

# Oakland County Department of Information Technology Project Scope and Approach

**Project Name: Infrastructure Automation**

**Project ID: T61186IA**

<b>Leadership Group:</b> Information Technology Steering Committee			
<b>Department:</b> Information Technology		<b>Division:</b> Technical Systems and Networking	
<b>Project Sponsor:</b> EJ Widun	<b>Date Requested:</b>	<b>PM Customer No.</b> 186	
<b>Request Type:</b> <i>New Development</i>			
<b>IT Team Name:</b> Server Administration		<b>IT Team No:</b> 6	
<b>Project Manager/Leader:</b> Heidi Flack			
<b>Account Number:</b> 17030	<b>Account Description:</b> Technical Systems and Networking	<b>Customer Name:</b>	Information Technology
<b>Grant Funded?</b> No		<b>Mandate?</b> No	

## **Project Goal**

To develop a strategic roadmap for software defined infrastructure methodologies to manage TSN storage and compute infrastructure resources so that builds and changes will be more consistent, verifiable, and auditable.

## **Business Objective**

To deploy scripted changes to infrastructure and exposing some portion for self-deployment and integration with Ansible for actual push-button maintenance as well as streamline and employ efficiencies and optimizations for standard server administration functions.

## **Major Deliverables**

- Research & Analysis SA process and procedure
- Identify common SA tasks /work packages
- Identify improvements opportunities
- Define consistent, verifiable, and auditable options (e.g. software, process)
- Develop strategic roadmap and approach(es)
- Obtain approvals and update SA Strategy
- Deploy (minimal effort) improvements

## **Approach**

- Conduct research and analysis of the current SA process and procedures.
- Identify efficiency and optimization opportunities.
- Develop SA Strategy and Roadmap for improvements/enhancements.
- Implement initial improvements (minimal effort)

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## Research & Analysis

- Market Guide for Infrastructure Automation Tools  
(<https://www.gartner.com/document/3984924?ref=solrAll&refval=252075558>)
- Data Center Infrastructure Primer for 2020  
(<https://www.gartner.com/document/3980031?ref=solrAll&refval=252075502>)

## Benefits

See *Return on Investment (ROI) Analysis Document*

## Impact

Number of Users	All
Divisions	IT
Leadership Groups	IT Steering Committee

## Risk

Business Environment	Low = Little or no impact to existing business processes.
Technical Environment	Low = Proven or 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:

<u>Role:</u>	<u>Name</u>
Sponsor/ TSN/EA Stakeholder:	EJ Widun
IT Stakeholder:	Mike Timm
Security Stakeholder:	TJ Fields
NS Stakeholder	Guy Compton
CLEMIS Stakeholder:	Jeff Nesmith
Internal Services Stakeholder:	Janette McKenna
Apps Stakeholder:	Tammi Shepherd
Data Center Stakeholder:	Joe Tabor

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## **Facilities**

- 

## **Technical**

- 

## **Funding**

- Information Technology
- Funding will be available for this effort and future phases and purchases.
- Implementation of a solution will be approved and budgeted.

## **Other**

- 

## **Priority**

- 

## **Constraints**

- 

## **Exclusions**

-

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**PROJECT PHASE AUTHORIZATION**

<b>Phase(s): Project Management, Infrastructure Automation</b>	
<b>Total Estimated Application Services</b>	<b>Hours: 30</b>
<b>Total Estimated Technical Systems</b>	<b>Hours: 786</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: <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Date:</b>
Reason:	
<b>Project Sponsor Approval:</b>	
Title:	<b>Date:</b>

**PROJECT SUMMARY**

<b>Authorized Development (see above)</b>	<b>Hours: 816</b>	
<b>Previously Approved Phases</b>	<b>Hours:</b>	
<b>Grand Total Estimated Development</b>	<b>Hours: 816</b>	<b>Cost: \$134,640</b>

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## PROJECT COMPLETION AUTHORIZATION

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

Infrastructure Automation - Size Estimate (+/- 10% to 50%)					
	Type	ID	Task Name	Estimated Hours	Estimate Notes
1	Phase	000000	PROJECT MANAGEMENT	254	
2	Phase	100000	INFRASTRUCTURE AUTOMATION	562	
1				816	

