Project Name: Disaster Recovery Toolkit Improvements Project ID: DR8181DR

Leadership Group: IT Steering Committee										
Department: Information	n Technology		Division: Interna	I Services						
Project Sponsor: Janett	Date Requeste	uested: May 16, 2018 PM Customer No. 181								
Request Type:	XX New Dev	<u>elopment</u>	Enhancement Customer Support							
	Planned Sys	stem Maintenanc	e or Upgrade							
IT Team Name: Internal	Services		IT Team No: R							
Project Manager/Leader	: Patty Salter									
Account	Account	Admin Divis	sion	Customer	Information					
Number: 17010	Description:	Developme	nt and Support	Name:	Technology					
Grant Funded? Yes	No XX		ndate? ndate Source:	Yes	No XX					

# Project Goal

To improve and simplify OCIT Disaster Recovery documentation requirements and to improve the DRCMDB so that current recovery methods and processes are accurately defined for each of the individual restore environments.

# Business Objective #1

Design and implement a simplified DR Toolkit Process to aid in the recovery of Oakland County IT Infrastructure, servers and applications.

### Major Deliverables Phase 1

- Locate and consult with a Disaster Recovery expert on best practices
- Define the minimal documentation required to recovery the following types of OCIT environments:
  - > Applications within the AWS (Amazon Web Service) OCIT cloud (ex. CA PPM)
  - Virtual server COTS applications within OCIT (ex. CA Service Desk)
  - Virtual server SaaS applications (ex. Kronos)
  - Virtual server custom applications (FRMS)
  - Physical server applications (ex. Telesoft)
  - Environment Infrastructure (ex. .net, DB, network)
- Design and implement an electronic process to store the DR Toolkits (AWS cloud, SharePoint)
- Meet and obtain feedback from all DR Toolkit owners on proposed revisions (Supervisors)
- Present and obtain approval from IT Steering Committee for revised DR Toolkit process
- Document revised DR Toolkit procedures for IT and Service Desk staff
- Train and turn over new DR Toolkit processes to Service Desk staff

#### Project Name: Disaster Recovery Toolkit Improvements

Project ID: DR8181DR

### Approach

OCIT Internal Services and ITSM consultant will:

- Discuss current DR trends of similar companies / governments
- Recommend new DR Toolkit methods and simplified content to streamline the process for each of the OCIT application and infrastructure environments

OCIT will:

- Document recommendations for minimal DR Toolkit content for each environment
- Meet with OCIT DR Toolkit owners to present recommendations and obtain feedback
- Present DR Toolkit revised procedures to OCIT Steering Committee for approval
- Document and deploy revised DR Toolkit procedure
- Train OCIT Service Desk to administer revised OCITDR Toolkit process

## **Business Objective #2**

Design and implement DRCMDB improvements to standardize content and reduce duplication for use in Disaster Recovery efforts.

#### Major Deliverables

- Definition of stored assets in the DRCMDM
- Standard Disaster Recovery data requirements within the DRCMDB application for each type of asset
- DRCMDB DB relocated to shared or cloud environment
- Improved use and access of the DRCMDB application

### Approach

- Determine what assets are required to be included in the DRCMDB application
- Determine what data is required for each type of asset in the DRCMDB application
- Evaluate moving the Access DB DRCMDB application to SharePoint or the OC AWS Cloud environment
- Evaluate DRCMDB application for opportunities to upgrade to a current version of Access or improve functionality

## **Business Objective #3**

Produce a OCIT DR Toolkit prototype template and documentation instructions for each of the identified Oakland Count environments to be used by IT Staff on an ongoing basis. **Major Deliverables** 

#### • DR Toolkit prototype and instructions for each of the identified OC environments:

- 1. Applications within the AWS (Amazon Web Service) OCIT cloud (ex. CA PPM)
- 2. Virtual server COTS applications within OCIT (ex. CA Service Desk)
- 3. Virtual server SaaS applications (ex. Kronos)
- 4. Virtual server custom applications (FRMS)
- 5. Physical server applications (ex. Telesoft)
- 6. Environment Infrastructure (ex. .net, DB, network)

