Project Name: PAWS Address Validation and Maintenance Screens Project ID: D99178AV

Leadership Group: Courts/Justice Administration											
Department: Public Ser	vices		Division:	Animal Control							
Project Sponsor: Joani	e Toole	Date Reques	sted: 02/05/201	18 PM Custo	mer No. 178						
Request Type:	New Develo	oment	Enhand	cement Cı	ustomer Support						
Planned System Maintenance or Upgrade											
IT Team Name: Assessi	ng and Taxation		IT Team N	o : 9							
Project Manager/Leade	r: Scott Kaiser										
Account Number 95628	Account Description:	Animal Co	ontrol	Customer Name:	Animal Control						
Grant Funded? Yes	No No		Mandate?	Yes	No						
			Mandate Sourc	e:							

Project Goal

To replace the Trillium address validation with LAMS validation for the PAWS application and enhance maintenance screens so that AC staffs and CVT's can validate addresses using site address instead of postal address and can have better administrative capabilities.

Business Objective

To put in place a friendlier application for address validation and maintenance screens that would save time, effort and frustration for the CVT's and Animal Shelter staff.

Major Deliverables

- Detailed Project Plan
- Application and/or System Requirements
- Technical Design Document
- Technical Architecture Diagram
- User Acceptance Test Plan
- Implementation Plan
- Application Code
- Disaster Recovery Toolkit
- Service Center Knowledge Documents

Approach

- Develop Detailed Project Plan
- Document system requirements
- Determine and document system architecture and diagram
- Assess Software Requirements

Project Name: PAWS Address Validation and Maintenance Screens Project ID: D99178AV

- Develop Implementation Plan
- Develop new system
- Develop User Acceptance Test Plan
- Test new system
- Acquire User Acceptance Sign off
- Conduct Change Control
- Develop Disaster Recovery Toolkit, Service Center Knowledge Documents
- Release new system into production

Research & Analysis

Gartner Research Recommendation - Research Conducted – Nothing Found

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users

45 CVT's

5 Oakland County Animal Shelter Employees

Divisions Animal Control

Leadership Groups Courts/Justice Administration

Risk

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

processes.

Technical Environment Low – Proven and previously implemented technologies.

Project Name: PAWS Address Validation and Maintenance Screens Project ID: D99178AV

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 Joanie Toole As Needed

Facilities

None

Technical

None

Funding

Information Technology

Other

N/A

Priority

• TBD

Constraints

N/A

Exclusions

N/A

Project Name: PAWS Address Validation and Maintenance Screens Project ID: D99178AV

PROJECT PHASE AUTHORIZATION

Phase(s): All							
Total Estimated Application Services	Hours: 326						
Total Estimated Technical Systems	Hours: 31						
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: 357	Cost: \$58,905

Project Name: PAWS Address Validation and Maintenance Screens Project ID: D99178AV

PROJECT COMPLETION AUTHORIZATION

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

PAWS Address Validation and Maintenance Screens - Size Estimate (+/- 10% to 50

1	Туре	ID	Task Name	Estimated	Estimate Notes
2				Hours	
3	3	000000	PROJECT MANAGEMENT	101	
4	Phase	200000	DEFINE BUSINESS REQUIREMENTS	26	
5	Phase	300000	DESIGN SYSTEM ARCHITECTURE	18	
6	Phase	500000	DEVELOP APPLICATION	170	
7	Phase	600000	IMPLEMENTATION PHASE	18	
8	Phase	080000	POST IMPLEMENTATION SUPPORT	24	
9				357	

As Of: 02/05/2018

Return on Investment Analysis

Project Summary

		Year 3	Year 4	Year 5	Year 6	Total
0	0	0	0	0	0	0
10,950	11,169	11,392	11,620	11,853	12,090	69,074
58,905	0	0	0	0	0	58,905
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
10,950	11,169	11,392	11,620	11,853	12,090	69,074
58,905	0	0	0	0	0	58,905
(47.955)	11.169	11.392	11.620	11.853	12.090	10,169
537.95%	0.00%	0.00%	0.00%	0.00%	0.00%	-,
10,950	22,119	33,511	45,132	56,984	69,074	69,074
58,905	58,905	58,905	58,905	58,905	58,905	58,905
(47,955)	(36,786)	(25,394)	(13,773)	(1,921)	10,169	10,169
537.95%	266.31%	175.78%	130.52%	103.37%	85.28%	85.28%
					Year 6	Year 6
			Date:			
			Date: ,			
	58,905 0 0 0 0 10,950 58,905 (47,955) 537.95% 10,950 58,905	10,950 11,169 58,905 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10,950 11,169 11,392 58,905 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 10,950 11,169 11,392 58,905 0 0 (47,955) 11,169 11,392 537.95% 0.00% 0.00% 10,950 22,119 33,511 58,905 58,905 58,905 (47,955) (36,786) (25,394)	10,950	10,950	10,950