**Oakland County -- Infrastructure Automation**

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:	51,068	51,068	51,068	51,068	51,068	51,068	306,405
<b>Costs:</b>							
Development Services Subtotal:	134,640	0	0	0	0	0	134,640
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	51,068	51,068	51,068	51,068	51,068	51,068	306,405
Annual Total Costs	134,640	0	0	0	0	0	134,640
Annual Return on Investment	(83,573)	51,068	51,068	51,068	51,068	51,068	171,765
Annual Costs/Savings Ratio	263.65%	0.00%	0.00%	0.00%	0.00%	0.00%	
<b>Project Cumulative Statistics:</b>							
Cumulative Total Savings	51,068	102,135	153,203	204,270	255,338	306,405	306,405
Cumulative Total Costs	134,640	134,640	134,640	134,640	134,640	134,640	134,640
Cumulative Return on Investment	(83,573)	(32,505)	18,563	69,630	120,698	171,765	171,765
Cumulative Cost/Savings Ratio	263.65%	131.83%	87.88%	65.91%	52.73%	43.94%	43.94%
Year Positive Payback Achieved			Year 3				Year 3
State or Federal Mandate?							
<b>Signatures:</b>							
Benefits Reviewed By Project Sponsor	_____			Date:	_____		
Costs (including IT Resources) Reviewed By Information Technology Project Manager	_____			Date:	_____		

**Oakland County -- Infrastructure Automation**  
Return on Investment Analysis

Savings Detail

<b>Benefit/Savings Description</b>	<b>Project Savings Category</b>	<b>Budget Category/Funding Source</b>	<b>Unit Desc</b>	<b>Units</b>	<b>Rate per Unit</b>	<b>Total Savings</b>	<b>Annual Multiplier</b>
Reduced server/system build time	Cost Avoidance	Technical Services & Ntwkg / 17030	HR	73	248	18,068	
Reduced re-work due to inconsistent system builds, configurations, and changes	Cost Avoidance	Technical Services & Ntwkg / 17030	HR	50	165	8,250	
Reduced re-work due to human error	Cost Avoidance	Technical Services & Ntwkg / 17030	HR	50	165	8,250	
Reduced system maintenance due to human error	Cost Avoidance	Technical Services & Ntwkg / 17030	HR	100	165	16,500	
Improved tracking of system configurations	Intangible Benefit	Technical Services & Ntwkg / 17030				0	
Repeatable and auditable change management	Intangible Benefit	Technical Services & Ntwkg / 17030				0	
Consistent system builds	Intangible Benefit	Technical Services & Ntwkg / 17030				0	
Reduced impact to business due to decreased outages as a result of changes	Intangible Benefit	Technical Services & Ntwkg / 17030				0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	

**Oakland County -- Infrastructure Automation**

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
Reduced server/system build time	Cost Avoidance	x	x	x	x	x	x	18,067.50	18,067.50	18,067.50	18,067.50	18,067.50	18,068
Reduced re-work due to inconsistent system builds, configurations, and changes	Cost Avoidance	x	x	x	x	x	x	8,250.00	8,250.00	8,250.00	8,250.00	8,250.00	8,250
Reduced re-work due to human error	Cost Avoidance	x	x	x	x	x	x	8,250.00	8,250.00	8,250.00	8,250.00	8,250.00	8,250
Reduced system maintenance due to human error	Cost Avoidance	x	x	x	x	x	x	16,500.00	16,500.00	16,500.00	16,500.00	16,500.00	16,500
Improved tracking of system configurations	Intangible Benefit												
Repeatable and auditable change management	Intangible Benefit												
Consistent system builds	Intangible Benefit												
Reduced impact to business due to decreased outages as a result of changes	Intangible Benefit												



**Oakland County -- Infrastructure Automation**

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>							
Reduced server/system build time	18,068	18,068	18,068	18,068	18,068	18,068	108,405
Reduced re-work due to inconsistent system builds, configurations, and changes	8,250	8,250	8,250	8,250	8,250	8,250	49,500
Reduced re-work due to human error	8,250	8,250	8,250	8,250	8,250	8,250	49,500
Reduced system maintenance due to human error	16,500	16,500	16,500	16,500	16,500	16,500	99,000
<b>Cost Avoidance Subtotal:</b>	<b>51,068</b>	<b>51,068</b>	<b>51,068</b>	<b>51,068</b>	<b>51,068</b>	<b>51,068</b>	<b>306,405</b>
<b>Intangible Benefit:</b>							
Improved tracking of system configurations							
Repeatable and auditable change management							
Consistent system builds							
Reduced impact to business due to decreased outages as a result of changes							
<b>Savings Total:</b>	<b>51,068</b>	<b>51,068</b>	<b>51,068</b>	<b>51,068</b>	<b>51,068</b>	<b>51,068</b>	<b>306,405</b>

**Oakland County -- Infrastructure Automation**  
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 (MP 2021-22)	Development Svcs	Technical Services & Ntwkg / 17030	HR	816	165	134,640		X						

**Oakland County -- Infrastructure Automation**  
Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
IT Hours - New Development (MP 2021-22)	Development Svcs	134,640.00					

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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
<b>Development Services:</b>							
IT Hours - New Development (MP 2021-22)	134,640						134,640
<i>Development Services Subtotal:</i>	<b>134,640</b>						<b>134,640</b>
<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>							

**Oakland County -- Infrastructure Automation**  
Return on Investment Analysis

Cost Summary

Cost Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
<b>Costs Total:</b>	<b>134,640</b>						<b>134,640</b>

