



# Creating what matters for future generations

***3M Road Safety Innovations Awards  
2020 – Auckland Transport Road Safety  
Business Case***



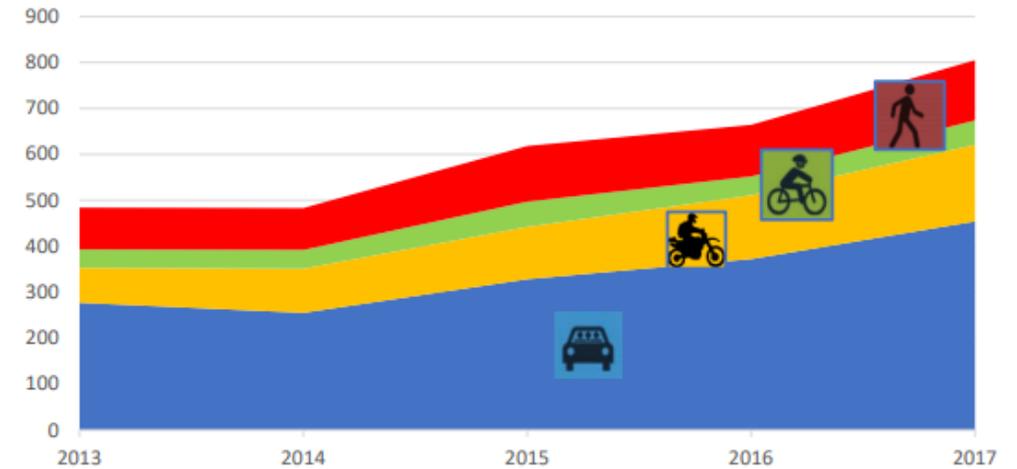
# The Problem

## *Auckland road safety is in crisis*

- The number of people killed or seriously injured on Auckland's roads is unacceptably high;
- All road deaths and serious injuries are unacceptable (Vision Zero);
- In the past, investment and leadership around road safety was not significant enough to turn around the trend of increasing deaths and serious injuries;
- Recently, there has been unclear direction on how and where to invest more in road safety in Auckland.



Auckland Road Deaths & Serious Injuries by Mode  
(2013 to 2017)



# Option Identification and Evaluation

PROGRAMME		P0	P1	P2	P3	P4	P5	P6	P7	P9	P10	P4B	P7B
		Do min 3 year programme	3 year programme extended to 10 years	Focus on high risk areas and highly effective measures	Contribute as much as possible to achieving Vision Zero	Focus on speed management	Focus on transformational infrastructure	Focus on vulnerable road users	Targeting 60% DSI Reduction	Speed management with some infrastructure	Focus on speed management and vulnerable road users	Focus on speed management version B	Targeting 60% DSI reduction, within current budget
APPROX. COST		-	Low - Med	Med - High	High	Med	Med - High	Low	Med - High	Med - High	Med	Med - High	Med
PROGRAMME STRATEGIES	Policy and leadership (including speed limit changes)												
	Engagement and education												
	Travel demand management												
	Enforcement												
INFRASTRUCTURE INTERVENTIONS	Speed management												
	Pedestrian infrastructure												
	Cycle infrastructure												
	Motorcycle infrastructure												
	Intersection improvements												
	Corridor improvements												

# Option Identification & Evaluation

ROAD SAFETY LONG LIST PROGRAMMES										
Scope of Capital Works										
Programme										
	2	3	4	5	6	7	9	10	4B	7B
<b>Number of intersections upgraded</b>	100	200	-	200	-	180	-	-	-	100
<b>Km's of corridor upgrades</b>										
Roads with Speed Management	1900	2800	3100	1900	1900	2800	2800	2800	3100	2800
Corridors transformed	370	1190		822		820	370			150
<b>Km's of upgrades for VRU's</b>										
Motorcyclist infrastructure improved (km)	20	50	20	20	50	20		20	20	20
Cyclist infrastructure improved (km)	15	25	10	25	25	15		25	10	15
Pedestrian infrastructure improved (km)	15	25	10	25	25	15		25	10	15
DSI Saved (yr 4- 10)	1756	2096	1676	1815	1718	1868	1752	1726	1846	1911
DSI Saved per \$100m (20 yrs)	449	461	729	456	1395	367	555	689	1199	1100
Increase in walking and cycling	2%	5%	2%	3%	3%	2%	2%	3%	3%	3%
Health/emission/wellbeing improvements	Low	High	Low	Medium	Medium	Medium	Low	Medium	Medium	Medium
Increase customer perception of road safety	Ok	Good	Poor	Good	OK	Very Good	Poor	Good	Ok	Very Good
<b>Cost Ranges</b>	\$820M to \$1.3Bn	\$1.3Bn to \$2.2Bn	\$650M to \$920M	\$960M to \$1.7Bn	\$310M to \$490M	\$1.2Bn to \$2Bn	\$680M to \$950M	\$640M to \$910M	\$520M to \$740M	\$760M to \$1.2Bn



