	Joe Tabor	As Needed
App Services Stakeholder:	Tammi Shepherd	As Needed
CLEMIS Stakeholder:	Jeff Nesmith	As Needed
CTO:	EJ Widun	As Needed
IT Director:	Mike Timm	As Needed

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Facilities

- Existing Network Operations room in Bldg 49 will be used

Technical

- New application will be purchased to manage systems.

Funding

- Information Technology

Other

- Leverage existing documentation to aid in writing SOPs and other documentation for the NOC.

Priority   TBD

Constraints

- None

Exclusions

- Video Arraignment System.
- Environmental conditions monitoring tools.
- Workstation monitoring.

In-Scope

- Mission critical applications and infrastructure (SAN, backup, & Database).
- Critical Core network infrastructure is composed of major switches, routers & firewalls (internal & external).
- VMWare infrastructure.

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PROJECT PHASE AUTHORIZATION

Phase(s):		
Total Estimated Application Services	**Hours:** 157	
Total Estimated Technical Systems	**Hours:** 1.685	
Total Estimated CLEMIS	**Hours:** 257	
Total Estimated Internal Services	**Hours:** 34	
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:** 2,133	
Previously Authorized Development	**Hours:**	
Preliminary Estimated Development for Future Phases	**Hours:**	
Grand Total Estimated Development	**Hours: 2,133**	**Cost:** $351,945

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PROJECT COMPLETION AUTHORIZATION

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

	Type	ID	Task Name	Estimated Hours	Estimate Notes
1	Phase	000000	PROJECT ADMINISTRATION - DC OPERATIONS IMP	613	
2	Phase	100000	DEVELOP RFP & SELECT VENDOR - DC OPERATIONS IMP	256	
3	Phase	200000	DEFINE BUSINESS REQUIREMENTS - DC OPERATIONS IMP	140	
4	Phase	300000	DESIGN SYSTEM ARCHITECTURE - DC OPERATIONS IMP	57	
5	Phase	400000	IMPLEMENT VENDOR APPLICATION - DC OPERATIONS IMP	101	
6	Phase	500000	SOP & DOCUMENTATION - DC OPERATIONS IMP	900	
7	Phase	600000	IMPLEMENTATION - DC OPERATIONS IMP	46	
8	Phase	700000	POST IMPLEMENTATION SUPPORT - DC OPERATIONS IMP	20	
9					
1				2,133	

Oakland County -- Data Center Operations Implementation

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:	49,920	49,920	49,920	49,920	49,920	0	249,600
Costs:							
Development Services Subtotal:	351,945	0	0	0	0	0	351,945
Hardware Subtotal:	0	0	0	0	0	0	0
Software Subtotal:	635,000	150,000	150,000	150,000	150,000	0	1,235,000
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	49,920	49,920	49,920	49,920	49,920	0	249,600
Annual Total Costs	986,945	150,000	150,000	150,000	150,000	0	1,586,945
Annual Return on Investment	(937,025)	(100,080)	(100,080)	(100,080)	(100,080)		(1,337,345)
Annual Costs/Savings Ratio	1977.05%	300.48%	300.48%	300.48%	300.48%	0.00%	
Project Cumulative Statistics:							
Cumulative Total Savings	49,920	99,840	149,760	199,680	249,600	249,600	249,600
Cumulative Total Costs	986,945	1,136,945	1,286,945	1,436,945	1,586,945	1,586,945	1,586,945
Cumulative Return on Investment	(937,025)	(1,037,105)	(1,137,185)	(1,237,265)	(1,337,345)	(1,337,345)	(1,337,345)
Cumulative Cost/Savings Ratio	1977.05%	1138.77%	859.34%	719.62%	635.80%	635.80%	635.80%
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: _____			_____			
Costs (including IT Resources) Reviewed By Technical Services Manager	Date: _____			_____			

Oakland County -- Data Center Operations Implementation

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
						0	
Proactively monitor server and network performance	Intangible Benefit					0	
Reduction of down time	Intangible Benefit					0	
Increased customer support	Intangible Benefit					0	
Increased availability of TSN Staff	Cost Avoidance		HR	390	128	49,920	1.000
						0	
						0	
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						0	

Oakland County -- Data Center Operations Implementation

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
Proactively monitor server and network performance	Intangible Benefit												
Reduction of down time	Intangible Benefit												
Increased customer support	Intangible Benefit												
Increased availability of TSN Staff	Cost Avoidance	x	x	x	x	x	x	49,920	49,920	49,920	49,920	49,920	49,920

Oakland County -- Data Center Operations Implementation

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:							
Increased availability of TSN Staff	49,920	49,920	49,920	49,920	49,920		249,600
Cost Avoidance Subtotal:	*49,920*	*49,920*	*49,920*	*49,920*	*49,920*		*249,600*
Savings Total:	*49,920*	*49,920*	*49,920*	*49,920*	*49,920*		*249,600*

