Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: WRC Northstar Replacement   **Project ID: D59611NS**

Leadership Group: Land	
Department: Water Resource Commissioner	**Division: Administration**
Project Sponsor: Tim Prince	**Date Requested: 03/02/2018** **PM Customer No. 611**
Request Type: <u>**New Development**</u> *Enhancement* *Customer Support* *Planned System Maintenance or Upgrade*	
IT Team Name: Public & Environmental Services	**IT Team No: 5**
Project Manager/Leader: Shashi Gowda	

Account Number: 37930	Account Description:	WATER AND SEWER-GENERAL ADMIN	Customer Name:	Water Resources Commissioner
Grant Funded? Yes <u>**No**</u>		**Mandate?** **Yes** <u>**No**</u> **Mandate Source:**		

Project Goal

To implement a replacement solution for the utility billing system so that the application is on a standard platform to allow for easier maintenance, seamless integration with Cityworks and Oakland County's Financial Management system, and allow WRC Billing to offer more payment options to their customers.

Business Objective

Replace WRC's utility billing application with newer technology that is capable of providing a better user experience for their water customers who pay their bills online, and it would be nice to have the ability to add new payment options such as mobile bill payment apps for iOS and Android. The new system will allow for easier upgrades, maintenance, integration with other applications and maintenance, as well as reduce downstream errors in Cityworks and Oakland County's Financial Management system.

Major Deliverables

- Functional Requirements Specifications
- Request for Proposal
- Vendor Selection Criteria and Rating System
- Detailed Project Plan
- Technical Architecture Diagram
- Technical Design
- Implementation Plan
- PeopleSoft Integration Plan
- Cityworks Integration Plan
- Paymentus Merchant Services Integration Plan
- Test Plan

Project Name: WRC Northstar Replacement   **Project ID: D59611NS**

- User Acceptance Test Plan
- Service Level Agreement
- Disaster Recovery Toolkit
- Service Center Knowledge Documents
- NorthStar Retirement Plan

Approach

- Gather Functional Requirements
- Determine Technical Design and Architecture
- Create RFP and Select Vendor
- Complete Contract Negotiations
- Perform Technical Design Review
- Implement the System
- Complete Coding and Testing of all Interfaces
- Complete Unit Testing
- Complete End User Training
- Manage the Execution of the User Acceptance Test
- Complete Stress Testing
- Manage Rollout to Production

Research & Analysis

Gartner Research Recommendation:

Research Conducted – Nothing Found

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users   100+ and Public

Divisions   **Water Resources Commissioner's Office**

Leadership Groups   Land

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Risk

Business Environment   Medium – Project will require some changes to the existing business processes.

Technical Environment   Medium – Previously implemented technologies with new aspects and/or new requirements.

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:	Tim Prince	As Needed
Project Business Lead	Nancy Basch	As Needed
Subject Matter Expert	Mike Kasanic	As Needed

Facilities

- None

Technical

- System will integrate with Cityworks, GIS, Paymentus, and Oakland County's Financial Management system

Funding

- WRC Funded

Other

- None

Priority

Project Name: WRC Northstar Replacement　　　　　　　**Project ID: D59611NS**

- TBD

Constraints

- Ability to interface with other county applications like Cityworks, Financial management system, Crew Scheduler, GIS, Paymentus System.

Exclusions

- None

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PROJECT PHASE AUTHORIZATION

Phase(s): All		
Total Estimated Application Services	**Hours: 3694**	
Total Estimated Technical Systems	**Hours: 268**	
Total Estimated CLEMIS	**Hours:**	
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: 3,962**	**Cost: $653,730**

Project Name: WRC Northstar Replacement **Project ID: D59611NS**

PROJECT COMPLETION AUTHORIZATION

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

WRC Northstar Replacement - Size Estimate (+/- 10% to 50%)

	Type	ID	Task Name	Estimated
1				
2				Hours
3	**3**	**000000**	**PROJECT MANAGEMENT**	901
4	Phase	100000	**DEVELOP RFP & SELECT VENDOR**	140
5	Phase	200000	**BUSINESS REQUIREMENTS**	167
6	Phase	300000	**DESIGN SYSTEM ARCHITECTURE**	135
7	Phase	400000	**IMPLEMENT VENDOR APPLICATION**	2,369
8	Phase	500000	**IMPLEMENTATION PHASE**	171
9	Phase	600000	**POST IMPLEMENTATION SUPPORT**	79
10				3,962

