Project Name: Incident Notification System Rewrite Project ID: DF1183IN

Leadership Group: CLE	MIS				
Department: Information	Technology		Division: CL	EMIS .	
Project Sponsor: Jeff Ne	esmith	Date Requ	ested: 5/13/20	PM Custor	<b>ner No.</b> 183
Request Type:	New Develop	ment	Enhance	ement Cu	ustomer Support
	Planned Sys	tem Mainte	nance or Upgrade		
IT Team Name: Public Sa	afety Applicatior	าร	IT Team No:	F	
Project Manager/Leader	: Brian Smith / I	Deb Nolen			
Account Number: 63500	Account Description:	CLEMIS	S Fund	Customer Name:	CLEMIS
Grant Funded? Yes	<u>No</u>		Mandate?	Yes	<u>No</u>
			Mandate Source:		

#### **Project Goal**

To provide law enforcement officers with an alternate method for receiving CAD notifications so that officers can be more informed of the situation they are dispatched to.

## **Business Objective**

To provide law enforcement officers with an alternate method of receiving CAD notification details. This would provide CLEMIS participating law enforcement agencies with a new method for receiving CAD notifications that allow them to control who receives incident notifications, to increase logging capabilities, and to add/revise information to better serve customers.

#### **Major Deliverables**

- Detailed Project Plan with WBS
- Proof of Concept
- Business Requirements Documents
- Functional testing
- Implementation Plan
- Training/User Manual
- Service Level Agreement
- Disaster Recovery Toolkit
- Service Center Knowledge Documents
- Rewrite Application

Project Name: Incident Notification System Rewrite Project ID: DF1183IN

#### **Approach**

- Develop Detailed Project Plans, as Needed
- Research CLEMIS agency notification requirements
- Design a solution that meets Oakland County IT standards,
- Develop a proof of concept incident notification solution that could be integrated into the CLEMIS product portfolio.
- Document Business Requirements
- Document Data Policy Changes
- Assess Hardware and Software Requirements
- Develop Implementation Plans
- Develop New Systems/Data
- Develop User Acceptance Test Plans
- Test New System/Data
- Develop User Training
- Develop User Documentation, SLA, Disaster Recovery Toolkit, Service Center Knowledge Documents
- Train/Notify Users of New System/Data
- Conduct Change Control
- Release New System/Data into Production

## Research & Analysis

**Gartner Research Recommendation** 

Nothing found

### **Benefits**

See Return on Investment (ROI) Analysis Document

## **Impact**

Number of Users 7000+ users

**Divisions** CLEMIS

Leadership Groups CLEMIS

Project Name: Incident Notification System Rewrite Project ID: DF1183IN

Risk

**Business Environment** Medium - Project will require some changes 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:

Role: Name Hours per Day

Project Sponsor: Jeff Nesmith As Needed

#### **Facilities**

- •
- \_

#### **Technical**

- •
- •

#### **Funding**

•

#### Other

•

#### **Priority**

TBD

Project Name: Incident Notification System Rewrite Project ID: DF1183IN

## **Constraints**

- •
- •

## **Exclusions**

- •
- •

Project Name: Incident Notification System Rewrite Project ID: DF1183IN

#### PROJECT PHASE AUTHORIZATION

Phase(s):		
Total Estimated Application Services	Hours:	
Total Estimated Technical Systems	<b>Hours</b> : 120	
Total Estimated CLEMIS	Hours: 1,137	
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: 1,257	Cost: \$207,405

Project Name: Incident Notification System Rewrite Project ID: DF1183IN

#### PROJECT COMPLETION AUTHORIZATION

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

## Incident Notification System Rewrite - Size Estimate (+/- 10% to 50%)

3	Type	ID	Task Name	Estimated	Estimate Notes
2				Hours	
3	3	000100	PROJECT MANAGEMENT	383	
4	Phase	200000	DEFINE BUSINESS REQUIREMENTS	224	
0	Phase	300000	DESIGN SYSTEM ARCHITECTURE	134	
đ	Phase	500000	DEVELOP APPLICATION	431	
7	Phase	600000	IMPLEMENTATION PHASE	61	
8	Phase	800000	POST IMPLEMENTATION SUPPORT	24	
ū				1,257	