As Of: 02/05/2018

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
Reduce IT Support hours on PAWS address update and maintenance related incidents	Cost Avoidance		HR	50	147	7,350	1.020
Improve user experience by reducing the time and effort spent by CVTs and Animal Shelter staffs in dealing with address issues while billing customers.	Cost Avoidance		HR	120	30	3,600	1.020
Improve administrative capabilites to enable Animal Shelter staff to perform certain actions without having to rely on IT support.	Intangible Benefit					0	
Improve data security by restricting access controls for certain user types	Intangible Benefit					0	
						0	

As Of: 02/05/2018

Return on Investment Analysis

Savings Detail

			fect	s Pr	oje	ct R	OI?		Pote	ential Savir	ngs Extensi	ions	
Benefit/Savings Description	Project Savings Category		Y2	Y 3	Y 4	Y5	Y6	Y1	Y2	Y3	Y4	Y5	Y6
Reduce IT Support hours on PAWS address update and maintenance related incidents	Cost Avoidance	x	х	х	х	х	х	7,350.00	7,497.00	7,646.94	7,799.88	7,955.88	8,114.99
Improve user experience by reducing the time and effort spent by CVTs and Animal Shelter staffs in dealing with address issues while billing customers.	Cost Avoidance	x	x	x	x	x	x	3,600.00	3,672.00	3,745.44	3,820.35	3,896.76	3,974.69
Improve administrative capabilites to enable Animal Shelter staff to perform certain actions without having to rely on IT support.	Intangible Benefit												
Improve data security by restricting access controls for certain user types	Intangible Benefit												

As Of: 02/05/2018

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:							
angure and an angure							
Cost Avoidance:							
Reduce IT Support hours on PAWS address							
update and maintenance related incidents	7,350	7,497	7,647	7,800	7,956	8,115	46,365
Improve user experience by reducing the							
time and effort spent by CVTs and Animal							
Shelter staffs in dealing with address issues	0.000	0.070	0.745	2 222	2 227	0.075	
while billing customers.	3,600	3,672	3,745	3,820	3,897	3,975	22,709
Cost Avoidance Subtotal:	10,950	11,169	11,392	11,620	11,853	12,090	69,074
Cost Avoidance Gabiotal.	10,930	11,109	11,392	11,020	11,000	12,090	03,074
Intangible Benefit:							
Improve administrative capabilites to enable							
Animal Shelter staff to perform certain							
actions without having to rely on IT support.							
Improve data security by restricting access							
controls for certain user types							
Savings Total:	10,950	11,169	11,392	11,620	11,853	12,090	69,074

As Of: 02/05/2018

Return on Investment Analysis

								Af	fects	ect R	OI?	
	Project Cost	Budget Category/	Unit		Rate per		Annual					
Cost Description	Category	Funding Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3 Y	4 Y5	Y6
IT Hours - New Development	Development Svcs		HR	357	165	58,905		Х		į	į	
IT Hours - System Maintenance	Development Svcs			10	165	1,650				Ì	İ	
IT Hours - Customer Support	Development Svcs			10	165	1,650						
IT Hours - Planned Maintenance	Development Svcs				165	0				Ì	İ	
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				i	i	
Internet Bandwidth per MB	Hardware		ANN		750	0						
Package Software - Acquisition	Software					0				-		
Package Software - Maintenance	Software					0						
Business Objects Access	Software					0				Ì	İ	
Term Emulation SFTW-Acquisition	Software					0					İ	
Term Emulation SFTW-Maintenance	Software					0				i	i	
Server - Acquisition/Upgrade	Infrastructure				8,000	0					İ	
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 -												Ī
Includes Year 1 Maintenance	Infrastructure				21,372	0						

