

# INVESTMENT PERFORMANCE MEASURES: BENEFITS AND MEASURES

Transport sector outcome	Investment benefit	Measure no.	Measure name	Measure description
Economic prosperity	Access – freight: increase/maintain	1	Spatial coverage – freight	Percentage completion of the strategic high productivity motor vehicle freight network
Economic prosperity	Financial cost of using transport: decrease/maintain	2	People – mode share	Number of pedestrians, cyclists, public transport boardings, and motor vehicles (excl. public transport) TIMES number of people per vehicle, expressed as percentages
Economic prosperity	Financial cost of using transport: decrease/maintain	3	People – throughput of pedestrians, cyclists and public transport boardings	Number of pedestrians, cyclists and public transport boardings
Economic prosperity	Pricing: more efficient	4	User to describe	User to describe
Economic prosperity	Reliability – vehicles: increase/maintain	5	Punctuality – public transport	Percentage of scheduled service trips between 59 seconds before and 4 minutes 59 seconds after the scheduled departure time of selected points
Economic prosperity	Reliability – vehicles: increase/maintain	6	Travel time reliability – motor vehicles	Coefficient of variation; standard deviation of travel time DIVIDED BY average minutes travel time (as per Austroads)
Economic prosperity	Throughput – freight: increase/maintain	7	Freight – mode share value	Number of vehicles TIMES average load per vehicle in NZ dollars, expressed as percentages
Economic prosperity	Throughput – freight: increase/maintain	8	Freight – mode share weight	Number of vehicles TIMES average load per vehicle in tonnes, expressed as percentages
Economic prosperity	Throughput – freight: increase/maintain	9	Freight – throughput value	Number of vehicles TIMES average load per vehicle in NZ dollars
Economic prosperity	Throughput – freight: increase/maintain	10	Freight – throughput weight	Number of vehicles TIMES average load per vehicle in tonnes
Economic prosperity	Travel time delay: decrease/maintain	11	Travel time delay	Difference between average travel time A and average travel time B in minutes per kilometre
Environmental sustainability	Biodiversity: support	12	Biodiversity	User to describe
Environmental sustainability	Environmental noise: decrease/maintain	13	Noise level	Noise level in dB Laeq(24h)
Environmental sustainability	Pollution and greenhouse gases: decrease/maintain	14	Ambient air quality – NO2	Concentration of NO2 in µg/m <sup>3</sup>
Environmental sustainability	Pollution and greenhouse gases: decrease/maintain	15	Ambient air quality – PM10	Concentration of PM10 in µg/m <sup>3</sup>
Environmental sustainability	Pollution and greenhouse gases: decrease/maintain	16	Water quality	User to describe
Environmental sustainability	Pollution and greenhouse gases: decrease/maintain	17	CO <sub>2</sub> emissions	Tonnes of CO <sub>2</sub> equivalents emitted
Environmental sustainability	Pollution and greenhouse gases: decrease/maintain	18	Mode shift from single occupancy private vehicle	User to describe
Environmental sustainability	Resource consumption: decrease/maintain	19	Resource consumption	User to describe
Healthy and safe people	Pollution: decrease/ maintain	Repeat of 14	Ambient air quality – NO <sub>2</sub>	Concentration of NO <sub>2</sub> in µg/m <sup>3</sup>
Healthy and safe people	Pollution: decrease/ maintain	Repeat of 15	Ambient air quality – PM10	Concentration of PM10 in µg/m <sup>3</sup>
Healthy and safe people	Pollution: decrease/maintain	Repeat of 16	Water quality	User to describe
Healthy and safe people	Health noise: decrease/maintain	Repeat of 13	Noise level	Noise level in dB Laeq(24h)
Healthy and safe people	Physical health: support	20	Physical health benefits from active modes	User to describe
Healthy and safe people	Safety: improve/ maintain (reduce deaths and serious injuries)	21	Collective risk (crash density)	Average annual fatal and serious injury crashes per kilometre of road section
Healthy and safe people	Safety: improve/ maintain (reduce deaths and serious injuries)	22	Crashes by severity	Number of crashes by severity
Healthy and safe people	Safety: improve/ maintain (reduce deaths and serious injuries)	23	Deaths and serious injuries	Number of deaths and serious injuries
Healthy and safe people	Safety: improve/ maintain (reduce deaths and serious injuries)	24	Personal risk (crash rate)	Average annual fatal and serious injury crashes per 100 million vehicle-kilometres
Healthy and safe people	Safety: improve/ maintain (reduce deaths and serious injuries)	25	Road assessment rating – roads	Infrastructure risk rating
Healthy and safe people	Safety: improve/ maintain (reduce deaths and serious injuries)	26	Road assessment rating – state highways	KiwiRoad Assessment Programme (KiwiRAP) star rating (for state highways)
Healthy and safe people	Safety: improve/ maintain (reduce deaths and serious injuries)	27	Travel speed gap	Difference between safe and appropriate speed, and actual speed (under development)

