

# Oakland County Department of Information Technology Project Scope and Approach

**Project Name: Windows Backup/Recovery Improvement**

**Project ID: T35186BR**

<b>Leadership Group: Information Technology Steering Committee</b>				
<b>Department: Information Technology</b>			<b>Division: Technical Systems and Networking</b>	
<b>Project Sponsor: David Veit</b>		<b>Date Requested: 7/7/05</b>		<b>PM Customer No. 186</b>
<b>Request Type:</b> <i>New Development</i> <span style="border: 1px solid black; padding: 2px;"><b>Enhancement</b></span> <i>Customer Support</i> <i>Planned System Maintenance or Upgrade</i>				
<b>IT Team Name: Server Administration</b>			<b>IT Team No: 6</b>	
<b>Project Manager/Leader: Darrell Kirby</b>				
<b>Account Number:</b> 17030	<b>Account Description:</b>	Technical Systems and Networking	<b>Customer Name:</b>	Information Technology
<b>Grant Funded? Yes</b> <span style="border: 1px solid black; padding: 2px;"><b>No</b></span>		<b>Mandate? Yes</b> <span style="border: 1px solid black; padding: 2px;"><b>No</b></span>		
<b>Mandate Source:</b>				

## Project Goal

To develop, pilot and prepare a roll-out plan for a consistent backup and recovery strategy that supports the family of server concept, so that efficiency and reliability are improved by September, 2006.

## Business Objective

To perform project management activities so that the project is executed in a timely manner with appropriate quality and cost controls.

Project Management Phase:

- Updated Project Plan
- Project Issues Log
- Notice of Project Decisions Log
- Project Communications Plan

## Business Objective

To develop a comprehensive backup and recovery strategy and perform a gap analysis so that an effective Proof of Concept is developed to prove that the strategy is viable.

### **Major Deliverables**

This Business Objective's deliverables are organized into two project phases: Strategy Development, and Gap Analysis.

Strategy Development Phase: **(COMPLETED)**

- Requirements Document
- Research Documented

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1. Current Backup and Recovery product inventory,
  2. Industry Best Practices that support gathered requirements, and
  3. Industry Tools that support gathered requirements
- Approved Strategy Document

Gap Analysis Phase: **(DESCOPE)**

- Gap Analysis Documented
- Proof of Concept Project Phases Approved

## **Approach**

To utilize Technical Systems and Networking staff supplemented by contract services to perform the following activities:

- Gather Requirements,
- Perform Project Research and Cost Analysis,
- Develop Strategy,
- Perform Gap Analysis**(DESCOPE)**
- Obtain Management Approval for Subsequent Project Phases, and
- Develop and Maintain Project Data.

IT leadership (supervisors) from each division will be interviewed for backup and recovery requirements.

IT management will provide expertise and approval of policies, plans and project documentation requiring management approval.

## **Business Objective**

To conduct a Proof of Concept for backup and Recovery for the County server environment in order to determine the viability of the solution to satisfy the project goal.

## **Major Deliverables**

Proof of Concept Phase: **(DESCOPE)**

- Backup/Recovery Product Coverage Documents
- Test Plan
- Test Results
- Recommendations Document
- Approved Scope and Approach for subsequent project Phases
- Approved WBS for subsequent project phases
- Approved ROI for subsequent project Phases

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## **Approach**

To utilize a small team to conduct a Proof of Concept of the Backup/Recovery products in a test environment using a representative subset of County server family. The Proof of Concept team will be comprised of Technical Systems and Networking supplemented by contract services to perform the following activities:

- Perform project research,
- Develop technical plans and documentation,
- Execute testing and produce test results,
- Produce project recommendations, and
- Develop and maintain project data.

IT management will provide expertise and approval of Test Plan and other project documentation requiring management approval.

## **Business Objective**

To implement the approved backup and recovery strategy for one of the family of servers.

### **Major Deliverables**

The Business Objectives deliverables are organized into four project phases: Solution Development, Pre-Implementation, Implementation, and Post Implementation.