WRC Northstar Replacement
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:	2,433	24,973	2,531	25,982	2,634	27,031	85,584
Costs:							
Development Services Subtotal:	1,128,480	147,750	114,750	147,750	114,750	147,750	1,801,230
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
Annual Statistics:							
Annual Total Savings	2,433	24,973	2,531	25,982	2,634	27,031	85,584
Annual Total Costs	1,128,480	147,750	114,750	147,750	114,750	147,750	1,801,230
Annual Return on Investment	(1,126,047)	(122,777)	(112,219)	(121,768)	(112,116)	(120,719)	(1,715,646)
Annual Costs/Savings Ratio	46380.15%	591.64%	4533.05%	568.67%	4357.03%	546.59%	
Project Cumulative Statistics:							
Cumulative Total Savings	2,433	27,406	29,937	55,919	58,553	85,584	85,584
Cumulative Total Costs	1,128,480	1,276,230	1,390,980	1,538,730	1,653,480	1,801,230	1,801,230
Cumulative Return on Investment	(1,126,047)	(1,248,824)	(1,361,043)	(1,482,811)	(1,594,927)	(1,715,646)	(1,715,646)
Cumulative Cost/Savings Ratio	46380.15%	4656.77%	4646.31%	2751.71%	2823.92%	2104.63%	2104.63%
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:			

WRC Northstar Replacement

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
Reduction in IT Support hours of custom Cityworks integration	Cost Avoidance		HR	12	147.00	1,764	1.02
Reduction in IT effort to execute upgrades of customized solution	Cost Avoidance		HR	150	147.00	22,050	1.02
Reduction in time spent correcting CAMS errors	Cost Avoidance		HR	13	51.47	669	1.02
Allow for easier integration with other applications such as mobile pay for Android and iOS	Intangible Benefit					0	
Allow for easier agent interactions and reduce customer time in telephone queues	Intangible Benefit					0	
Present an easier-to-use payment portal to water and sewer billing customers	Intangible Benefit					0	
						0	
						0	

WRC Northstar Replacement

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
Reduction in IT Support hours of custom Cityworks integration	Cost Avoidance	x	x	x	x	x	x	1,764.00	1,799.28	1,835.27	1,871.97	1,909.41	1,948
Reduction in IT effort to execute upgrades of customized solution	Cost Avoidance		x		x		x		22,491.00		23,399.64		24,345
Reduction in time spent correcting CAMS errors	Cost Avoidance	x	x	x	x	x	x	669.11	682.49	696.14	710.06	724.27	739
Allow for easier integration with other applications such as mobile pay for Android and iOS	Intangible Benefit												
Allow for easier agent interactions and reduce customer time in telephone queues	Intangible Benefit												
Present an easier-to-use payment portal to water and sewer billing customers	Intangible Benefit												

WRC Northstar Replacement

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:								
	Reduction in IT Support hours of custom Cityworks integration	1,764	1,799	1,835	1,872	1,909	1,948	11,128
	Reduction in time spent correcting CAMS errors	669	682	696	710	724	739	4,221
	Reduction in IT effort to execute upgrades of customized solution		22,491		23,400		24,345	70,236
	Cost Avoidance Subtotal:	*2,433*	*24,973*	*2,531*	*25,982*	*2,634*	*27,031*	*85,584*
Intangible Benefit:								
	Allow for easier integration with other applications such as mobile pay for Android and iOS							
	Allow for easier agent interactions and reduce customer time in telephone queues							
	Present an easier-to-use payment portal to water and sewer billing customers							
Savings Total:		*2,433*	*24,973*	*2,531*	*25,982*	*2,634*	*27,031*	*85,584*

WRC Northstar Replacement

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	Development Svcs		EA	3,962	165	653,730		X					
IT Hours - System Maintenance	Development Svcs		EA	50	165	8,250		X	X	X	X	X	X
IT Hours - Customer Support	Development Svcs		EA	100	165	16,500		X	X	X	X	X	X
IT Hours - Planned Maintenance	Development Svcs		EA	200	165	33,000			X		X		X
User Hours - New Development	Development Svcs					0							
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							
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		EA	1	450,000	450,000		X					
Package Software - Maintenance	Software		ANN	1	90,000	90,000			X	X	X	X	X
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							
Oracle Enterprise Per Processor - Year 2 and Beyond	Infrastructure				3,432	0							

WRC Northstar Replacement

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
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019	Infrastructure				24,533	0							
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 (4 cores) - Purchased Sept 2018-Aug 2019 - Includes Maintenance thru Aug 2019	Infrastructure				16,985	0							
SQL Server Enterprise - Maintenance, Per Processor (4 cores) - Sept 2019 and Beyond	Infrastructure				4,218	0							
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019	Infrastructure				6,398	0							
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2017-Aug 2018 - Includes Maintenance thru Aug 2019	Infrastructure				5,414	0							
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2018-Aug 2019 - Includes Maintenance thru Aug 2019	Infrastructure				4,429	0							
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 Maintenance	Infrastructure				3,506	0							