Transport sector outcome	Investment benefit	Measure no.	Measure name	Measure description
Inclusive access	Access – people: increase/maintain	28	Access – perception	Perception of safety and ease of walking and cycling
Inclusive access	Access – people: increase/maintain	29	Access to key destinations (all modes)	Proportion of population living within travel threshold (15 minutes, 30 minutes or 45 minutes) of key social and economic opportunities (including work, education, health care, supermarkets) by different modes (walking, cycling, public transport, private motor vehicle) in the morning peak
Inclusive access	Access – people: increase/maintain	30	Accessibility – public transport facilities	Number of bus or train stops that are fully accessible
Inclusive Access	Access – people: increase/maintain	Repeat of 18	Mode shift from single occupancy private vehicle	User to describe
Inclusive access	Access – people: increase/maintain	31	Pedestrian delay	Pedestrian time lost due to intersection delay
Inclusive access	Access – people: increase/maintain	32	Spatial coverage – cycle lanes and paths	Percentage completion of the strategic cycle network
Inclusive access	Access – people: increase/maintain	33	Spatial coverage – cycling facilities	Number of people living within 500m of a high-quality cycling facility
Inclusive access	Access – people: increase/maintain	34	Spatial coverage – public transport – employees	Number of employees within 500m of a bus stop or 1km from a rail or bus rapid transit station
Inclusive access	Access – people: increase/maintain	35	Spatial coverage – public transport – resident population	Number of people living within 500m of a bus stop or 1km from a rail or bus rapid transit station
Inclusive access	Access – people: increase/maintain	36	Temporal availability – public transport	Public transport frequency per hour weighted by percentage of the population living within 500m of a bus stop or 1km from a rail or bus rapid transit station
Inclusive access	Amenity value: increase/maintain	37	Amenity value – natural environment	User to describe
Inclusive access	Amenity value: increase/maintain	38	Amenity value – built environment	User to describe
Inclusive access	Comfort and customer experience – access: improve/maintain	39	Ease of getting on and off public transport services	Percentage of low floor and wheelchair accessible services
Inclusive access	Comfort and customer experience – access: improve/maintain	40	Network condition – cycling	Percentage travel on cycle network classified as complying with defined level of service (facility type)
Inclusive access	Comfort and customer experience – access: improve/maintain	41	Network condition – road	Percentage travel on road network classified as smooth as per defined level of service
Inclusive access	Community cohesion: support	42	Social connectedness	User to describe
Inclusive access	Financial cost of using transport: decrease/maintain	43	Access to key destinations – all modes	User to describe
Inclusive access	Reliability – people: increase/maintain	Repeat of 5	Punctuality – public transport	Percentage of scheduled service trips between 59 seconds before and 4 minutes 59 seconds after the scheduled departure time of selected points
Inclusive access	Throughput – people/vehicle: increase/maintain	Repeat of 2	People – mode share	Number of pedestrians, cyclists, public transport boardings and motor vehicles (excl. public transport) TIMES average number of people per vehicle, expressed as percentages
Inclusive access	Throughput – people/vehicle: increase/maintain	44	People – throughput	Number of pedestrians, cyclists, public transport boardings and motor vehicles (excl. public transport) TIMES average number of people per vehicle
Inclusive access	Throughput – people/vehicle: increase/maintain	45	People – throughput (UCP)	Number of pedestrians and cyclists
Inclusive access	Throughput – people/vehicle: increase/maintain	46	Traffic – mode share	Number of transport users by mode, expressed as percentages
Inclusive access	Throughput – people/vehicle: increase/maintain	47	Traffic – throughput	Number of pedestrians, cyclists and motor vehicles by vehicle type
Inclusive access	Travel time: decrease/maintain	48	Travel time	Average travel time in minutes
Resilience and security	Resilience: improve/maintain	49	Availability of a viable alternative to high-risk and high-impact route	Percentage of high-risk, high-impact routes with a viable alternative
Resilience and security	Resilience: improve/maintain	50	Level of service and risk	User to describe
Resilience and security	Resilience: improve/maintain	51	Network redundancy	Appropriate capacity in event of system disruption (including alternative routes, alternative modes, alternative destinations)
Resilience and security	Resilience: improve/maintain	52	Temporal availability – road	Number and duration of resolved road closures: urban >=2 hours; rural >=12 hours

Source: [List of investment performance measures](#) on the [Planning & Investment Knowledge Base](#)