

INVESTMENT PRIORITISATION METHOD FOR THE 2021–24 NATIONAL LAND TRANSPORT PROGRAMME

DECEMBER 2020

Waka Kotahi has created the Investment Prioritisation Method for the 2021–24 National Land Transport Programme, which replaces the Investment Assessment Framework used for the 2018–21 National Land Transport Programme. It includes moving from two prioritisation factors to three (as was the case before 2018), to give effect to the Government Policy Statement on land transport (GPS) 2021. This includes the three-factor priority order matrix and the Indicative Efficiency Rating tool to prioritise activities for inclusion in the 2021–24 National Land Transport Programme (NLTP).

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OVERVIEW OF INVESTMENT PRIORITISATION METHOD

Waka Kotahi NZ Transport Agency (Waka Kotahi) is responsible for developing a three-year National Land Transport Programme (NLTP).

The Waka Kotahi Investment Prioritisation Method¹ for the 2021–24 NLTP is used to give effect to the Government Policy Statement on land transport 2021 (GPS 2021) in the 2021–24 NLTP.

The Investment Prioritisation Method applies to activities proposed for the 2021–24 NLTP.

KEY PRINCIPLES AND CONSIDERATIONS FOR INVESTMENT PRIORITISATION

Prioritisation is considered at two stages

Investment prioritisation is undertaken when a proposed activity, or combination of activities, is put forward **for inclusion** in an NLTP, whether this is during the development of the NLTP or during the Point of Entry process, as a variation to an existing NLTP.

The same factors are applied when the **priority order assigned is reconsidered** after a business case is presented for endorsement and a funding decision is requested, in order to check that the activity is above the investment threshold.²

Core requirements for investment

Section 19B of the Land Transport Management Act 2003 (LTMA) sets out the following 'Core Requirements' for the NLTP, which are summarised below:

- Giving effect to the GPS.
- Contributing to the purpose of the LTMA.
- Taking into account any Regional Land Transport Plan (RLTP) as well as any National Energy Efficiency and Conservation Strategy (NEECS), relevant National Policy Statement (NPS), relevant Regional Policy Statement (RPS) or plans in force under the Resource Management Act 1991 (RMA).

The implications of these key considerations for the proposed Investment Prioritisation Method are outlined below.

Giving effect to the GPS

A key consideration for the Investment Prioritisation Method is to ensure that the NLTP gives effect to government priorities and direction as outlined in the GPS.

Contributing to the purpose of the LTMA

The purpose of the LTMA is 'to contribute to an effective, efficient, and safe land transport system in the public interest.' To approve funding of an activity or a combination of activities, the LTMA stipulates that Waka Kotahi must be satisfied that specified criteria are met, including that the proposal:

- is included in the NLTP³
- is consistent with the GPS (as outlined above)
- is efficient and effective

¹ Formerly known as Investment Assessment Framework or IAF for the NLTP 2018–2021.

² The priority order at which funding becomes fully allocated to an activity class is the investment threshold.

³ Or otherwise qualifies under s 20(4) if the activity is in the urgent interests of public safety or is necessary to effect immediate or temporary repair of damage caused by a sudden and unexpected event.

- has been assessed (to the extent practicable) against other land transport options and alternatives, and
- has complied with relevant consultation requirements under the LTMA 2003.

The GPS 2021 notes that Waka Kotahi, the NZ Police and approved organisations⁴ will use the framework in the LTMA 2003 to deliver investment across New Zealand that is prioritised and coordinated.

Taking into account RLTPs, NEECS and relevant RMA policy documents

Activities in RLTPs are accounted for in the Waka Kotahi Investment Prioritisation Method as follows:

- Except for nationally-delivered programmes⁵, every activity (including state highway activities) in the 2021–24 NLTP must be part of an approved RLTP.
- The LTMA 2003 requires an RLTP to identify the order of priority of significant activities for the first six years of the plan. The Waka Kotahi Investment Prioritisation Method applies to activities put forward for the three years of the 2021–24 NLTP.
- The RLTP priority order will be considered in distinguishing between activities with the same priority order in the 2021–24 NLTP when such activities are at the investment threshold for the activity class.

The NEECS and RMA policy documents are considered as part of a given business case and specific guidance is provided in the Business Case Approach.

Inclusion of activities from previous NLTPs in the 2021–24 NLTP

Any activity phase that is already 'funding approved' in the 2018–21 NLTP will be treated as 'committed', i.e. these will not be required to be reviewed under the Investment Prioritisation Method for the 2021–24 NLTP, and will be automatically included in the 2021–24 NLTP.