#### Project Name: Disaster Recovery Toolkit Improvements

Project ID: DR8181DR

### Approach

- Identify an application within each environment to use as a DR Toolkit prototype.
- Work with DR Toolkit owners to create and approve DR Toolkit template prototype
- Present and obtain approval from the IT Steering Committee to start using the DR Template prototypes as a standard
- Inform IT Staff the new DR Toolkit template requirements moving forward including converting existing DR Toolkits from the current template to the new template when updating DR Toolkits

# **Research & Analysis**

Gartner Research Recommendation - Nothing found

# **Benefits**

See Return on Investment (ROI) Analysis Document (ROI completed for program that includes Analysis, Requirements & RFP project, Prototype Project, and Implementation project).

# **Impact**

Number of Users:	200
Divisions:	Information Technology
Leadership Groups:	IT Steering Committee

# <u>Risk</u>

<b>Business Environment</b>	Medium – Project will require some changes to existing business
	processes.
Technical Environment	Medium – Previously implemented technologies with new aspects and/or new requirements.

## **Assumptions**

StaffingIT Staffing: resources will be available for the hours indicated per the attached<br/>project plan.Other Staffing: additional staffing will be available as follows:

Project Name: Disaster Recovery Tool	Project ID: DR8181DR	
Role:	Name	Hours per Day
Project Sponsor:	Janette McKenna	As needed
Facilities		
Technical		
N/A		
<ul><li>Funding</li><li>Information Technology</li></ul>		
Other		
N/A		
<b>Priority</b> TBD		
<u>Constraints</u>		
None Applicable		

# **Exclusions**

• This project does not include the conversion of the 200+ existing DR Toolkits. Toolkits will be converted during the ongoing new development / planned maintenance within the PM's project plan.

Project Name: Disaster Recovery Toolkit Improvements P

Project ID: DR8181DR

#### PROJECT PHASE AUTHORIZATION

Phase(s): All											
Total Estimated Application Services	Hours: 63										
Total Estimated Technical Systems Hours: 27											
Total Estimated CLEMIS Hours: 36											
Total Estimated Internal Services Hours: 745											
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: 871	
Preliminary Estimated Development for Future Phases	Hours:	
Grand Total Estimated Development	Hours: 871	Cost: \$143,050

Project Name: Disaster Recovery Toolkit Improvements Project ID: DR8181DR

#### PROJECT COMPLETION AUTHORIZATION

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

Disaster Recovery Toolkit Improvements - Size Estimate (+/- 10% to 50%)									
_									
Туре	ID	Task Name	Estimated Hours	Estimate Notes					
Phase	200000	PROJECT MANAGEMENT	286						
Phase	200101	DESIGN & IMPLEMENT SIMPLIFIED DR TOOLKIT PROCESSES	300						
Phase	300000-0	DISASTER RECOVERY DRCMDB IMPROVEMENTS	200						
Phase	400000	PROTOTYPE DR TOOLKITS TO NEW OCIT DR REQUIREMENTS	85						
			871						

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:	82,500	84,150	85,833	87,550	89,301	91,087	520,420
Costs:							
Development Services Subtotal:	143,715	0	0	0	0	0	143,715
Hardware Subtotal:	0	0	0	0	0	0	0
Software Subtotal:	0	0	0	0	0	0	0
Infrastructure Subtotal	845	0	845	0	845	0	2,535
Training Subtotal:	0	0	0	0	0	0	0
Other Subtotal:	0	0	0	0	0	0	0
Annual Statistics:							
Annual Total Savings	82,500	84,150	85,833	87,550	89,301	91,087	520,420
Annual Total Costs	144,560	0	845	0	845	0	146,250
Annual Return on Investment	(62,060)	84,150	84,988	87,550	88,456	91,087	374,170
Annual Costs/Savings Ratio	175.22%	0.00%	0.98%	0.00%	0.95%	0.00%	071,170
Project Cumulative Statistics:							
Cumulative Total Savings	82,500	166,650	252,483	340,033	429,333	520,420	520,420
Cumulative Total Costs	144,560	144,560	145,405	145,405	146,250	146,250	146,250
Cumulative Return on Investment	(62,060)	22,090	107,078	194,628	283,083	374,170	374,170
Cumulative Cost/Savings Ratio	175.22%	86.74%	57.59%	42.76%	34.06%	28.10%	28.10%
	11 0.22 /0	00.7470	51.5570	42.7070	04.0070	20.1070	20.1070
Year Positive Payback Achieved		Year 2					Year 2
State or Federal Mandate?							
Signatures:							
Benefits Reviewed By Project Sponsor				Date:			
Costs (including IT Resources) Reviewed By Information Technology Project Manager				Date:			
				2410.			