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	0	0	0	0	0	0
Costs:							
Development Services Subtotal:	207,405	16,500	9,900	16,500	9,900	16,500	276,705
Hardware Subtotal:	0	0	0	0	0	0	0
Software Subtotal:	40,000	40,800	41,616	42,448	43,297	44,163	252,325
Infrastructure Subtotal	38,328	39,095	39,876	40,674	41,487	42,317	241,778
Training Subtotal:	0	0	0	0	0	0	0
Other Subtotal:	0	0	0	0	0	0	0
Annual Statistics:							
Annual Total Savings	0	0	0	0	0	0	0
Annual Total Costs	285,733	96,395	91,392	99,622	94,685	102,980	770,807
Annual Return on Investment	(285,733)	(96,395)	(91,392)	(99,622)	(94,685)	(102,980)	(770,807)
Annual Costs/Savings Ratio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	(::0,00:)
Project Cumulative Statistics:							
Cumulative Total Savings	0	0	0	0	0	0	0
Cumulative Total Costs	285,733	382,128	473,520	573,142	667,827	770,807	770,807
Cumulative Return on Investment	(285,733)	(382,128)	(473,520)	(573,142)	(667,827)	(770,807)	(770,807)
Cumulative Cost/Savings Ratio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
V 5 % 5 1 1 1 1 1							NO DAYBAGI
Year Positive Payback Achieved							NO PAYBACK
State or Federal Mandate?							
Signatures:							
D 51 D 1 1 D 2 1 1 0				5.1			
Benefits Reviewed By Project Sponsor				Date:			
Costs (including IT Resources) Reviewed By Information Technology Project Manager				Date:			
				Duto.			_

Return on Investment Analysis

#### Savings Detail

	Project Savings		Unit		Rate per		Annual
Benefit/Savings Description	Category	Budget Category/Funding Source	Desc	Units	Unit	Total Savings	Multiplier
Provide incident information in a best in							
class notification method	Intangible Benefit					0	
Enable agencies that have part time							
and volunteer officers the abilityy to							
receive notifications and respond when							
not on duty	Intangible Benefit					0	
Provide a back up communication							
method in the event normal radio							
communications are interrupted	Intangible Benefit					0	
						0	
						0	
						0	
						0	
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Return on Investment Analysis

#### Savings Detail

		Af	ects	s Pr	ojec	t RC	OI?									
D 5110 1 D 1.11	Project Savings								.v.	\ <b>'</b> 0		\	\ <b>7</b>			
Benefit/Savings Description	Category	Y1	Y2	Y3	Y4	Y5	Y6	Y1	Y2	Y3	Y4	Y5	Y6			
Provide incident information in a best in											•	•	i			
class notification method	Intangible Benefit															
Enable agencies that have part time											İ	İ				
and volunteer officers the abilityy to										i ! !	İ	İ				
receive notifications and respond when	1								ŀ	<u> </u>			i			
not on duty	Intangible Benefit															
Provide a back up communication										<u> </u>			!			
method in the event normal radio							i			i !	İ	İ				
communications are interrupted	Intangible Benefit									i !	İ	İ				
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Return on Investment Analysis

#### Savings Summary

Benefit/Savings Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Tangible Benefit:							
Tanaible Banafite Subtatali							
Tangible Benefits Subtotal:							
Cost Avoidance:							
TOUSE AVOIDABLE.							
Cost Avoidance Subtotal:							
Intangible Benefit:  Provide incident information in a best in							
class notification method							
class notification method							
Enable agencies that have part time and							
volunteer officers the abilityy to receive							
notifications and respond when not on duty							
Provide a back up communication method in							
the event normal radio communications are							
interrupted							
·							
Savings Total:							

Return on Investment Analysis

#### Cost Detail

								Aff	ect	s Pro	oject	RO	?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual			1 1	Ť		
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3	Y4	Y5	<b>1</b> 6
IT Hours - New Development	Development Svcs			1,257	165	207,405	1.020	х		$\Box$	$\equiv$		
IT Hours - System Maintenance	Development Svcs			20	165	3,300			Х	x	x i	x >	(
IT Hours - Customer Support	Development Svcs			40	165	6,600			Х	х		x þ	(
IT Hours - Planned Maintenance	Development Svcs			40	165	6,600			Х		х	þ	(
User Hours - New Development	Development Svcs					0						İ	
User Hours - PTNE/OT	Development Svcs					0							
CLEMIS New Development -Contractor													
Professional Services	Development Svcs				70	0	1.020					-	
PC System - Acquisition	Hardware				687	0							
PC System - Maintenance	Hardware				2,936	0						į	
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							
Laserprinter - Acquisition	Hardware				1,432	0						İ	
Laserprinter - 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			1	40,000	40,000	1.020	х	Х	х	x :	x >	(
Package Software - Maintenance	Software					0							
Business Objects Access	Software					0							
Term Emulation SFTW-Acquisition	Software					0						ŀ	
Term Emulation SFTW-Maintenance	Software					0							
Server - Acquisition/Upgrade	Infrastructure				8,000	0							
Server - Maintenance	Infrastructure			6	360	2,160	1.020	х	Х	x	x i	x >	(
Server Sftwre - Acquisition/Upgrade	Infrastructure			6	335	2,010	1.020	х	Х	Х	x i	x i	(
Server Sftwre - Maintenance	Infrastructure					0							
Server Rack Mount	Infrastructure				400	0							
Oracle Enterprise Software Purchase -													
Per Processor (4 Cores) - Requires												ļ	
Annual Support Below	Infrastructure				42,280	0						į	
Oracle Enterprise Software Support -					-								
Per Processor (4 Cores)	Infrastructure				9,293	0	1.030					!	