However, where an activity phase has approved funding (denoted as 'committed' in Transport Investment Online) in the **2015–18 NLTP or an earlier NLTP**, Waka Kotahi may request the project owner to reassess the activity phase using the Investment Prioritisation Method for the 2021–24 NLTP. Waka Kotahi reserves the right to overturn funding approval/commitment should the activity be below the investment threshold for the 2021–24 NLTP and not been progressed in its delivery.

Activity phases included in previous NLTPs (e.g. denoted as 'Included in NLTP 2018–21' in Transport Investment Online) but which do not have funding approval, must be reviewed based on the Investment Prioritisation Method for 2021–24 NLTP in order to be considered for inclusion in the 2021–24 NLTP.

Activity phases put forward for the first time for inclusion in the 2021 – 24 NLTP must provide the information required as outlined in the Planning and Investment Knowledge Base.

GPS 2021 DIRECTION

GPS 2021 sets priorities; objectives; long-, medium- and short-term results; and ranges of funding for activity classes to guide decision makers on where and how to prioritise investment.

GPS 2021 does not determine the individual activities that will be funded, or how much funding any particular activity will receive. The role of Waka Kotahi is to give effect to the GPS including the activity class funding ranges, alongside its other LTMA obligations. Waka Kotahi achieves this by using the Investment Prioritisation Method to determine which proposals should receive funding within the GPS activity class funding ranges.

GPS 2021 has **four strategic priorities**:

⁴ Approved organisations: territorial authorities, regional councils, Auckland Transport, the Department of Conservation, the Waitangi National Trust Board and Waka Kotahi.

⁵ Waka Kotahi develops programmes of activities that are delivered on a national basis rather than regionally through regional land transport plans. Examples of nationally delivered programmes include Research Programme, Safe Network Programme, National Ticketing Programme (NEXT), and Rail Regulator Funding.

- Safety
- Better travel options
- Improved freight connections
- Climate change.

These priorities are expected to guide land transport investments from 2021/22 to 2030/31.

In addition to the four strategic priorities, GPS 2021 identifies the Auckland Transport Alignment Project programme (ATAP), Let's Get Wellington Moving programme (LGWM), Road to Zero (R2Z) and New Zealand Rail Plan as **Government Commitments** that will make significant contributions to achieving the GPS 2021 strategic priorities.

To realise the GPS 2021 intentions, forthcoming NLTPs must meet investment expectations for the Government Commitments as set out in GPS 2021. GPS 2021 states that the Minister expects Waka Kotahi will help deliver the four Government Commitments by:

- establishing three-year investment targets for Government Commitments
- proactively managing progress across programmes (responding to slower or quicker delivery) in order to reach investment targets for Government Commitments
- establishing specific reporting on Road to Zero that demonstrates that it delivers on the measures in the Road to Zero strategy and action plan
- establishing specific reporting on LGWM and supporting the ATAP reporting process
- supporting the implementation of the New Zealand Rail Plan.

FACTORS FOR INVESTMENT PRIORITISATION

The Investment Prioritisation Method for 2021–24 NLTP has three factors, namely:

- GPS Alignment
- Scheduling
- Efficiency

Each of the factors is outlined below.

GPS Alignment

GPS alignment indicates the alignment of a proposed activity or combination of activities (e.g. programmes or packages) with a GPS strategic priority and identifies the potential contribution to achieving the GPS strategic priority (refer **Appendix 1**).

A rating of Very High/High/Medium/Low alignment is applied, which reflects both the extent of alignment and scale of the expected contribution to a GPS strategic priority. Where an activity contributes to more than one GPS strategic priority, the rating is assigned based on the highest expected contribution to a single GPS strategic priority.

Scheduling

Scheduling indicates the criticality or interdependency of the proposed activity or combination of activities with other activities in a programme or package or as part of a network.

Criticality and interdependency are defined as follows:

- (i) **Criticality:** the significance of the activity or combination of activities' role as part of the network, and the degree of impact to users, particularly due to availability (or not) of alternatives.
- (ii) **Interdependency with other activities:** Degree to which the activity is necessary to unlock the benefits of another related or integrated investment. The other investment may be part of the same transport programme or package, or a major housing or industrial development or international event.

A rating of High/Medium/Low impact across either criticality or interdependency with other activities is applied.

A High or Medium rating is often associated with being an integral part of a programme or package.

Where neither criticality or interdependencies are an issue (including any standalone activity), the activity/activities should be given a rating of Low.

Efficiency

Efficiency indicates expected return on investment and considers the whole of life costs and benefits through cost-benefit analysis.

The Efficiency factor looks at monetised impacts, generally using the Benefit-Cost Ratio (BCR). Other non-monetised impacts will be considered under the prioritisation factor 'GPS Alignment', while the full range of non-monetised impacts is expected to be assessed through the Business Case Approach.

For some activities, e.g. to replace a facility or technology at the end of its life, the Present Value (PV) of Costs (previously called PV End of Life) may be used where an asset is at end of life and is being replaced on a like-for-like basis.