Solution Development Phase:

- Hardware and Software Purchased
- Security Design
- Architecture Diagram
- Technology Management Plan
- Maintenance Plan and Schedule

Pre-Implementation Phase:

- Testing
- Implementation Plan
- Approved Change Control
- Support Staff Technically Trained

Implementation Phase:

- Implementation according to the Implementation Plan
- Quality and Assurance and Test Results Documented
- Pilot Successful Sign-Off for one Family of Servers
- Service Definition Document
- Technology Refresh Strategy Document
- Roll-Out Plan developed for remaining families

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Post Implementation Phase:

- Post Implementation Support Provided after one Pilot

## **Approach**

To utilize Technical Systems and Networking staff supplemented by contract services to perform the following activities:

- Develop Technical Plans and Documentation,
- Execute Implementation
- Conduct Testing and Pilot, and
- Develop and Maintain Project Data.

The Pilot team will need to validate the backups and recoveries for the pilot.

IT management will provide expertise and approval of policies, plans and project documentation requiring management approval.

## **Benefits**

***See Return on Investment (ROI) Analysis Document***

### ***Intangible***

#### **Improved Service**

The improvement of the backup and recovery system provides Oakland County with the opportunity for quicker backup /recovery times and more efficient back-up and restores for user data. It will also provide better manageability by using standardized tools in order to simplify the process.

#### **Product/Service**

#### **Accuracy**

#### **Product/Service**

#### **Productivity**

## **Impact**

### **Divisions**

All

### **Leadership Groups**

All

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**Risk**

**Business Environment**      Medium - Project will require some changes to existing business processes  
1. This project re-engineers the backup and recovery 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:

<u>Role:</u>	<u>Name</u>	<u>Hours per Day</u>
Project Sponsor:	David Veit	As Needed

**Facilities**

- All work will be performed at the Bldg 49 facility.
- An isolated from production test environment will not be created for this project.

**Technical**

- Solution encompasses the evaluation/implementation of tape catalog backup/recovery.
- Solution encompasses the evaluation/implementation of disk Image replication/recovery.
- Solution will take advantage of backup and recovery products that best fit the strategy.
- The solution must include the role/strategy of disk backups which includes improving SQL and Oracle backup services.
- The solution must include the role/strategy for improving Mirapoint Email systems backup.

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- The solution may include centralized management tools used for monitoring data backup and recovery.
- Pilot will be conducted on one family of servers. The roll-out plan will follow this pattern as well.
- The solution must include the strategy for improving the DMZ backups.
- The solution may include the strategy for reporting capabilities.

## **Funding**

- Final hardware, software and implementation costs will be determined as part of the Implementation phase.

## **Other**

- Solution will include Guidance/Documentation for other IT areas. Must describe capacity, guidelines and backup/recovery projections.
- Solution must support family of servers' concept.
- Information Technology management commitment to review and approve documentation requiring management approval as required by the project.

**Priority**      08

## **Constraints**

- 

## **Exclusions**

- Family of servers must be identified and documented as an input to this project. The identification of server families and the individual, named servers that belong to that family is out of scope for this project.

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**PROJECT PHASE AUTHORIZATION**

<b>Phase(s): Project Management, Solutions Development, Pre-Implementation, Implementation, Post Implementation</b>		
<b>Total Estimated Application Services</b>	<b>Hours: 0</b>	<b>Cost: 0</b>
<b>Total Estimated Technical Systems</b>	<b>Hours: 406</b>	<b>Cost: \$17,298</b>
<b>Total Estimated eGovernment Services</b>	<b>Hours: 0</b>	<b>Cost: \$0</b>
<b>Total Estimated CLEMIS</b>	<b>Hours: 0</b>	<b>Cost: \$0</b>
<b>Total Estimated Internal Services</b>	<b>Hours: 0</b>	<b>Cost: \$0</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 eGovernment Services 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 Resource Manager Approval:</b>		<b>Date:</b>
<b>IT Resource Manager Approval:</b>		<b>Date:</b>
<b>IT Resource Manager Approval:</b>		<b>Date:</b>
<b>IT Resource Manager Approval:</b>		<b>Date:</b>
<b>IT Resource Manager Approval:</b>		<b>Date:</b>
<b>IT Management Approval:</b>		
Approved:            Yes            No		Date:
Reason:		
<b>Project Sponsor Approval:</b>		
Title:		Date:

**PROJECT SUMMARY**

<b>Authorized Development (New)</b>	<b>Hours: 406</b>	<b>Cost: \$17,298</b>
<b>Previously Approved Development</b>	<b>Hours: 483</b>	<b>Cost: \$16,945</b>
<b>Grand Total Estimated Development</b>	<b>Hours: 889</b>	<b>Cost: \$34,243</b>

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**PROJECT COMPLETION AUTHORIZATION**

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

**Oakland County -- Windows Backup/Recovery Improvement**  
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:	0	0	0	0	0	0	0
<b>Costs:</b>							
Development Services Subtotal:	26,217	0	0	0	0	0	26,217
Hardware Subtotal:	10,651	3,700	4,793	4,824	5,650	7,528	37,146
Software Subtotal:	3,985	0	0	0	0	0	3,985
Infrastructure Subtotal:	6,673	590	696	822	969	1,144	10,894
Training Subtotal:	5,000	0	0	0	0	0	5,000
Other Subtotal:	0	0	0	0	0	0	0
<b>Annual Statistics:</b>							
Annual Total Savings	0	0	0	0	0	0	0
Annual Total Costs	52,526	4,290	5,490	5,645	6,619	8,672	83,242
Annual Return on Investment	(52,526)	(4,290)	(5,490)	(5,645)	(6,619)	(8,672)	(83,242)
Annual Costs/Savings Ratio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Project Cumulative Statistics:</b>							
Cumulative Total Savings	0	0	0	0	0	0	0
Cumulative Total Costs	52,526	56,816	62,305	67,951	74,570	83,242	83,242
Cumulative Return on Investment	(52,526)	(56,816)	(62,305)	(67,951)	(74,570)	(83,242)	(83,242)
Cumulative Cost/Savings Ratio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Year Positive Payback Achieved							NO PAYBACK
State or Federal Mandate?							
<b>Signatures:</b>							
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 -- Windows Backup/Recovery Improvement**  
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
IT Hours - New Development	Development Svcs	IT - Information Technology / 17030	HR	1	16,723	16,723	
IT Hours - System Maintenance	Development Svcs	IT - Information Technology / 17030	HR	0	41	0	1.030
IT Hours - Application Services	Development Svcs	IT - Information Technology / 17030	HR	2	61	122	
IT Hours - Tech Consultant	Development Svcs	IT - Information Technology / 17030	HR	124	76	9,372	
Contractor Professional Services	Development Svcs	IT - Information Technology / 17030	EA		8,000	0	
Networker & Mgmt Console for Windows - Acquisition	Software	IT - Information Technology / 17030	EA	1	2,550	2,550	
PC System - Maintenance	Hardware				2,304	0	
Notebook - Acquisition	Hardware					0	
Notebook - Maintenance	Hardware				2,372	0	
Mini Notebook - Acquisition	Hardware					0	
Mini Notebook - Maintenance	Hardware				2,196	0	
Laserprinter 1 - Acquisition	Hardware					0	
Laserprinter 1 - Maintenance	Hardware				1,104	0	
Laserprinter 2 - Acquisition	Hardware					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					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	
McAfee Anti-virus Software - Acquisition	Software	IT - Information Technology / 17030	EA	1	35	35	