#### Oakland County -- Disaster Recovery Toolkit Improvements 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	
DR Toolkit Creation / Mainteance	Cost Avoidance			500	165	82,500	1.020
Standarize and document DR Toolkit requirements for each OCIT							
	Intangible Benefit					0	
Less time spent updating DR Toolkit hardcopies by IT Staff	Intangible Benefit					0	
Less time processing and shipping hard copy DR Toolkits by Service Center							
	Intangible Benefit					0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	

Return on Investment Analysis Savings Detail

		Af	Affects Project ROI?						Potential Savings Extensions					
Benefit/Savings Description	Project Savings Category	Y1	Y2	Y3	B Y	4 ١	Y5	Y6	Y1	Y2	Y3	Y4	Y5	Y6
DR Toolkit Creation / Mainteance	Cost Avoidance	x	x	x	x	x	,	x	82,500.00	84 150 00	85 833 00	87,549.66	89 300 65	91,087
		Â	Ê	<u>^</u>	Ê	ŕ	Ì	^	02,000.00	04,100.00	00,000.00	07,040.00	00,000.00	51,007
Standarize and document DR Toolkit requirements for each OCIT														
environment.	Intangible Benefit				1									
Less time spent updating DR Toolkit					1									
hardcopies by IT Staff	Intangible Benefit				1		į							
Less time processing and shipping hard				1	1									
copy DR Toolkits by Service Center														
staff.	Intangible Benefit				1									
			<u> </u>	1	1									
			<u> </u>	<u> </u>	1									
			į	<u> </u>	1									
			<u> </u>	<u>i</u>	1	1								
		1		1	1									
			<u> </u>	<u> </u>	1	_								
		1	<u> </u>	1	1									
			<u>i</u>	1	1									

#### Oakland County -- Disaster Recovery Toolkit Improvements Return on Investment Analysis Savings Summary

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
82,500	84,150	85,833	87,550	89,301	91,087	520,420
82,500	84,150	85,833	87,550	89,301	91,087	520,420
92 500	94 150	95 922	97 550	80 201	01.097	520,420
	82,500	82,500 84,150 82,500 84,150 82,500 84,150 82,500 84,150	82,500 84,150 85,833   82,500 84,150 85,833   82,500 84,150 85,833   82,500 84,150 85,833   82,500 84,150 85,833   82,500 84,150 85,833   82,500 84,150 85,833   82,500 84,150 85,833   82,500 84,150 85,833	Image: state of the state	No.   No. <td>Image: state state</td>	Image: state

Return on Investment Analysis

Cost Detail

								Af	fect	s Pr	ojec	t RC	) <b> </b> ?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual						
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3	Y4	Y5	<b>Y6</b>
IT Hours - New Development	Development Svcs			871	165	143,715	1.000						
IT Hours - System Maintenance	Development Svcs			0	165	0	1.030	х	х	х	х	Х	Х
IT Hours - Customer Support	Development Svcs			0	165	0	1.030	х	х	х	х	х	х
IT Hours - Planned Maintenance	Development Svcs				165	0							
User Hours - New Development	Development Svcs					0				ĺ			
User Hours - PTNE/OT	Development Svcs					0							
Contractor Professional Services	Development Svcs					0							
PC System - Acquisition	Hardware				814	0							
PC System - Maintenance	Hardware				2,304	0							
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						ļ	
Image Workstations - Maintenance	Hardware				3,496	0							
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					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				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					i İ	ļ	
Oracle Enterprise Per Processor - Year								ļ				Ī	
2 and Beyond	Infrastructure				3,432	0							
SQL Server Enterprise - Per Processor													
(4 cores) - Purchased Sept 2016-Aug											. 1	. 1	
2017 - Includes Maintenance thru Aug											. I		
2019	Infrastructure				24,533	0							