Return on Investment Analysis

#### Cost Detail

								Af	fect	s Pr	ojec	t R	OI?
010	Project Cost	Budget Category/Funding	Unit		Rate per	T. (.) 0(	Annual	<b>.</b>					
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y 1	1 12	Y 3	14	¦ ¥5	Y6
SQL Server Enterprise Software													
Purchase - Per Processor (4 cores) -									į		ļ		!
Purchased Sept 2019-Aug 2020 -									į	į	ļ	į	
Includes Support thru Aug 2022	Infrastructure				16,985	0			<u> </u>		İ	İ	
SQL Server Enterprise Software													
Purchase - Per Processor (4 cores) -													
Purchased Sept 2020-Aug 2021 -													
Includes Support thru Aug 2022	Infrastructure			2	12,724	25,448	1.020	х	х	х	Х	х	Х
SQL Server Enterprise Software											İ		[
Purchase - Per Processor (4 cores) -									İ	İ	į	İ	
Purchased Sept 2021-Aug 2022 -									İ	ĺ		ĺ	
Includes Support thru Aug 2022	Infrastructure				8,463	0						ļ	
SQL Server Enterprise - Support, Per									l		-	ļ	
Processor (4 cores) - Sept 2022 and													
Beyond	Infrastructure				4,261	0			į				!
SQL Server Standard Software													
Purchase - Per Processor (4 cores) -											-		
Purchased Sept 2019-Aug 2020 -									<b>!</b>				
Includes Support thru Aug 2022	Infrastructure				4,429	0					ļ		
SQL Server Standard Software												İ	
Purchase - Per Processor (4 cores) -									İ	į	ļ	į	
Purchased Sept 2020-Aug 2021 -									İ	İ	İ	İ	
Includes Support thru Aug 2022	Infrastructure				3,317	0							
SQL Server Standard Software													
Purchase - Per Processor (4 cores) -												į	
Purchased Sept 2021-Aug 2022 -									İ				!
Includes Support thru Aug 2022	Infrastructure				2,205	0			İ	İ	İ	İ	
SQL Server - Standard Support, Per									İ	İ		İ	
Processor (4 cores) - Sept 2022 and									ļ				
Beyond	Infrastructure				1,112	0						!	
Websphere Basic Per Processor													
Single/Dual Core - Includes Year 1									ĺ	İ			
Maintenance	Infrastructure				3,506	0			İ				

Return on Investment Analysis

#### Cost Detail

								Af	fect	s Pı	ojec	t RC	OI?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual				-		ĺ
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3	Y4	Y5	Y6
													ĺ
Websphere Basic Per Processor					,								ĺ
Single/Dual Core - Year 2 and Beyond	Infrastructure				701	0			ļ	1	ļ	<u> </u>	i
Websphere ND Per Processor													ĺ
Single/Dual Core - Includes Year 1													ĺ
Maintenance	Infrastructure				13,180	0			ļ	<u> </u>	<u> </u>		<u> </u>
Websphere ND Per Processor													ĺ
Single/Dual Core - Year 2 and Beyond	Infrastructure				2,635	0			į			1	l
SSL Certificate	Infrastructure				845	0							ĺ
Internet Access	Infrastructure				180	0			!	1	!		ĺ
Imperva Web Application Firewall									!		!		•
(External Web Applications Only)	Infrastructure		ANN		500	0					İ		
App Code Directories on Consolidated													
IIS Server (Virtual)	Infrastructure		ANN		415	0							ĺ
Dedicated Virtual Server	Infrastructure		ANN		4,150	0			l		į		
Extra Small - 2 Core 8GB RAM, 500GB									ĺ	ĺ	1		ŀ
Drive, 10 GB NIC - Cloud/Virtual =									ŀ		1		
\$601 On Premise Physical Server =									}		-		ł
N/A	Infrastructure		ANN			0							1
Small - 4 Core 16GB RAM, 500GB									!		1		
Drive, 10 GB NIC - Cloud/Virtual =											1	1	ĺ
\$951 On Premise Physical Server =									1		1	1	ĺ
\$9,288	Infrastructure		ANN	2	951	1,902	1.020	x	X	x	x	x	Х
Medium - 8 Core 32GB RAM, 500GB						,			l	1	1		
Drive, 10 GB NIC - Cloud/Virtual =													ĺ
\$1,702 On Premise Physical Server =									ļ		-		į
\$9,751	Infrastructure		ANN	4	1,702	6,808	1.020	x	x	x	х	x	Х
Large - 16 Core 64GB RAM, 500GB				-	1,1 0=	2,000							
Drive, 10 GB NIC - Cloud/Virtual =											-		1
\$3,167 On Premise Physical Server =													1
\$10,446	Infrastructure		ANN			0					-		į