## Oakland County -- Windows Backup/Recovery Improvement

## 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
Networker Diskbackup Option Tier 2:1 TB to Less Than 6 TB (Data to Disk Option)	Software		EA	0		0	
Networker Module for Oracle, Windows Client, Tier 1	Software	IT - Information Technology / 17030	EA	1	1,400	1,400	
Business Objects Access	Software					0	
Term Emulation SFTW-Acquisition	Software					0	
Term Emulation SFTW-Maintenance	Software					0	
Backup Server - Acquisition/Upgrade	Hardware	IT - Information Technology / 17030	EA	1	5,300	5,300	
Backup Server Sftwre - Acquisition/Upgrade	Software	IT - Information Technology / 17030	EA	1	873	873	
Backup Server Sftwre - Annual Support Maintenance	Hardware	IT - Information Technology / 17030	EA	1	500	500	1.180
Server - Hardware Maintenance	Hardware	IT - Information Technology / 17030	EA	1	1,253	1,253	1.300
Server OS Sftwre - Maintenance	Software	IT - Information Technology / 17030	EA	1	400	400	1.300
Imation Tape (LTO-3) - Acquisition	Hardware	IT - Information Technology / 17030	EA	10	51	510	
Imation Tape - Acquisition/Replacement	Hardware	IT - Information Technology / 17030	EA	10	90	900	1.100
OS - Acquisition	Software	IT - Information Technology / 17030	EA	1	400	400	
Rack Mount (Server)	Hardware	IT - Information Technology / 17030	EA	1	500	500	1.100
HP MSL2024 Ultrium 960 Tape Library (Tape Unit Price - includes SCSI Card, Rack Mount and 12ft VHDCI Cable)	Hardware	IT - Information Technology / 17030	EA	1	8,741	8,741	
HP MSL2024 Ultrium 960 Tape Library Warranty (Tape Unit Service 13x5 next day for 3 years on HW DLT/LTO Autoloader)	Hardware	IT - Information Technology / 17030	EA	1	1,755	1,755	1.180
Internet Access	Infrastructure				180	0	
Project Staff Training	Training	IT - Information Technology / 17030	EA	1	5,000	5,000	
User Training	Training					0	
						0	

**Oakland County -- Windows Backup/Recovery Improvement**  
Return on Investment Analysis

*Cost Detail*

Cost Description	Project Cost Category	Affects Project ROI?						Potential Cost Extensions						
		Y1	Y2	Y3	Y4	Y5	Y6	Y1	Y2	Y3	Y4	Y5	Y6	
IT Hours - New Development	Development Svcs	X						16,723						
IT Hours - System Maintenance	Development Svcs	X	X	X	X	X	X	0	0	0	0	0	0	
IT Hours - Application Services	Development Svcs	X						122						
IT Hours - Tech Consultant	Development Svcs	x						9,372						
Contractor Professional Services	Development Svcs	X						0						
Networker & Mgmt Console for Windows - Acquisition	Software	X						2,550						
PC System - Maintenance	Hardware													
Notebook - Acquisition	Hardware													
Notebook - Maintenance	Hardware													
Mini Notebook - Acquisition	Hardware													
Mini Notebook - Maintenance	Hardware													
Laserprinter 1 - Acquisition	Hardware													
Laserprinter 1 - Maintenance	Hardware													
Laserprinter 2 - Acquisition	Hardware													
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													
McAfee Anti-virus Software - Acquisition	Software	X						35						

*Cost Detail*

Cost Description	Project Cost Category	Affects Project ROI?						Potential Cost Extensions						
		Y1	Y2	Y3	Y4	Y5	Y6	Y1	Y2	Y3	Y4	Y5	Y6	
Networker Diskbackup Option Tier 2:1 TB to Less Than 6 TB (Data to Disk Option)	Software	X						0						
Networker Module for Oracle, Windows Client, Tier 1	Software	X												
Business Objects Access	Software													
Term Emulation SFTW-Acquisition	Software													
Term Emulation SFTW-Maintenance	Software													
Backup Server - Acquisition/Upgrade	Hardware	X						5,300						
Backup Server Sftwre - Acquisition/Upgrade	Software	X						873						
Backup Server Sftwre - Annual Support Maintenance	Hardware		X	X	X	X	X		590	696	822	969	1,144	
Server - Hardware Maintenance	Hardware		X	X	X	X	X		1,629	2,118	2,753	3,579	4,652	
Server OS Sftwre - Maintenance	Software		X	X	X	X	X		520	676	879	1,142	1,485	
Imation Tape (LTO-3) - Acquisition	Hardware	X						510						
Imation Tape - Acquisition/Replacement	Hardware		X	X	X	X	X		990	1,089	1,198	1,318	1,449	
OS - Acquisition	Software	X												
Rack Mount (Server)	Hardware			X			X			605			805	
HP MSL2024 Ultrium 960 Tape Library (Tape Unit Price - includes SCSI Card, Rack Mount and 12ft VHDCI Cable)	Hardware	X												
HP MSL2024 Ultrium 960 Tape Library Warranty (Tape Unit Service 13x5 next day for 3 years on HW DLT/LTO Autoloader)	Hardware		X	X	X	X	X		2,071	2,071	2,071	2,071	2,071	
Internet Access	Infrastructure													
Project Staff Training	Training	X						5,000						
User Training	Training													

