

Business Case

Project name: CCTV Enforcement of SVL's FY21-22 **ReAuth**

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 Date 20/07/21 EPMF
 Edison ID 18100122 Phase:



Business Need / Problem

Special Vehicle Lane enforcement for Bus Lanes and Transit Lanes is currently undertaken by AT employees who travel to site with a mobile camera to record vehicles who travel in the bus lane within certain parameters, i.e. vehicles other than a bus, motorcycle, cycle or moped traveling more than 50 meters during hours of operation. This poses a number of issues with respects to health and safety of the employees and increased operational costs of sending people out to site.

Goal / Outcome

- Enable remote monitoring of specified zones for bus lanes and T2/T3 transit lanes using fixed camera's, specialised CCTV equipment and computer vision builds to provide alerts to the enforcement officer when a breach occurs
- Enable warranted enforcement officers to review footage and issue infringements where appropriate.

Benefits

- Reduced operational costs
- Reduced risk to the health and safety of transit lane enforcement officers
- Increased productivity of enforcement officers
- Increased compliance with transit lane regulations

Scope

In Scope:

- Installation of a combination of scene and ANPR cameras for up to 42 new Bus Lane zones **and up to 20 additional bus zones**
- Installation of cameras and specialised CCTV equipment for up to 4 new Transit Lane zones **and up to 26 additional transit lanes**
- 2x Servers for media server compute via Greenlake model
- Storage via Greenlake for up to 62TB for the 46 proposed zones
- Connection to the AT Network via fibre/Wi-Fi bridge, or upgrade to fibre
- Implementation of computer vision for vehicle detection and log alerts when a vehicle is travelling in the bus lane
- Capability to view and deal with alerts in RiskShield, including issuing infringements in Pathway via Pinforce Citywide
- Update operational support and service management process

Out of scope:

- Any additional SVLs which are currently not in scope.

Concept

Current State



Proposed State



Funding Source

Project Funding	
Opex WBS	E.009000.08
Capex WBS	C.102374
Conseq Opex WBS	E.009000.08
Capital Plan Approval	Yes \$4,000,000 in CP and PCR512: Budget increase of \$4,500,000

Funding Source

BT	Yes	\$8,500,000	100%
NZTA	No		
Business Unit	No		

Departments / Stakeholders Impacted

- Parking Services
- Business Technology
- Legal
- Roading Assets
- Network Optimization
- Comms & Marketing

DRB (Design Review Board) Approval

Yes		No DRB approval required as the solution has been approved. The project is only extending the endorsed solution to newly identified sites.
No		
n/a	✓	

Financial Summary *

	21/22		22/23		23/24		24/25		25/26	
	OPEX	CAPEX	OPEX	OPEX	OPEX	OPEX	OPEX	OPEX	OPEX	
Support & Maintenance			\$131,002	\$131,002	\$131,002	\$131,002	\$131,002	\$131,002	\$131,002	
Internal Resources		\$577,900								
Hardware & Install		\$3,016,500								
Servers hardware (Greenlake Compute)		\$290,600								
Greenlake Storage OPEX	\$15,485		\$15,485	\$15,485	\$15,485	\$15,485	\$15,485	\$15,485	\$15,485	
Licencing		\$115,000								
Sub Total		\$4,000,000								
Consequential OPEX	\$15,485		\$146,487	\$146,487	\$146,487	\$146,487	\$146,487	\$146,487	\$146,487	
Total	\$15,485	\$8,500,000	\$487,875	\$487,875	\$487,875	\$487,875	\$487,875	\$487,875	\$487,875	

Approvals – for Business Case

Role	Name	Date	Signature
Project Sponsor	John Strawbridge	03 November 2021	
EGM Business Tech	Roger Jones	03 November 2021	
GM D&T Delivery	Chris Creighton	03 November 2021	
Finance	Dave Martin	03 November 2021	
DE Manager (Reviewer)	Lisa Read	03 November 2021	

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AT
EPMF
Phase:



Deliverables

- Network and CCTV site design
- Computer Vision integration with RiskShield alerts
- As-Built documentation
- Updated Operational Support document
- User Acceptance Testing and Go-Live
- Additional Media Server hardware capacity into the Data Centre
- Project Closure Report

Milestones

- Business Case approved July 2021
 - Fibre orders placed July 2021
 - SVL Hardware orders placed July – September 2021
 - MediaServer hardware and licensing ordered August 2021
 - Power ordered August 2021
 - Hardware installation and Civil works September 2021 – June 2022
 - Enforcements UAT and Go-live October 2021 – June 2022
 - Project closure July 2022
- * Once the project has kicked off and the dates confirmed with the vendor, a detailed project schedule will be drafted.