In the early stages of developing a proposed activity, there may not have been detailed consideration of the cost of ownership and quantification of benefits. In these cases, a new tool to calculate an Indicative Efficiency Rating for the purpose of investment prioritisation has been developed (see below).

Indicative Efficiency Rating

When a proposed activity does not yet have a calculated BCR, the Indicative Efficiency Rating (IER) tool can be used to calculate an indicative efficiency rating for the activity. The IER tool provides a high-level estimate of monetised costs and benefits.

The IER tool provides a consistent, simple method for calculating an indicative efficiency rating that can be applied across all modes, and to services as well as infrastructure, and incorporates a range of typical benefits by outcome sought and by mode.

The IER is designed to remove reliance of the 'L*' rating previously used for investment prioritisation in the absence of a calculated BCR.

Programmes and packages

An activity that is part of a programme or package previously endorsed by Waka Kotahi may be assigned the GPS Alignment and Efficiency rating of that programme or package. This may require GPS Alignment of the programme or package to be reassessed using the Investment Prioritisation Method for the 2021–24 NLTP. Where a programme or package being put forward for inclusion is new to the 2021–24 NLTP, then all phases of the programme/package and activities for the 2021–24 NLTP may be assigned the GPS Alignment of the programme or package.

Allowing for assessment and investment decisions to be made at a programme rather than individual project level:

- Packages of inter-related and inter-dependent activities submitted for funding consideration are able to include activities with BCRs < 1 provided the overall package demonstrates a BCR>1 and all the components of the package are completed.
- Programmes of work may take the same approach as packages, when the components of the programme are seeking to deliver a common outcome, but they are not necessarily inter-related or inter-dependent.
- The policy thus allows inclusion of activities that are highly effective in achieving GPS priorities but have a BCR< 1 into a programme, provided the overall programme demonstrates delivery of BCR>1.

The Scheduling factor must be assessed separately for each activity phase of a programme or package being considered for inclusion. Business cases (e.g. detailed or single stage business cases for activities/combination of activities within the programme or package) developed subsequent to the programme business case will require all three factors to be assessed.

Meeting investment expectations for Government Commitments

Any activity/combination of activities submitted for inclusion in the 2021-24 NLTP will be prioritised using the Investment Prioritisation Method, before consideration of Government Commitments expenditure.

Once an agreement has been reached on the three-year investment targets for the four Government Commitments, Waka Kotahi will ensure that expenditure level is being met across the appropriate activity class or classes.

The implementation of the New Zealand Rail Plan, through the first Rail Network Investment Programme (RNIP), may be supported wholly or partially by Crown funding. This may impact the timing of activities, particularly in the public transport infrastructure activity class.

DETERMINING THE PRIORITY OF AN ACTIVITY OR COMBINATION OF ACTIVITIES

Improvement Activities

Investment prioritisation is the basis for including an activity or combination of activities in the NLTP. Depending on the amount of funding available for an activity class, activities with a priority order above an investment threshold in that activity class are included in the NLTP. The Waka Kotahi Board sets the investment threshold based on the funds available for each activity class and the value and priority order of all proposed activities.

The priority order for activities is reconsidered when a request for funding approval is made. The review confirms information about costs and benefits as well as the other factors that impact on investment prioritisation.

Activity classes prioritised as improvements include:

- Road to Zero
- public transport services (including rapid transit)
- public transport infrastructure (including rapid transit)
- rail network
- coastal shipping
- walking and cycling improvements
- local road improvements
- state highway improvements.

Note that several activity classes also include “continuous programmes” which are prioritised separately as outlined below.

Improvement activities are assigned a priority order using each of the three prioritisation factors, according to the following matrix (refer to Figure 3 below).

Figure 3: Investment Prioritisation 3-factor Matrix for Improvement Activities

Proposed 2021-24 NLTP Priority Order						
GPS alignment	Scheduling	Efficiency				
		VL* (BCR<1.0)	L (BCR 1.0-2.9)	M (BCR 3.0-5.9)	H (BCR 6.0-9.9) (PV of Costs for end of life replacement)	VH (BCR>=10.0)
VH	H	7	2	1	1	1
VH	M	8	3	2	2	1
VH	L	9	4	3	2	2
H	H	9	5	4	4	3
H	M	10	6	5	5	3
M	H	10	7	6	6	4
M	M	10	9	8	6	5
H	L	11	8	8	6	5
M	L	11	10	10	9	8
L	H/M/L	12	12	12	12	12

* Activities that have a Very Low (BCR<1) Efficiency rating may be included in 2021–24 NLTP if they are above the investment threshold for an activity class. However, funding for these activities will only be approved by exception at the appropriate level of delegation, usually the Waka Kotahi Board.