Oakland County -- Data Center Operations Implementation

As Of: 6/10/22

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	Y1	Y2
IT Hours - New Development	Development Svcs	IT - Information Technology / 17030	HR	2,133	165	351,945		x	
IT Hours - New Development	Development Svcs	IT - Information Technology / 17030	HR	0	122	0		x	
IT Hours - New Development	Development Svcs	IT - Information Technology / 17030	HR	0	116	0		x	
IT Hours - New Development	Development Svcs	IT - Information Technology / 17030	HR	0	77	0		x	
IT Hours - New Development	Development Svcs	IT - Information Technology / 17030	HR	0	75	0		x	
IT Hours - New Development	Development Svcs	IT - Information Technology / 17030	HR	0	56	0		x	
Networking Monitoring Application		IT - Information Technology / 17030	EA	1	635,000	635,000	1.100	x	
Networking Monitoring App maintenance		IT - Information Technology / 17030	EA	1	122	150,000	1.000		x
					122	0			
					122	0			
					122	0			
					122	0			
					122	0			
Laserprinter 2 - Maintenance	Hardware				1,208	0			
Laserprinter 3 - Acquisition	Hardware					0			
Laserprinter 3 - Maintenance	Hardware				1,860	0			
Image Workstations - Acquisition	Hardware					0			
Image Workstations - Maintenance	Hardware				3,496	0			
Terminals - Acquisition	Hardware			2,135		0			
Terminals - Maintenance	Hardware				644	0			
PRTR w/TERM ID - Acquisition	Hardware					0			
PRTR w/TERM ID - Maintenance	Hardware				1,072	0			
PRTR w/o TERM ID - Acquisition	Hardware					0			
PRTR w/o TERM ID - Maintenance	Hardware				1,072	0			
PC Maintenance User Owned	Hardware				2,304	0			
Printer Maintenance User Owned	Hardware				1,072	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					0			

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Oakland County -- Data Center Operations Implementation

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	Y1	Y2
Server - Maintenance	Infrastructure					0			
Server Sftwre - Acquisition/Upgrade	Infrastructure					0			
Server Sftwre - Maintenance	Infrastructure					0			
TBD	Infrastructure					0			
TBD	Infrastructure					0			
TBD	Infrastructure					0			
TBD	Infrastructure					0			
Internet Access	Infrastructure				180	0			
Project Staff Training	Training					0			
User Training	Training					0			
						0			
						0			
						0			
						0			
						0			

Oakland County -- Data Center Operations Implementation

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Project ROI?				Potential Cost Extensions					
		Y3	Y4	Y5	Y6	Y1	Y2	Y3	Y4	Y5	Y6
IT Hours - New Development	Development Svcs					351,945					
IT Hours - New Development	Development Svcs					0					
IT Hours - New Development	Development Svcs					0					
IT Hours - New Development	Development Svcs					0					
IT Hours - New Development	Development Svcs					0					
IT Hours - New Development	Development Svcs					0					
Networking Monitoring Application						635,000					
Networking Monitoring App maintenance		x	x	x	x		150,000	150,000	150,000	150,000	150,000
Laserprinter 2 - Maintenance	Hardware										
Laserprinter 3 - Acquisition	Hardware										
Laserprinter 3 - Maintenance	Hardware										
Image Workstations - Acquisition	Hardware										
Image Workstations - Maintenance	Hardware										
Terminals - Acquisition	Hardware										
Terminals - Maintenance	Hardware										
PRTR w/TERM ID - Acquisition	Hardware										
PRTR w/TERM ID - Maintenance	Hardware										
PRTR w/o TERM ID - Acquisition	Hardware										
PRTR w/o TERM ID - Maintenance	Hardware										
PC Maintenance User Owned	Hardware										
Printer Maintenance User Owned	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										

Oakland County -- Data Center Operations Implementation

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Project ROI?				Potential Cost Extensions					
		Y3	Y4	Y5	Y6	Y1	Y2	Y3	Y4	Y5	Y6
Server - Maintenance	Infrastructure										
Server Sftwre - Acquisition/Upgrade	Infrastructure										
Server Sftwre - Maintenance	Infrastructure										
TBD	Infrastructure										
TBD	Infrastructure										
TBD	Infrastructure										
TBD	Infrastructure										
Internet Access	Infrastructure										
Project Staff Training	Training										
User Training	Training										

Oakland County -- Data Center Operations Implementation

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	351,945						351,945
IT Hours - New Development	0						
IT Hours - New Development	0						
IT Hours - New Development	0						
IT Hours - New Development	0						
IT Hours - New Development	0						
Development Services Subtotal:	*351,945*						*351,945*
Hardware:							
Hardware Subtotal:							
Software:							
Networking Monitoring Application	635,000						635,000
Networking Monitoring App maintenance		150,000	150,000	150,000	150,000		600,000
							0
Software Subtotal:	*635,000*	*150,000*	*150,000*	*150,000*	*150,000*		*1,235,000*
Infrastructure:							
Infrastructure Subtotal							
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	**986,945**	**150,000**	**150,000**	**150,000**	**150,000**		**1,586,945**

Oakland County -- Data Center Operations Implementation

Return on Investment Analysis

Assumptions

Date	Assumption Description
10-Jun-22	Cost Avoidance in Savings Detail is based on Operations team monitoring the Server Administration, Network and Deployment Services queue and not requirinng staff for those areas to monitor the queues. This is estimated to save each of the areas 30 minutes per day. 1.5 hours X 260 work days per year = 390 hours per year.