Project Approach

Fibre will be ordered ASAP and the 46 zones (plus the additional 46 SVL zones) will be delivered only when the fibre has been provisioned. The project approach will be to focus on the entire program at once and

Up to 52 zones							
# Zones	Quarter 1			Quarter 2			
	July	August	September	October	November	December	
8	Delivered			1	Delivered		
3		Delivered		2	Delivered		
3			Delivered	1	Delivered		
4			Delivered	2	Delivered		
1		Delivered		14	Delivered	Delivered	Delivered
3			Delivered	2		Delivered	
4			Delivered				

Legend
Bus Lane
Transit Lane

Advanced warning signs for these zones will be funded by parking SVL FY21 deferral as a separate project. This will be delivered in unison with the rollout of CCTV enforcement of SVL's.

Zones will be allocated from the above

Customer & Business Value – Strategic Alignment

Safety	Customer Experience	Integrated Journeys	Network Efficiency	Access	Regeneration	Equity	Health & Environment	Engagement	People	Innovation	Financial
Minor	Major	Major	Major	Major	Minor	Equity	Major	Minor	Major	Major	Major

Customer & Business Value – Detailed Benefits

ID	Benefits - Brief Description	Business Owner	Target	Measurement	Measured By	Planned Due Date
1	Increased Health & Safety for staff and public and with a view to higher compliance.	Parking	N/A	Lower risk by not sending enforcement officers out on the road	Parking services	June 2022 (6 months following production rollout)
2	Increased in productivity increasing the operational coverage without a consequential increase in FTE.	Parking	100%	Enforcement officers can monitor multiple lanes and issue multiple infringements during the same time.	Parking services	June 2022 (6 months following production rollout)
3	Easy journeys - Increased customer experience of PT users and compliant drivers	Parking	N/A	Increased customer experience due to faster PT journey times and fair use of transit lanes	Parking services	June 2022 (6 months following production rollout)
4	The addition of 46 zones is projected to generate gross revenue of \$5.2 to \$7.1m (Plus a further \$700,000) above the current manual capture process. 1. This will be attributed to reaching the FY22 budgeted revenue target. 2. The level of revenue is dependent on the mix of lanes undergoing CCTV	Parking	100%	Each lane will offer differing levels of compliance activity, this will flow through into enforcement revenue.	Parking services	2022-2023 (12 Months following production roll out)

Risks

- Significant delays by Vector to supply power could affect the delivery timeline.
- Significant delays by Chorus to upgrade the enforcement zones to fibre could affect the delivery timeline.
- Not having a dedicated project networking resource could have an impact on delivery schedule
- Long lead time to get the hardware shipped to NZ from the overseas suppliers due to COVID related delays
- Another Level 3 or 4 COVID lockdown will affect project delivery timelines
- Introduction of Queen Street SVLs may push planned delivery out by circa two months.

Assumptions & Dependencies

- (A) Fibre rollout to zones will be completed within 6 months from ordering it
- (A) If for any reason fibre will not be available, WiFi bridges may be used in some situations.
- (A) Advanced warning signs for these zones will be funded by a SVL FY21 deferral as a separate project but aligned with our SVL delivery. This will be delivered in unison with the rollout of CCTV enforcement of SVL's.