Prioritisation for continuous programmes

Based on the GPS 2021, activities prioritised as continuous programmes are:

- public transport continuous programme including:
 - existing public transport services (includes total mobility) (forms part of public transport services activity class), and
 - maintenance (including renewals) of public transport facilities and infrastructure (forms part of the public transport infrastructure activity class)
- local road maintenance programme (includes operations, maintenance and renewal activities)
- State highways maintenance programme (includes operations, maintenance and renewal activities)
- Road Safety Partnership Programme (road policing)
- road safety promotion
- investment management.

Note that low cost, low risk activities are being treated as *improvement programmes* within their respective activity class in the 2021-24 NLTP. These are discussed separately below.

Continuous programmes are effectively funded first, as funding decisions for continuous programmes are made for the three years of the NLTP at the time the NLTP is adopted. This provides the sector and Waka Kotahi investment partners with certainty of funding continuity for the NLTP period.

Waka Kotahi expects to provide funding to all continuous programmes. On this basis, Waka Kotahi proposes to assign continuous programmes ratings of HHM, priority order 4, as the 'starting point'

for investment prioritisation, reflecting the importance of such programmes to maintaining ongoing levels of service. Waka Kotahi will then assess the investment proposals to determine:

- how well the proposed programme identifies and prioritises gaps that align with and contribute to GPS strategic priorities, as well as other Waka Kotahi statutory obligations. Programmes found to not align well with the GPS strategic priorities could see a reduction in the GPS alignment rating. The converse is also true: programmes found to align very well with the GPS strategic priorities could see an increase in the GPS alignment rating.
- the quality of the decision-making framework within the Activity Management Plan (AMP) or Regional Public Transport Plan (RPTP) on how they optimise their plan, programmes and activities. Poor/excellent optimisation could see a reduction/increase in the scheduling rating.
- the Approved Organisation's performance over the previous NLTP.
- efficiency based on benchmarking across Approved Organisations in terms of the cost to deliver the outcome. That is, if more expense per unit of outcome, then a lower efficiency rating may be assigned; if more cost-effective, then a higher efficiency rating may be assigned recognising every dollar spent should deliver more outcome.

The assessment of investment proposals and the resulting priority order will assist Waka Kotahi in determining the merits of investing to different levels in the various continuous programmes submitted.

All continuous programmes are developed through application of continuous improvement practices, and ideally involve regular engagement with and feedback from Waka Kotahi on the merits of the supporting AMP or RPTP. They are expected to achieve at least a medium GPS alignment rating. Programmes that do not achieve a medium rating will be the subject of additional scrutiny as part of the NLTP decision making and may have additional conditions of funding applied to the approved programme investment. Any other risks or issues may also be addressed through conditions attached to the funding decision.

Road safety promotion

Road safety promotion is part of the proposed Road to Zero activity class.

Many road safety promotion activities are low cost, low risk activities, i.e. below \$2m in total cost, and therefore these are assessed as a continuous programme in the same manner as low cost, low risk programmes for road improvements.

Road safety promotion activities above \$2m in total cost are assessed and prioritised separately, in the same way as an improvement activity in other activity classes.

Road policing programme

The road policing programme is part of the Road to Zero activity class.

The road policing programme is made up of a base programme which maintains current levels of enforcement, and an improvements programme. The base road policing component is assessed as a continuous programme. Improvement activities in the road policing programme are assessed and prioritised in the same way as an improvement activity in other activity classes.

Investment management

For investment prioritisation, the investment management activity class is considered under its component parts (transport planning, sector research and investment and funding allocation system – IFAS), with each assessed and prioritised separately. Where there is discretion over funding, i.e. not funding core Waka Kotahi or sector activities (e.g. transport modelling, activity management planning improvements, and programme business case development) proposals are assessed using the investment prioritisation factor 'GPS Alignment'.

Prioritisation for low cost, low risk programmes

Low cost, low risk improvement (LCLR) programmes apply to local road, state highway and public transport improvements activity classes, as well as Road to Zero and walking and cycling activity classes. For the 2021-24 NLTP, individual LCLR activities have a threshold of up to \$2m. LCLR are assessed following similar guidance for continuous programmes:

- The assessment is made at the programme level. The generic rating for a LCLR programme is HHM, priority order 4. The rating may be adjusted following the assessment and moderation process.
- GPS Alignment (including the rating) for each activity in the programme is captured in the low cost, low risk template. It is critical this is completed and kept current.
- As for continuous programmes, insight to the quality and value proposition of these programmes and activities is provided by a strong linkage to good quality activity management planning documents (e.g. AMP, RPTP).

APPENDIX 1: INVESTMENT PRIORITISATION TABLES

The investment prioritisation table for the GPS Alignment factor below helps to determine the degree to which proposals align with the priorities and results sought in the GPS 2021. A similar table follows for the Scheduling factor.