WRC Northstar Replacement

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
Websphere Basic Per Processor Single/Dual Core - Year 2 and Beyond	Infrastructure				701	0							
Websphere ND Per Processor Single/Dual Core - Includes Year 1 Maintenance	Infrastructure				13,180	0							
Websphere ND Per Processor Single/Dual Core - Year 2 and Beyond	Infrastructure				2,635	0							
SSL Certificate	Infrastructure				845	0							
Internet Access	Infrastructure				180	0							
Imperva Web Application Firewall (External Web Applications Only)	Infrastructure		ANN		500	0							
App Code Directories on Consolidated IIS Server (Virtual)	Infrastructure		ANN		415	0							
Database (5 GB) on Consolidated SQL Instance Server	Infrastructure		ANN		930	0							
Database Instance (125 GB DB) on Consolidated SQL Server	Infrastructure		ANN		2,395	0							
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							
DB Maintenance (Semi-Annual Cycle $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 Exisitng Instance	Infrastructure				366	0							
Extra Small - 2 Core 8GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $601 On Premise Physical Server = N/A	Infrastructure		ANN			0							

WRC Northstar Replacement

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
Small - 4 Core 16GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $951 On Premise Physical Server = $9,288	Infrastructure		ANN			0							
Medium - 8 Core 32GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $1,702 On Premise Physical Server = $9,751	Infrastructure		ANN			0							
Large - 16 Core 64GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $3,167 On Premise Physical Server = $10,446	Infrastructure		ANN			0							
Extra Large - 40 Core 160GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $7,564 On Premise Physical Server = $12,906	Infrastructure		ANN			0							
Project Staff Training	Training					0							
User Training	Training					0							

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
IT Hours - New Development	Development Svcs	653,730.00					
IT Hours - System Maintenance	Development Svcs	8,250.00	8,250.00	8,250.00	8,250.00	8,250.00	8,250.00
IT Hours - Customer Support	Development Svcs	16,500.00	16,500.00	16,500.00	16,500.00	16,500.00	16,500.00
IT Hours - Planned Maintenance	Development Svcs		33,000.00		33,000.00		33,000.00
User Hours - New Development	Development Svcs						
User Hours - PTNE/OT	Development Svcs						
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						
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	450,000.00					
Package Software - Maintenance	Software		90,000.00	90,000.00	90,000.00	90,000.00	90,000.00
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						
Server Rack Mount	Infrastructure						
Oracle Enterprise Per Processor - Includes Year 1 Maintenance	Infrastructure						
Oracle Enterprise Per Processor - Year 2 and Beyond	Infrastructure						

WRC Northstar Replacement

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019	Infrastructure						
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						
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						

WRC Northstar Replacement

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		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 (External Web Applications Only)	Infrastructure						
App Code Directories on Consolidated IIS Server (Virtual)	Infrastructure						
Database (5 GB) on Consolidated SQL Instance Server	Infrastructure						
Database Instance (125 GB DB) on Consolidated SQL Server	Infrastructure						
Database SQL Maint Server	Infrastructure						
Database SQL Server Physical	Infrastructure						
DB Maintenance (Annual Cycle $610)	Infrastructure						
DB Maintenance (Semi-Annual Cycle $1220)	Infrastructure						
DB Maintenance (Semi-Annual Cycle $2440)	Infrastructure						
Dedicated Virtual Server	Infrastructure						
DB Instance Setup	Infrastructure						
DBA MS SQL Database Creation on Exisitng Instance	Infrastructure						
Extra Small - 2 Core 8GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $601 On Premise Physical Server = N/A	Infrastructure						

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
Small - 4 Core 16GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $951 On Premise Physical Server = $9,288	Infrastructure						
Medium - 8 Core 32GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $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	Infrastructure						
Project Staff Training	Training						
User Training	Training						

WRC Northstar Replacement

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	653,730						653,730
IT Hours - System Maintenance	8,250	8,250	8,250	8,250	8,250	8,250	49,500
IT Hours - Customer Support	16,500	16,500	16,500	16,500	16,500	16,500	99,000
IT Hours - Planned Maintenance		33,000		33,000		33,000	99,000
Package Software - Acquisition	450,000						450,000
Package Software - Maintenance		90,000	90,000	90,000	90,000	90,000	450,000
Contractor Professional Services							
Development Services Subtotal:	*1,128,480*	*147,750*	*114,750*	*147,750*	*114,750*	*147,750*	*1,801,230*
Hardware:							
Hardware Subtotal:							
Software:							
Software Subtotal:							
Infrastructure:							
Infrastructure Subtotal:							
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	*1,128,480*	*147,750*	*114,750*	*147,750*	*114,750*	*147,750*	*1,801,230*

WRC Northstar Replacement

Return on Investment Analysis

Assumptions

Date	Assumption Description
10-Jun-18	SAAS Solution is planned - pricing obtained from existing SaaS solutions in the market
10-Jun-18	The new software will be able to integrate with Cityworks, financial management system, Crew Scheduler, check payment system, and IVR
10-Jun-18	Increased Support, System Maintenance, and PMU hours due to high number of integrations
13-Jun-18	Original NorthStar to CAMS integration was $66K in vendor fees, and 600 hours in IT Labor, which equates to $165,000 in today's dollars, plus Harris costs for customizations which were covered by WRC separately.
13-Jun-18	