Return on Investment Analysis

Cost Detail

								Af	fect	s Pro	ojecí	t ROI?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual					
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3	<u>Y4</u>	Y5 Y6
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										1		
(4 cores) - Purchased Sept 2018-Aug												l l
2019 - Includes Maintenance thru Aug										1		1
2019	Infrastructure				16,985	0						
SQL Server Enterprise - Maintenance,										1		
Per Processor (4 cores) - Sept 2019												
and Beyond	Infrastructure				4,218	0						
SQL Server Standard - Per Processor												
(4 cores) - Purchased Sept 2016-Aug										1		
2017 - Includes Maintenance thru Aug												
2019	Infrastructure				6,398	0						
SQL Server Standard - Per Processor												
(4 cores) - Purchased Sept 2017-Aug										1		
2018 - Includes Maintenance thru Aug												
2019	Infrastructure			0	26,415	0	0.000	х				
SQL Server Standard - Per Processor												
(4 cores) - Purchased Sept 2018-Aug												
2019 - Includes Maintenance thru Aug												
2019	Infrastructure				4,429	0				1		1
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										1		
Maintenance	Infrastructure				3,506	0						
Websphere Basic Per Processor												
Single/Dual Core - Year 2 and Beyond	Infrastructure				701	0				1		
Websphere ND Per Processor												
Single/Dual Core - Includes Year 1												l
Maintenance	Infrastructure				13,180	0						
											ļ	
Websphere ND Per Processor					c=	_						
Single/Dual Core - Year 2 and Beyond	Infrastructure		_		2,635	0				<b>   </b>		
SSL Certificate	Infrastructure			1	845	845	1.000	х		х		Х
Internet Access	Infrastructure				180	0				<u> </u>		<u>    i    </u>

Return on Investment Analysis

Cost Detail

								Af	fect	s Pro	ojec	t RO	<b>I</b> ?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual						
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3	Y4	Y5	Y6
App Code Directories on Consolidated													
IIS Server (Virtual)	Infrastructure		ANN		415	0					1		
Database (5 GB) on Consolidated SQL													
Instance Server	Infrastructure		ANN		930	0					ļ		
Database Instance (125 GB DB) on										$\square$			
Consolidated SQL Server	Infrastructure		ANN		2,395	0					1		
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					į		
DB Maintenance (Semi-Annual Cycle										$\square$			
\$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											Ī		
Exisitng Instance	Infrastructure				366	0							
Extra Small - 2 Core 8GB RAM, 500GB											ļ		
Drive, 10 GB NIC - Cloud/Virtual = \$601											1		
On Premise Physical Server = N/A	Infrastructure		ANN			0					1		
											I		
Small - 4 Core 16GB RAM, 500GB											1		
Drive, 10 GB NIC - Cloud/Virtual = \$951											1		
On Premise Physical Server = \$9,288	Infrastructure		ANN			0					į		
Medium - 8 Core 32GB RAM, 500GB													
Drive, 10 GB NIC - Cloud/Virtual =											1		
\$1,702 On Premise Physical Server =											ļ		
\$9,751	Infrastructure		ANN			0					İ		
Large - 16 Core 64GB RAM, 500GB											ļ		
Drive, 10 GB NIC - Cloud/Virtual =											ļ		
\$3,167 On Premise Physical Server =											l		
\$10,446	Infrastructure		ANN			0					i		
Extra Large - 40 Core 160GB RAM,													
500GB Drive, 10 GB NIC - Cloud/Virtual											l		
= \$7,564 On Premise Physical Server =											1		
\$12,906	Infrastructure		ANN			0					ļ		