Waka Kotahi invests to deliver key land transport outcomes and GPS priorities. Waka Kotahi encourages activities, programmes and packages deliberately designed to deliver multiple outcomes, including contributing to wider government priorities and wellbeing where transport has a role to play. The business case approach has been adopted and designed to assist organisations to develop their investment proposals with this in mind, and Waka Kotahi funding decisions take multiple outcomes into account.

Most activities, programmes or packages will contribute to more than one outcome.

Investment prioritisation is one part of the investment decision making framework, sitting alongside business case development, assessment for investment, endorsement and the funding decisions themselves.

In order to keep the Investment Prioritisation Method reasonably simple to understand and apply, ratings for the GPS Alignment and Scheduling factors are assigned based on the highest expected contribution to a single GPS strategic priority. In some cases, where an activity or combination of activities may impact on more than one priority (namely: Better Travel Options and Climate Change or Improved Freight Connections and Climate Change), this is acknowledged in the investment prioritisation table below.

For the GPS Alignment and Scheduling factors, select **one relevant criterion** related to each expected benefit from investment in the activity or combination of activities (e.g. programme or package). To determine the rating for the activity or combination of activities under consideration, the rating is assigned based on the highest expected contribution to a single GPS strategic priority. For example, if a proposed activity contributes to both Improving Freight Connections and Better Travel Options (improved mode choice), with a High for Improving Freight Connections and a Medium for Better Travel Options, then a rating of High for Improving Freight Connections may be selected.

An activity that is part of a programme or package previously endorsed by Waka Kotahi may be assigned the GPS Alignment of that programme or package. In some cases (e.g. where a programme or package was included a previous NLTP), this may require the programme or package to be reassessed using the Investment Prioritisation Method for the 2021–24 NLTP. Where a programme or package being put forward **for inclusion** is new to the 2021–24 NLTP, then all phases of the programme/package and activities being put forward for the 2021–24 NLTP may be assigned the GPS Alignment and Efficiency rating of the programme or package.

As noted in the main document, the IER tool should be used in the absence of a calculated BCR in determining the Efficiency factor rating.

Where an activity or combination of activities may impact on both interdependency and criticality in the Scheduling factor, the rating for the greatest value may be selected as the Scheduling factor rating.

When a **new** activity or combination of activities is considered for inclusion in the NLTP, it is recognised that the potential impact of the activity may be based on **estimates** of the three factors, and this is considered acceptable.

When an activity or combination of activities is brought forward for endorsement and/or funding approval, Waka Kotahi expects that such estimates will be substantiated with evidence and more robust modelling or forecasting techniques.

Definitions for some of the terms used in the GPS Alignment factor are found in Appendix 2.

Where feasible, the criteria for the GPS Alignment draw on the benefits and measures with centralised data available as part of the Waka Kotahi benefits framework – refer to Appendix 2 for details. To estimate impacts on GPS priorities, proposers may draw information from the [Non-monetised benefits manual \(NMBM\)](#)

Investment Logic Maps (performance measures, targets) for related programmes and/or previous business cases. Data in [MegaMaps](#) and [StoryMaps \(non-monetised benefits\)](#) will help to establish the baseline from which an estimate can be made.

If you don't have access to view the information on MegaMaps or StoryMaps, please contact investment.benefits@nzta.govt.nz.