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
Extra Large - 40 Core 160GB RAM,								
500GB Drive, 10 GB NIC -								
Cloud/Virtual = \$7,564 On Premise								
Physical Server = \$12,906	Infrastructure		ANN			0		

REV: March 27, 2020

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	207,405.00				l	ļ		
IT Hours - System Maintenance	Development Svcs		3,300.00	3,300.00	3,300.00	3,300.00	3,300.00		
IT Hours - Customer Support	Development Svcs		6,600.00	6,600.00	6,600.00	6,600.00	6,600.00		
IT Hours - Planned Maintenance	Development Svcs		6,600.00		6,600.00		6,600.00		
User Hours - New Development	Development Svcs						! !		
User Hours - PTNE/OT	Development Svcs								
CLEMIS New Development -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			ı					
Laserprinter - Acquisition	Hardware								
Laserprinter - Maintenance	Hardware								
PC Maintenance User Owned	Hardware								
Printer Maintenance User Owned	Hardware								
File Space (100GB)	Hardware								
Package Software - Acquisition	Software	40,000.00	40,800.00	41,616.00	42,448.32	43,297.29	44,163.23		
Package Software - Maintenance	Software								
Business Objects Access	Software								
Term Emulation SFTW-Acquisition	Software								
Term Emulation SFTW-Maintenance	Software								
Server - Acquisition/Upgrade	Infrastructure								
Server - Maintenance	Infrastructure	2,160.00	2,203.20	2,247.26	2,292.21	2,338.05	2,384.81		
Server Sftwre - Acquisition/Upgrade	Infrastructure	2,010.00	2,050.20	2,091.20	2,133.03	2,175.69	2,219.20		
Server Sftwre - Maintenance	Infrastructure		,	,	,		i .		
Server Rack Mount	Infrastructure								
Oracle Enterprise Software Purchase -									
Per Processor (4 Cores) - Requires							į		
Annual Support Below	Infrastructure								
Oracle Enterprise Software Support -									
Per Processor (4 Cores)	Infrastructure								

REV: March 27, 2020

Return on Investment Analysis

#### Cost Detail

	Potential Cost Extensions								
	Project Cost								
Cost Description	Category	Y1	Y2	Y3	Y4	Y5	Y6		
SQL Server Enterprise Software				:					
Purchase - Per Processor (4 cores) -				<u> </u>					
Purchased Sept 2019-Aug 2020 -				ļ					
Includes Support thru Aug 2022	Infrastructure			•					
SQL Server Enterprise Software									
Purchase - Per Processor (4 cores) -				}					
Purchased Sept 2020-Aug 2021 -				}					
Includes Support thru Aug 2022	Infrastructure	25,448.00	25,956.96	26,476.10	27,005.62	27,545.73	28,096.65		
SQL Server Enterprise Software									
Purchase - Per Processor (4 cores) -				}					
Purchased Sept 2021-Aug 2022 -				į					
Includes Support thru Aug 2022	Infrastructure			}					
SQL Server Enterprise - Support, Per									
Processor (4 cores) - Sept 2022 and				ļ					
Beyond	Infrastructure								
SQL Server Standard Software									
Purchase - Per Processor (4 cores) -									
Purchased Sept 2019-Aug 2020 -				ļ					
Includes Support thru Aug 2022	Infrastructure			!					
SQL Server Standard Software									
Purchase - Per Processor (4 cores) -				ļ					
Purchased Sept 2020-Aug 2021 -				}					
Includes Support thru Aug 2022	Infrastructure								
SQL Server Standard Software									
Purchase - Per Processor (4 cores) -				•					
Purchased Sept 2021-Aug 2022 -				ļ					
Includes Support thru Aug 2022	Infrastructure			İ					
SQL Server - Standard Support, Per									
Processor (4 cores) - Sept 2022 and				ļ					
Beyond	Infrastructure			İ					
Websphere Basic Per Processor									
Single/Dual Core - Includes Year 1				<u> </u>					
Maintenance	Infrastructure								