**Oakland County -- Windows Backup/Recovery Improvement**  
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	16,723						16,723
IT Hours - System Maintenance	0	0	0	0	0	0	
IT Hours - Application Services	122						122
IT Hours - Tech Consultant	9,372						9,372
Contractor Professional Services	0						
<i>Development Services Subtotal:</i>	<b>26,217</b>						<b>26,217</b>
<b>Hardware:</b>							
Imation Tape (LTO-3) - Acquisition	510						510
Imation Tape - Acquisition/Replacement	900						900
Rack Mount (Server)	500		605			805	1,910
HP MSL2024 Ultrium 960 Tape Library (Tape Unit Price - includes SCSI Card, Rack Mount and 12ft VHDCI Cable)	8,741						8,741
HP MSL2024 Ultrium 960 Tape Library Warranty (Tape Unit Service 13x5 next day for 3 years on HW DLT/LTO Autoloader)		2,071	2,071	2,071	2,071	2,071	10,355
Server - Hardware Maintenance		1,629	2,118	2,753	3,579	4,652	14,730
<i>Hardware Subtotal:</i>	<b>10,651</b>	<b>3,700</b>	<b>4,793</b>	<b>4,824</b>	<b>5,650</b>	<b>7,528</b>	<b>37,146</b>
<b>Software:</b>							
Networker & Mgmt Console for Windows - Acquisition	2,550						2,550
McAfee Anti-virus Software - Acquisition	35						35
Networker Diskbackup Option Tier 2:1 TB to Less Than 6 TB (Data to Disk Option)	0						
Networker Module for Oracle, Windows Client, Tier 1	1,400						1,400
OS - Acquisition	400						
Server OS Sftwre - Maintenance		520	676	879	1,142	1,485	
<i>Software Subtotal:</i>	<b>3,985</b>						<b>3,985</b>
<b>Infrastructure:</b>							
Backup Server - Acquisition/Upgrade	5,300						5,300
Backup Server Sftwre - Acquisition/Upgrade	873						873
Backup Server Sftwre - Annual Support - Maintenance	500	590	696	822	969	1,144	4,721
<i>Infrastructure Subtotal</i>	<b>6,673</b>	<b>590</b>	<b>696</b>	<b>822</b>	<b>969</b>	<b>1,144</b>	<b>10,894</b>
<b>Training:</b>							
Project Staff Training	5,000						5,000
<i>Training Subtotal:</i>	<b>5,000</b>						<b>5,000</b>
<b>Other:</b>							
<i>Other Subtotal:</i>							
<b>Costs Total:</b>	<b>52,526</b>	<b>4,290</b>	<b>5,490</b>	<b>5,645</b>	<b>6,619</b>	<b>8,672</b>	<b>83,242</b>

**Oakland County -- Windows Backup /Recovery Improvement**

Return on Investment Analysis

*Assumptions*

Date	Assumption Description
7-Jul-05	The backup/recovery strategy moves to a 'decentralized' approach using 'Family of Servers' information will be provided to the Development team by the application Owner.
7-Jul-05	Project will need to perform an assessment on the current back/recovery process.
7-Jul-05	The project will use a pilot for one tape drive and one server family to test the one family of server concept .
7-Jul-05	At project completion, Development will own responsibility for management of tape backup and recovery.
7-Jul-05	Tools identified for monitoring and management of applications and database servers may be purchased for Development Divisions as part of the transition/turnover process requirements.
7-Jul-05	The Project will include the Improvement of Mirapoint Email backup/recovery routine.
11-Jul-05	Assumes Professional Services flat rate contract for installation and testing (travel & expenses not included).
11-Jul-05	Staff can also select the backup approach that best suits their environment including Full, Incremental, Differential or Consolidated.)
	<i>Note:</i> 75% of storage management is backup & recovery, yet 30% of all data recovery instances fail due to botched backups. - Andres Lofgren, Forrester Research 2003 - Best Practices Recovery Management