		GPS Alignment			
		<i>Definitions for some of the terms used are found in Appendix 2</i>			
		<i>The spatial or geographical boundaries of the activity / combination of activities is the basis for measurement.</i>			
GPS Strategic Priority	Benefit	LOW	MEDIUM	HIGH	VERY HIGH
Safety	Impact on social cost and incidences of crashes	<ul style="list-style-type: none"> Target low-medium or greater collective risk corridors and/or intersections to achieve a death and serious injuries reduction of >5% over a 5-year period Proposal addresses DSIs in an area of Normal Concern (Communities at Risk Register – All deaths and serious casualties table) 	<ul style="list-style-type: none"> Target medium or greater collective risk corridors or intersections to achieve a death and serious injuries reduction of >15% over a 5-year period Proposal addresses DSIs in an area of Medium Concern** (Communities at Risk Register – All deaths and serious casualties table) Investment to support behaviour change (e.g. changing perceptions of safety or road safety promotion) to improve road safety outcomes 	<ul style="list-style-type: none"> Target medium-high or high collective risk corridors or intersections to achieve a death and serious injuries reduction of 25-39% over a 5-year period Speed limit changes reduce operating speed in corridor by 10 km/h Proposal addresses DSIs in an area of High Concern (Communities at Risk Register – All deaths and serious casualties table) 	<ul style="list-style-type: none"> Target medium high or high collective risk corridors or intersections to achieve a death and serious injuries reduction of ≥40% over a 5-year period Speed limit changes reduce operating speed in corridor by >10 km/h
Better Travel options and Climate Change (GHG emissions reduction and air quality improvements)	Impact on mode choice		<ul style="list-style-type: none"> Up to 3% change in share of private passenger vehicle-based trips to other modes* Investment to support behaviour change (e.g. education, promotion) to improve mode shift outcomes 	<ul style="list-style-type: none"> >3 and up to 6% change in share of private passenger vehicle-based trips to other modes* 	<ul style="list-style-type: none"> >6% change in share of private passenger vehicle-based trips to other modes*
Better Travel Options	Impact on access to opportunities	<ul style="list-style-type: none"> Up to 3% change in number of jobs accessed within 45 minutes by a given mode or modes (public transport, walking, cycling, driving) in morning peak Up to 3% change in proportion of population within 15 minutes access of social opportunity 	<ul style="list-style-type: none"> 4-5% change in number of jobs accessed within 45 minutes by a given mode or modes (public transport, walking, cycling, driving) in the morning peak 4-5% change in proportion of population within 15 minutes access of social opportunity (namely primary or secondary) 	<ul style="list-style-type: none"> 6-7% change in number of jobs accessed within 45 minutes by a given mode or modes (public transport, walking, cycling, driving) in the morning peak 6-7% change in proportion of population within 15 minutes access of social opportunity (namely primary or secondary) 	<ul style="list-style-type: none"> >8% change in number of jobs accessed within 45 minutes by a given mode or modes (public transport, walking, cycling, driving) in the morning peak >8% change in proportion of population within 15 minutes access of social opportunity (namely primary or secondary)

		GPS Alignment			
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		<i>The spatial or geographical boundaries of the activity / combination of activities is the basis for measurement.</i>			
GPS Strategic Priority	Benefit	LOW	MEDIUM	HIGH	VERY HIGH
		<p>(namely primary or secondary education, GP surgery or supermarkets) by a given mode or modes (public transport, walking, cycling, driving) in the morning peak</p> <ul style="list-style-type: none"> Up to 3% increase in percentage of the population living within 500m of a bus stop or 1km from a rail or bus rapid transit station where service frequency is ≤30 minutes per hour New walking/cycling link forms part of small urban area network Improving connections to locally significant tourism destinations/attractions 	<p>education, GP surgery or supermarkets) by a given mode or modes (public transport, walking, cycling, driving) in the morning peak</p> <ul style="list-style-type: none"> 4-6% increase in percentage of the population living within 500m of a bus stop or 1km from a rail or bus rapid transit station where service frequency is ≤30 minutes per hour New walking/cycling link forms part of medium urban area network Improving connections to regionally significant tourism destinations/attractions Investment in specialised services to support accessibility (e.g. Total Mobility) 	<p>education, GP surgery or supermarkets) by a given mode or modes (public transport, walking, cycling, driving) in the morning peak</p> <ul style="list-style-type: none"> 7-9% increase in percentage of the population living within 500m of a bus stop or 1km from a rail or bus rapid transit station where service frequency is ≤30 minutes per hour New walking/cycling link forms part of a large or major urban area network Improving connections to nationally significant tourism destinations/attractions 	<p>education, GP surgery or supermarkets) by a given mode or modes (public transport, walking, cycling, driving) in the morning peak</p> <ul style="list-style-type: none"> >10% increase in percentage of the population living within 500m of a bus stop or 1km from a rail or bus rapid transit station where service frequency is ≤30 minutes per hour New walking/cycling link forms part of regional network, including linking with the NZ Cycle Network, Te Araroa Trail and other tourism trails
Improving Freight Connections <i>and</i> Climate Change (GHG emissions reduction and air quality improvements)	Impact on mode choice		<ul style="list-style-type: none"> Up to 3% change in road freight Mode share to rail or coastal shipping measured as percentage change in volume of road freight AADT on corridor moved to alternative modes 	<ul style="list-style-type: none"> >3 and up to 6% change in road freight Mode share to rail or coastal shipping measured as percentage change in volume of road freight AADT on corridor moved to alternative modes 	<ul style="list-style-type: none"> >6% change in road freight Mode share to rail or coastal shipping measured as percentage change in volume of road freight AADT on corridor moved to alternative modes
Improving Freight Connections	Impact on network	<ul style="list-style-type: none"> 5-10% improvement in predictability (reduction in 	<ul style="list-style-type: none"> 11-20% improvement in predictability (reduction in 	<ul style="list-style-type: none"> 21-30% improvement in predictability (reduction in 	<ul style="list-style-type: none"> >31% improvement in predictability (reduction in