Return on Investment Analysis Cost Detail

		Potential Cost Extensions						
	Project Cost							
Cost Description	Category	Y1	Y2	Y3	Y4	Y5	Y6	
IT Hours - New Development	Development Svcs	143,715.00						
IT Hours - System Maintenance	Development Svcs	0.00	0.00	0.00	0.00	0.00	0.00	
IT Hours - Customer Support	Development Svcs	0.00	0.00	0.00	0.00	0.00	0.00	
IT Hours - Planned Maintenance	Development Svcs							
User Hours - New Development	Development Svcs				1	1		
User Hours - PTNE/OT	Development Svcs							
Contractor Professional Services	Development Svcs							
PC System - Acquisition	Hardware							
PC System - Maintenance	Hardware			l				
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							
PC Maintenance User Owned	Hardware							
Printer Maintenance User Owned	Hardware							
File Space (100GB)	Hardware							
Internet Bandwidth per MB	Hardware							
Package Software - Acquisition	Software				Î			
Package Software - Maintenance	Software			l				
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			Î	Î	l		
Server Rack Mount	Infrastructure							
Oracle Enterprise Per Processor -								
Includes Year 1 Maintenance	Infrastructure					l l		
Oracle Enterprise Per Processor - Year				l	l	l		
2 and Beyond	Infrastructure							
SQL Server Enterprise - Per Processor				ł	ł	ł		
(4 cores) - Purchased Sept 2016-Aug				ł	ł	ł		
2017 - Includes Maintenance thru Aug				l l	ļ	Į		
2019	Infrastructure							

Return on Investment Analysis Cost Detail

		Potential Cost Extensions						
Cost Description	Project Cost Category	Y1	Y2	Y3	Y4	Y5	Y6	
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	0.00						
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							
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	845.00		845.00		845.00		
Internet Access	Infrastructure							

Return on Investment Analysis Cost Detail

		Potential Cost Extensions						
Cost Description	Project Cost Category	Y1	Y2	Y3	Y4	Y5	Y6	
App Code Directories on Consolidated	Category		12	13	14	15	10	
IIS Server (Virtual)	Infrastructure							
Database (5 GB) on Consolidated SQL	Innastructure							
Instance Server	Infrastructure							
Database Instance (125 GB DB) on			1					
Consolidated SQL Server	Infrastructure							
Database SQL Maint Server	Infrastructure		_					
Database SQL Server Physical	Infrastructure							
DB Maintenance (Annual Cycle \$610)	Infrastructure		1					
DB Maintenance (Semi-Annual Cycle								
\$1220)	Infrastructure							
DB Maintenance (Semi-Annual Cycle	Innastractore							
\$2440)	Infrastructure							
Dedicated Virtual Server	Infrastructure		-					
DB Instance Setup	Infrastructure							
DBA MS SQL Database Creation on								
Exisiting Instance	Infrastructure							
Extra Small - 2 Core 8GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$601 On Premise Physical Server = N/A	Infrastructure							
Small - 4 Core 16GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$951 On Premise Physical Server = \$9,288 Medium - 8 Core 32GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual =	Infrastructure							
\$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								

#### Oakland County -- Disaster Recovery Toolkit Improvements 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	143,715						143,715
IT Hours - System Maintenance	0	0	0	0	0	0	
IT Hours - Customer Support	0	0	0	0	0	0	
IT Hours - Planned Maintenance							
User Hours - New Development							
User Hours - PTNE/OT							
Contractor Professional Services							
Development Services Subtotal:	143,715						143,715
Hardware:							
Hardware Subtotal:							
Software:							
Soltware.							
On the same On the task							
Software Subtotal:							
Infrastructure:							
SQL Server Standard - Per Processor (4							
cores) - Purchased Sept 2017-Aug 2018 -	_						
Includes Maintenance thru Aug 2019	0						
SSL Certificate	845		845		845		2,535
Infrastructure Subtotal	845		845		845		2,535
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	144,560		845		845		146,250

Return on Investment Analysis

Assumptions

Date	Assumption Description
10-Aug-18	The average number of hours required to create / update / process DR Toolkits is 1,000. If those hours could be cut in half the savings could be \$85,000 annually.
10-Aug-18	In 2016 IT spent 1,301 hours on DR Toolkits.
10-Aug-18	Savings Assumption assumes we will save at least 500 hours per year on DR Toolkit creation and maintenance.
10-Aug-18	Cost research must be done to estimate the cost of moving the new process to SharePoint or the OCIT cloud.