As Of: 02/05/2018

Return on Investment Analysis

								Af	fect	ject	RO	1?	
	Project Cost	Budget Category/	Unit		Rate per		Annual						
Cost Description	Category	Funding Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3 '	Y4	Y5	Y6
Oracle Enterprise Per Processor - Year											Ī	į	
2 and Beyond	Infrastructure				3,432	0					ĺ	İ	
SQL Server Enterprise - Per Processor											į	į	
(4 cores) - Purchased Sept 2016-Aug											į	ŀ	
2017 - Includes Maintenance thru Aug											į	į	
2019	Infrastructure				24,533	0							
SQL Server Enterprise - Per Processor											į	į	
(4 cores) - Purchased Sept 2017-Aug											į	ŀ	
2018 - Includes Maintenance thru Aug											į	į	
2019	Infrastructure				20,759	0							
SQL Server Enterprise - Per Processor											i		
(4 cores) - Purchased Sept 2018-Aug											į	ļ	
2019 - Includes Maintenance thru Aug											į	İ	
2019	Infrastructure				16,985	0					į	ļ	
SQL Server Enterprise - Maintenance,											i		
Per Processor (4 cores) - Sept 2019											į	ļ	
and Beyond	Infrastructure				4,218	0							
SQL Server Standard - Per Processor											į	ļ	
(4 cores) - Purchased Sept 2016-Aug											į	İ	
2017 - Includes Maintenance thru Aug											į	ļ	
2019	Infrastructure				6,398	0							
SQL Server Standard - Per Processor											į	ŀ	
(4 cores) - Purchased Sept 2017-Aug											į	į	
2018 - Includes Maintenance thru Aug											į	ŀ	
2019	Infrastructure				5,414	0							
SQL Server Standard - Per Processor											į	Ĭ	
(4 cores) - Purchased Sept 2018-Aug											į	i	
2019 - Includes Maintenance thru Aug											ŀ	ļ	
2019	Infrastructure				4,429	0							
SQL Server - Standard Maintenance,													
Per Processor (4 cores) - Sept 2019											İ	į	
and Beyond	Infrastructure				1,100	0					ŀ	į	

As Of: 02/05/2018

Return on Investment Analysis

								Af	fect	ject	RO	1?	
	Project Cost	Budget Category/	Unit		Rate per		Annual						
Cost Description	Category	Funding Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3 '	Y4	Y5	Y6
Websphere Basic Per Processor										Ī	Ī		
Single/Dual Core - Includes Year 1										İ	į	į	
Maintenance	Infrastructure				3,506	0				_		_	
Websphere Basic Per Processor												ĺ	n
Single/Dual Core - Year 2 and Beyond	Infrastructure				701	0				- [ĺ	l	
Websphere ND Per Processor										- †	i	T i	
Single/Dual Core - Includes Year 1										- !	į	į	
Maintenance	Infrastructure				13,180	0							
Websphere ND Per Processor										İ	i		ì
Single/Dual Core - Year 2 and Beyond	Infrastructure				2,635	0				- 1		į	
SSL Certificate	Infrastructure				845	0				- i	- i	- i	
Internet Access	Infrastructure				180	0					- i	—į	
App Code Directories on Consolidated	iiiiasiiuciuie				100	0				- 1			
IIS Server (Virtual)	Infrastructure		ANN		415	0					i	į	
Database (5 GB) on Consolidated SQL	imasiruoturo		AININ		413	0					-		
Instance Server	Infrastructure		ANN		930	0				İ	İ	į	i
Database Instance (125 GB DB) on	madadada		7 4 41 4		000						-		
Consolidated SQL Server	Infrastructure		ANN		2,395	0						-	
Database SQL Maint Server	Infrastructure		ANN		834	0				i	t	- i	
Database SQL Server Physical	Infrastructure		ANN		19,158	0					1		
DB Maintenance (Annual Cycle \$610)	Infrastructure		ANN		610	0					T		
DB Maintenance (Semi-Annual Cycle													
\$1220)	Infrastructure		ANN		1,220	0				- 1	į	į	
DB Maintenance (Semi-Annual Cycle										- 1	Î		
\$2440)	Infrastructure		ANN		2,440	0				- 1		į	
Dedicated Virtual Server	Infrastructure		ANN		4,150	0				İ	Ţ	Ī	
DB Instance Setup	Infrastructure				976	0					İ	Ī	
DBA MS SQL Database Creation on											Ì		
Exisitng Instance	Infrastructure				366	0					i_	<u>i</u>	

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Return on Investment Analysis