		GPS Alignment			
		<i>Definitions for some of the terms used are found in Appendix 2</i>			
		<i>The spatial or geographical boundaries of the activity / combination of activities is the basis for measurement.</i>			
GPS Strategic Priority	Benefit	LOW	MEDIUM	HIGH	VERY HIGH
	productivity and utilisation	variability) of travel time on priority routes for freight <ul style="list-style-type: none"> • (for rail) up to 10% Change in freight trains arrived on time (i.e. within 30 minutes of scheduled arrival) • Up to 10% reduction in duration of unplanned road closures/rail service disruptions of ≥2 hours • Improving connections between locally significant production and distribution points 	variability) of travel time on priority routes for freight <ul style="list-style-type: none"> • (for rail) 11-20% Change in freight trains arrived on time (i.e. within 30 minutes of scheduled arrival) • 11-20% reduction in duration of unplanned road closures/rail service disruptions of ≥2 hours • Improving connections between regionally significant production and distribution points 	variability) of travel time on priority routes for freight <ul style="list-style-type: none"> • (for rail) 21-30% Change in freight trains arrived on time (i.e. within 30 minutes of scheduled arrival) • 21-30% reduction in duration of unplanned road closures/rail service disruptions of ≥2 hours • Improving connections between nationally significant production and distribution points 	variability) of travel time on priority routes for freight <ul style="list-style-type: none"> • (for rail) >31% Change in freight trains arrived on time (i.e. within 30 minutes of scheduled arrival) • >31% reduction in duration of unplanned road closures/service disruptions of ≥2 hours
Climate Change	Impact on GHG	<ul style="list-style-type: none"> • Addressing a known climate change adaptation issue that is forecast to occur beyond 2090 	<ul style="list-style-type: none"> • up to 3% reduction in private vehicle kilometres travelled – can use change in AADT as a proxy • >up to 5% reduction in CO₂ vehicle emissions total grams per kilometre per day by corridor (carriageway) • Addressing a known climate change adaptation issue that is forecast to occur between 2041-2090 	<ul style="list-style-type: none"> • 4-6% reduction in private vehicle kilometres travelled – can use change in AADT as a proxy • 6-10% reduction in CO₂ vehicle emissions total grams per kilometre per day by corridor (carriageway) • Addressing a known climate change adaptation issue that is forecast to occur by 2040 	<ul style="list-style-type: none"> • >6% reduction in private vehicle kilometres travelled – can use change in AADT as a proxy • >10% reduction in CO₂ vehicle emissions total grams per kilometre per day by corridor (carriageway)

		GPS Alignment			
		<i>Definitions for some of the terms used are found in Appendix 2</i>			
		<i>The spatial or geographical boundaries of the activity / combination of activities is the basis for measurement.</i>			
GPS Strategic Priority	Benefit	LOW	MEDIUM	HIGH	VERY HIGH
	Impact of air emissions on health / Impact of noise and vibration on health	<ul style="list-style-type: none"> Up to 5% reduction of (local) population exposed to elevated concentrations of land transport-related air pollution (NO₂) Up to 5% reduction in local population exposed to excessive traffic noise level 	<ul style="list-style-type: none"> Up to 10% reduction (local) population exposed to elevated concentrations of land transport-related air pollution (NO₂) Up to 10% reduction in local population exposed to excessive traffic noise level 	<ul style="list-style-type: none"> Up to 15% reduction (local) population exposed to elevated concentrations of land transport-related air pollution (NO₂) ≥11% reduction in local population exposed to excessive traffic noise level 	

*Other modes include walk, cycle, public transport, micro-mobility and need for trip being eliminated (e.g. working from home, ordering online)

Scheduling			
	LOW	MEDIUM	HIGH
Interdependency	<ul style="list-style-type: none"> Activity/combination of activities is part of a programme or package, but non-delivery in the 2021 NLTP period will not hold up the overall delivery of other parts of programme, package or another investment (e.g. housing development), The proposed activity is a standalone activity (not part of another programme or package) Non-delivery of the proposed activity in the 2021 NLTP has a negligible impact on realising the estimated benefits of the programme/package 	<ul style="list-style-type: none"> Activity/combination of activities is part of a programme, package or another investment, but relies on the delivery of another phase or activity in the 2021 NLTP period before being actioned Non-delivery of proposed activity in the 2021 NLTP has a moderate impact on realising the estimated benefits of the programme/package, i.e. one or more benefits may not be achieved or may be reduced, or may be delayed for up to 3 years 	<ul style="list-style-type: none"> Activity/combination of activities is part of a programme, package or another investment (e.g. housing development), and its delivery in the 2021 NLTP period is required to enable further implementation of that programme, package, or investment. Non-delivery of the proposed activity in the 2021 NLTP has a significant impact on realising the estimated benefits of the programme/package, i.e. one or more benefits will not be achieved or will be delayed for more than 3 years
Criticality	<ul style="list-style-type: none"> Need to undertake this activity in order to deliver/prepare for remainder of programme/package where its implementation is to begin in 2027 NLTP or beyond Significance of activity as part of the network, with risk of unplanned loss of service (≥2 hours) requires use of alternative routes or modes taking up to 1 hour extra travel time for most users 	<ul style="list-style-type: none"> Need to undertake this activity in order to deliver/prepare for remainder of programme/package where its implementation is to begin in 2024 NLTP Significance of activity as part of the network, with risk of unplanned loss of service (≥2 hours) requires use of alternative routes or modes taking 1-2 hours extra travel time for most users 	<ul style="list-style-type: none"> Need to undertake this activity in order to deliver/prepare for remainder of programme/package where its implementation is to begin in 2021 or early 2024 NLTP Significance of activity as part of the network, where risk of unplanned loss of service (≥2 hours) requires use of alternative routes or modes taking >2 hours extra travel time for most users