## Evidence-driven programme

Program me	Cost Range	Cost Mid Point (\$M)	Crash Reduction Range	Forecast annual DSI in 20 27	Decrease from 20 17 (690)	DSI Saved ( yr 1- yr10)	BCR
Program me 1	~\$500 M to \$700 M	\$600	55% - 65%	292	58%	1663	3.3
Program me 2	\$820 M to \$1.3Bn	\$1,078	60% - 70%	243	65%	1872	2.5
Program me 3	\$1.3Bn to \$2.2Bn	\$1,764	75% - 85%	125	82%	2366	2.1
Program me 4	\$660 M to \$920 M	\$788	55% - 65%	273	60%	1746	2.8
Program me 5	\$960 M to \$1.7Bn	\$1,343	60% - 70%	245	65%	1864	2.1
Program me 6	\$310 M to \$490 M	\$400	50% - 60%	300	57%	1631	4.0
Program me 7	\$1.2Bn to \$2.0 Bn	\$1,608	70% - 80%	187	73%	2106	2.0
Program me 10	\$520 M to \$740 M	\$632	60% - 70%	258	63%	1809	3.3
Program me 4B	\$680 M to \$940 M	\$809	60% - 70%	255	63%	1820	2.9
Program me 9	\$640 M to \$910 M	\$776	65% - 75%	204	70%	2035	3.4
Program me 7B	\$840 M to \$1.3Bn	\$1,085	65% - 75%	191	72%	2088	2.7

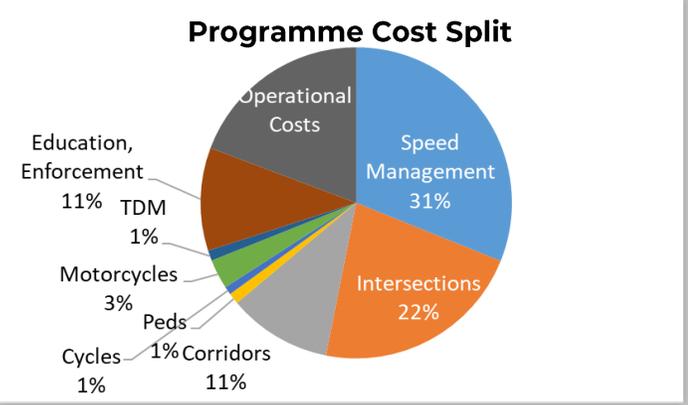


# Recommended Option

## PROGRAMME 7B: Targeting 60% DSI Reduction, within current budget

Invest across Auckland to achieve at least 60% DSI reduction in 10 years (mode neutral, as per RLTP target), best DSI return for \$ spend.

Programme Components	Effort	Assessment			
<b>Policy &amp; Leadership</b> <small>(including speed limit changes)</small>					
<b>Engagement &amp; Education</b>		<b>Benefit 1:</b> Sustained ↓ in DSI	<b>Benefit 2:</b> Safe, healthy [people]	<b>Benefit 3:</b> Safe road environment	<b>Benefit 4:</b> Safe User Behaviour
Key Programme Themes / Concepts					
<b>Travel Demand Management</b>		<ul style="list-style-type: none"> <li>• Safer speeds and road environment for vulnerable road users</li> <li>• Blanket speed management including signs and lines and some LATM</li> <li>• Top 60 high risk intersections targeted for DSI reduction</li> <li>• Top 10% high risk corridors targeted for DSI reduction</li> <li>• Educational campaigns for speed and vulnerable road users</li> <li>• Behaviour change initiatives to decrease car travel</li> <li>• Improve infrastructure &amp; speed environment for vulnerable road users</li> </ul>			
<b>Enforcement</b>					
<b>Speed Management (Infrastructure)</b>					
<b>Pedestrian Infrastructure</b>					
<b>Cycle Infrastructure</b>					
<b>Motorcycle Infrastructure</b>					
<b>Intersection Improvements</b>		Estimate of Key Outcomes			
<b>Corridor Improvements</b>		<ul style="list-style-type: none"> <li>• Improved education in safe travel leading to road users independently managing safety</li> <li>• Increase in public awareness of Vision Zero</li> <li>• Some positive customer perceptions</li> <li>• Improved compliance, decreased speeds</li> <li>• Vulnerable road users feel safer</li> <li>• Moderate to high DSI reduction which could be mainstreamed</li> </ul>	<b>232</b> DSI saved per \$100M spent YR 4 to 10	<b>0.45-0.83</b> more active Journeys per household	
<b>3 year Programme '18-'21</b>			<b>Good</b> Customer Perception	<b>3%</b> Mode Shift (JTW/E)	



# Thank you



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