								Af	fect	s Pro	ojec	t RC	1?
Cost Description	Project Cost Category	Budget Category/ Funding Source	Unit Desc	Units	Rate per Unit	Total Cost	Annual Multiplier	Y1	Y2	Y 3	Y4	Y5	Y6
Extra Small - 2 Core 8GB RAM, 500GB													
Drive, 10 GB NIC - Cloud/Virtual = \$601											į		.
	Infrastructure		ANN			0					İ		,
-													
Small - 4 Core 16GB RAM, 500GB									İ		į		
Drive, 10 GB NIC - Cloud/Virtual = \$951									į		į		
On Premise Physical Server = \$9,288	Infrastructure		ANN			0			•		İ		.
Medium - 8 Core 32GB RAM, 500GB											i		
Drive, 10 GB NIC - Cloud/Virtual =									•		ļ		
\$1,702 On Premise Physical Server =									į		į		
\$9,751	Infrastructure		ANN			0					į		
Large - 16 Core 64GB RAM, 500GB									į		į		
Drive, 10 GB NIC - Cloud/Virtual =											į		
\$3,167 On Premise Physical Server =									İ	•	į		
· - / -	Infrastructure		ANN			0							
Extra Large - 40 Core 160GB RAM,									İ	i	į		.
500GB Drive, 10 GB NIC - Cloud/Virtual													
= \$7,564 On Premise Physical Server =									İ		į		.
\$12,906	Infrastructure		ANN			0							

Return on Investment Analysis

		Potential Cost Extensions								
	Project Cost	1			1					
Cost Description	Category	Y1	Y2	Y3	Y4	Y5	Y6			
IT Hours - New Development	Development Svcs	58,905		İ	į					
IT Hours - System Maintenance	Development Svcs			<u> </u>	}					
IT Hours - Customer Support	Development Svcs			:	ļ					
IT Hours - Planned Maintenance	Development Svcs				ļ					
User Hours - New Development	Development Svcs				ļ					
User Hours - PTNE/OT	Development Svcs			İ	ļ					
Contractor Professional Services	Development Svcs			!						
PC System - Acquisition	Hardware			<u> </u>	}					
PC System - Maintenance	Hardware			!	•					
Notebook - Acquisition	Hardware				ļ					
Notebook - Maintenance	Hardware				ļ					
Tablet Notebook - Acquisition	Hardware			<u> </u>						
Tablet Notebook - Maintenance	Hardware				į					
Laserprinter - Acquisition	Hardware			† !	ļ					
Laserprinter - Maintenance	Hardware			!						
Image Workstations - Acquisition	Hardware			i						
Image Workstations - Maintenance	Hardware				į					
PC Maintenance User Owned	Hardware			i						
Printer Maintenance User Owned	Hardware				į					
File Space (100GB)	Hardware			ĺ						
Internet Bandwidth per MB	Hardware				ļ					
Package Software - Acquisition	Software			<u> </u>						
Package Software - Maintenance	Software				į					
Business Objects Access	Software			i						
Term Emulation SFTW-Acquisition	Software				į					
Term Emulation SFTW-Maintenance	Software			i						
Server - Acquisition/Upgrade	Infrastructure				į	! !				
Server - Maintenance	Infrastructure				į					
Server Sftwre - Acquisition/Upgrade	Infrastructure				į					
Server Sftwre - Maintenance	Infrastructure			•	į					
Server Rack Mount	Infrastructure				į					
Oracle Enterprise Per Processor -				•	į					
Includes Year 1 Maintenance	Infrastructure				ļ					