Additional Finance Info

RLTP Project	Effective Journeys
P3 Portfolio	Intelligent Transport Systems
Programme	ITS programme
Delivery Manager	Ginny Nayler
Profit Centre	8520
Asset Type	Tangible

Resource Requirements

Internal resources – role & number

External resources (contingent labour)

- Network Design Consultant – DevOps and [redacted]
- Camera and related hardware Installer – [redacted]
- Computer Vision Build & Support – a dedicated internal Computer Vision resource
- Project Management – a dedicated Project Manager
- Communications Lead – Member of the Comms team

N/A

Business Case Appendix 1: Consequential Opex

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Phase:



Consequential OPEX							BU Cost Centre Assignments	
Hardware Maintenance & Support								
Description	Vendor / Supplier	2021/22	2022/23	2023/24	2024/25	2025/26	Department	WBS / Cost Centre
x135 CCTVs @ \$425 per unit	█		\$57,375	\$57,375	\$57,375	\$57,375	Parking services	E.009000.08 GL 20201
4 Relocatable Units (2x Nano CCTVs; 1 NIR Illuminator; 1 PC) at \$15,200 per unit	█		\$60,800	\$60,800	\$60,800	\$60,800	Parking services	E.009000.08 GL 20201
X75 further CCTVs @ \$425 per unit	█		\$31,875	\$31,875	\$31,875	\$31,875	Parking services	E.009000.08 GL 20201
26 Relocatable Units (2x Nano CCTVs; 1 NIR Illuminator; 1 PC) at \$15,200 per unit	█		\$395,200	\$395,200	\$395,200	\$395,200	Parking services	E.009000.08 GL 20201
Software Maintenance & Support								
Description	Vendor / Supplier	2021/22	2022/23	2023/24	2024/25	2025/26	Department	WBS / Cost Centre
Greenlake ongoing support (15%) Compute	█		\$12,827	\$12,827	\$12,827	\$12,827	Parking services	E.009000.08 GL 20201
Licensing Renewals								
Description	Vendor / Supplier	2021/22	2022/23	2023/24	2024/25	2025/26	Department	WBS / Cost Centre
Subscription Service Renewals								
Description	Vendor / Supplier	2021/22	2022/23	2023/24	2024/25	2025/26	Department	WBS / Cost Centre
Professional Services (External Labour)								
Description	Vendor / Supplier	2021/22	2022/23	2023/24	2024/25	2025/26	Department	WBS / Cost Centre
Professional Services (Internal Labour)								
Description	Vendor / Supplier	2021/22	2022/23	2023/24	2024/25	2025/26	Department	WBS / Cost Centre
Other								
Description	Vendor / Supplier	2021/22	2022/23	2023/24	2024/25	2025/26	Department	WBS / Cost Centre
Greenlake Storage	█	\$15,485	\$15,485	\$15,485	\$15,485	\$15,485	Parking services	E.009000.08 GL 20703
		See appendix for breakdown						
Opex Savings								
Description	2021/22	2022/23	2023/24	2024/25	2025/26	Department	WBS / Cost Centre	
Totals		\$15,485	\$487,875	\$487,875	\$487,875	\$487,875		

Transfer these totals to front page of Business Case. Add additional line items as appropriate.

Business Case Appendix 2: Detailed Financial Breakdown

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Phase:



< Include screenshots from the project's [BT Project Finance Tracking spreadsheet template](#) as relevant below >

Resource Costs

Resource costs and estimates

Resource Profile			Hours & Days in Month Effort Projections		DO NOT Enter data into any coloured cell Actual must not exceed predicted																										
Role	Resource	Rate Card	Hours Projections	Remaining projected	Predicted Hrs	Actual Hrs to	Predict ed Jul	Actual	Predict ed Aug	Actual Aug	Predict ed Sep	Actual Sep	Predict ed Oct	Actual Oct	Predict ed Nov	Actual Nov	Predict ed Dec	Actual Dec	Predict ed Jan	Actual Jan	Predict ed Feb	Actual Feb	Predict ed Mar	Actual Mar	Predict ed Apr	Actual Apr	Predict ed May	Actual May	Predict ed Jun	Actual Jun	Actual
Project Manager		\$85	\$153,000	1800	1800	0	160		160		160		160		160		120		80		160		160		160		160		160		
Technical Resource - DEVOPS		\$120	\$216,000	1800	1800	0	160		160		160		160		160		120		80		160		160		160		160		160		
Comms Resource		\$85	\$62,900	740	740	0	40		40		80		80		80		60		40		0		80		80		80		80		
Technical Resource - PROVISION		\$70	\$126,000	1800	1800	0	160		160		160		160		160		120		80		160		160		160		160		160		
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