Return on Investment Analysis

#### Cost Detail

					Potential Cost Extensions					
	Project Cost									
Cost Description	Category	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	iiiiasiiuciuie									
(External Web Applications Only)	Infrastructure									
App Code Directories on Consolidated	iiiiasiiuciure									
IIS Server (Virtual)	Infrastructure		ļ							
Dedicated Virtual Server	Infrastructure									
Extra Small - 2 Core 8GB RAM, 500GB	iiiiasiiuciuie									
Drive, 10 GB NIC - Cloud/Virtual =										
\$601 On Premise Physical Server =										
N/A	Infrastructure									
Small - 4 Core 16GB RAM, 500GB	imirastructure									
Drive, 10 GB NIC - Cloud/Virtual =										
\$951 On Premise Physical Server =	Infrastructure	4 000 00	4 040 04	4.070.04	2 040 42	2.050.70	2 000 00			
\$9,288	inirastructure	1,902.00	1,940.04	1,978.84	2,018.42	2,058.79	2,099.96			
Medium - 8 Core 32GB RAM, 500GB										
Drive, 10 GB NIC - Cloud/Virtual =										
\$1,702 On Premise Physical Server =				7 000 04			7 5 4 0 5 0			
\$9,751	Infrastructure	6,808.00	6,944.16	7,083.04	7,224.70	7,369.20	7,516.58			
Large - 16 Core 64GB RAM, 500GB										
Drive, 10 GB NIC - Cloud/Virtual =										
\$3,167 On Premise Physical Server =										
\$10,446	Infrastructure		İ							

Return on Investment Analysis

#### Cost Detail

		Potential Cost Extensions								
Cost Description	Project Cost Category	Y1	Y2	Y3	Y4	Y5	Y6			
Extra Large - 40 Core 160GB RAM,			1	!	!	!	!			
500GB Drive, 10 GB NIC -					•					
Cloud/Virtual = \$7,564 On Premise			1	-			<u> </u>			
Physical Server = \$12,906	Infrastructure			-			}			

REV: March 27, 2020

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	207,405						207,405
IT Hours - System Maintenance		3,300	3,300	3,300	3,300	3,300	16,500
IT Hours - Customer Support		6,600	6,600	6,600	6,600	6,600	33,000
IT Hours - Planned Maintenance		6,600		6,600		6,600	19,800
User Hours - New Development							
User Hours - PTNE/OT							
CLEMIS New Development -Contractor							
Professional Services							
Development Services Subtotal:	207,405	16,500	9,900	16,500	9,900	16,500	276,705
Hardware:						·	-
Hardware Subtotal: Software: Package Software - Acquisition	40,000	40,800	41,616	42,448	43,297	44,163	252,325
Software Subtotal:	40,000	40,800	41,616	42,448	43,297	44,163	252,325
Infrastructure:							10.000
Server - Maintenance	2,160	2,203	2,247	2,292	2,338	2,385	13,626
Server Sftwre - Maintenance	2,010	2,050	2,091	2,133	2,176	2,219	12,679
SQL Server Enterprise Software Purchase -							
Per Processor (4 cores) - Purchased Sept							
2020-Aug 2021 - Includes Support thru Aug	05 440	05.057	00.470	07.000	07.540	00.007	400 500
2022	25,448	25,957	26,476	27,006	27,546	28,097	160,529
Small - 4 Core 16GB RAM, 500GB Drive, 10							
GB NIC - Cloud/Virtual = \$951 On Premise	4 000	4.040	4.070	0.040	0.050	0.400	44.000
Physical Server = \$9,288	1,902	1,940	1,979	2,018	2,059	2,100	11,998

Return on Investment Analysis

#### Cost Summary

Cost Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Medium - 8 Core 32GB RAM, 500GB Drive,							
10 GB NIC - Cloud/Virtual = \$1,702 On							
Premise Physical Server = \$9,751	6,808	6,944	7,083	7,225	7,369	7,517	42,946
Infrastructure Subtotal	38,328	39,095	39,876	40,674	41,487	42,317	241,778
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	285,733	96,395	91,392	99,622	94,685	102,980	770,807

REV: March 27, 2020

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Return on Investment Analysis

#### Assumptions

Date	Assumption Description

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