Return on Investment Analysis

			Poten	tial Cos	t Extens	sions	
	Project Cost		[
Cost Description	Category	Y1	Y2	Y3	Y4	Y5	Y6
Oracle Enterprise Per Processor - Year			į				
2 and Beyond	Infrastructure		<u> </u>				
SQL Server Enterprise - Per Processor			į				
(4 cores) - Purchased Sept 2016-Aug			•				
2017 - Includes Maintenance thru Aug			ļ				
2019	Infrastructure						
SQL Server Enterprise - Per Processor							
(4 cores) - Purchased Sept 2017-Aug			į				
2018 - Includes Maintenance thru Aug							
2019	Infrastructure		<u> </u>				
SQL Server Enterprise - Per Processor							
(4 cores) - Purchased Sept 2018-Aug			į				
2019 - Includes Maintenance thru Aug							
2019	Infrastructure		!				
SQL Server Enterprise - Maintenance,			į				
Per Processor (4 cores) - Sept 2019			ļ				
and Beyond	Infrastructure		<u> </u>				
SQL Server Standard - Per Processor							
(4 cores) - Purchased Sept 2016-Aug			į				
2017 - Includes Maintenance thru Aug							
2019	Infrastructure		<u> </u>				
SQL Server Standard - Per Processor			•				
(4 cores) - Purchased Sept 2017-Aug			į				
2018 - Includes Maintenance thru Aug	Infractructura		•				
2019 SQL Server Standard - Per Processor	Infrastructure						
			į				
(4 cores) - Purchased Sept 2018-Aug						! !	
2019 - Includes Maintenance thru Aug 2019	Infrastructure		İ				
SQL Server - Standard Maintenance,	iiiiasiiuciule		<u> </u>				
Per Processor (4 cores) - Sept 2019							
and Beyond	Infrastructure						
and beyond	mmashucture		<u>i</u>		i	<u>i</u>	

As Of: 02/05/2018

Return on Investment Analysis

			Poten	tial Cos	t Extens	sions	
	Project Cost		!		į		
Cost Description	Category	Y1	Y2	Y3	Y4	Y5	Y6
Websphere Basic Per Processor							
Single/Dual Core - Includes Year 1							
Maintenance	Infrastructure						
Websphere Basic Per Processor							
Single/Dual Core - Year 2 and Beyond	Infrastructure		į		į		
Websphere ND Per Processor							
Single/Dual Core - Includes Year 1			į		į		
Maintenance	Infrastructure		<u> </u>	! ! !		! ! !	
Websphere ND Per Processor							
Single/Dual Core - Year 2 and Beyond	Infrastructure		!			<u> </u>	
SSL Certificate	Infrastructure		İ		•		
Internet Access	Infrastructure						
App Code Directories on Consolidated							
IIS Server (Virtual)	Infrastructure		į		į		
Database (5 GB) on Consolidated SQL							
Instance Server	Infrastructure		į		į		
Database Instance (125 GB DB) on							
Consolidated SQL Server	Infrastructure				į		
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			!		ļ		
\$2440)	Infrastructure				į		
Dedicated Virtual Server	Infrastructure			<u> </u>			
DB Instance Setup	Infrastructure						
DBA MS SQL Database Creation on					}		
Exisitng Instance	Infrastructure		<u> </u>	i !		i !	

As Of: 02/05/2018

Return on Investment Analysis

		Potential Cost Extensions							
Cost Description	Project Cost Category	Y1	Y2	Y3	Y4	Y5	Y6		
Extra Small - 2 Core 8GB RAM, 500GB			į	İ	İ				
Drive, 10 GB NIC - Cloud/Virtual = \$601			į	į	į				
On Premise Physical Server = N/A	Infrastructure			<u> </u>	<u> </u>				
Small - 4 Core 16GB RAM, 500GB				İ		i ! !			
Drive, 10 GB NIC - Cloud/Virtual = \$951				•	•				
On Premise Physical Server = \$9,288	Infrastructure			į	į	i i			
Medium - 8 Core 32GB RAM, 500GB	minastractare								
Drive, 10 GB NIC - Cloud/Virtual =				İ	į				
\$1,702 On Premise Physical Server =				į	į				
\$9,751	Infrastructure				-				
Large - 16 Core 64GB RAM, 500GB				İ	İ				
Drive, 10 GB NIC - Cloud/Virtual =			ļ						
\$3,167 On Premise Physical Server =			ļ	•	•				
\$10,446	Infrastructure			İ	į				
Extra Large - 40 Core 160GB RAM,					į	T 			
500GB Drive, 10 GB NIC - Cloud/Virtual			!						
= \$7,564 On Premise Physical Server =			į	į	į				
\$12,906	Infrastructure		<u> </u>						

As Of: 02/05/2018

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	58,905						58,905
IT Hours - System Maintenance							
IT Hours - Customer Support							
IT Hours - Planned Maintenance							
User Hours - New Development							
User Hours - PTNE/OT							
Contractor Professional Services							
Development Services Subtotal:	58,905						58,905
Hardware:							
Hardware Subtotal:							
Software:							
Software Subtotal:							
Infrastructure:							
Infrastructure Subtotal							
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	58,905						58,905

As Of: 02/05/2018

Return on Investment Analysis

Assumptions