Ratings for the Efficiency factor

The ratings for this factor are Very High, High, Medium, Low, and Very Low, as follows:

- Very High (BCR >10.0)
- High (BCR 6.0-9.9) / PV of Costs (where an asset is at end of life and is being replaced on a like-for-like basis)
- Medium (BCR 3.0 – 5.9)
- Low (BCR 1.0 – 2.9)
- Very Low (BCR < 1.0)

Proposals which have a Very Low (BCR<1) Efficiency rating may be included in 2021–24 NLTP if they are above the investment threshold for an activity class. However, funding for these activities will only be approved by exception at the appropriate level of delegation, usually the Waka Kotahi Board.

APPENDIX 2: DEFINITIONS

Several terms are used in this document that have specific meaning in the context of the Investment Prioritisation Method and the three factors GPS Alignment, Scheduling, and Efficiency. We provide here an overview of key definitions.

GPS Alignment criteria

Where feasible, measures are drawn from the benefits framework, particularly those with centralised data available. The [Non-monetised benefits manual](#) provides a definition of the benefit, its measure(s), and identifies what data is available through [StoryMaps](#) or [MegaMaps](#).

GPS Priority	Name	Benefit measure #	Description	Comment on data availability
Safety	Collective risk (crash density)	1.1.1	Average annual fatal and serious injury crashes per kilometre of road section.	Collective risk identified for corridors and intersections throughout NZ
	Deaths and serious injuries	1.1.3	From geospatial point 'a' to geospatial point 'b', the number of deaths and serious injuries resulting from land transport-related crashes in the last year.	Identified for corridors and intersections throughout NZ
	Communities at Risk		See below	
Better Travel options and Climate Change	Impact on mode choice	10.2.10	Percent of transport users by mode pedestrians, cyclists and motor vehicles by vehicle class Definition of "other modes" – see below	Available by mesh block (Census 2013) or MOT NZ Household Travel Survey by region or major urban area
Better Travel options	Impact on access to opportunities Access to jobs	5.2.6	number of jobs accessed within 45 minutes by a given mode or modes (public transport, walking, cycling, driving) in morning peak	Measure uses the centroid of each NZ meshblock (48,000) as its origin and jobs as the destination
	Access to social opportunities	10.3.1	Proportion of population living within 15 minutes travel threshold of key social opportunities (including education, health care, supermarkets) by different modes (walking, cycling, public transport, private motor vehicle) in the morning peak	
	Access to frequent PT services	10.2.7	Access to public transport (within 500m of stop with transport that runs every 30 minutes) Access to high frequency public transport (within 500m of stop with transport that runs every 15 minutes)	Based on morning peak period – partial centralised data available
	New cycling links		Urban area definitions are below	
	Tourism destinations		Local / regional / national defined below	
Improving Freight Connections	Impact on mode choice	5.2.5	AADT of freight road vehicles (heavy vehicles) for state highways and local roads	Data about other modes is not available

<i>and</i> Climate Change				
Improving Freight Connections	Impact on network productivity and utilisation			
Climate change	Impact on GHG	8.1.1	CO ₂ vehicle emissions total grams per kilometre per day by carriageway id #	Modelled for each 0.2 square km – emissions rates calculated using vehicle emission prediction model (VEPM)
	Impact on air and noise/vibration	3.2.1 3.3.1	Annual concentration of NO ₂ in µg/m ³ and average annual vehicle emissions Number of people exposed to noise levels (measured in dB Laeq(24h))	Partial monitoring data available Regional data only – extrapolate for corridor

Communities at Risk

The [Communities at Risk Register](#) has been developed by Waka Kotahi to identify communities of road users that are over-represented in terms of road safety risk. The register highlights personal risk to road users by ranking communities by local authority area based on areas of concern.

The ratings are to be drawn from the 'All deaths and serious casualties' table in the most recent version of the Communities at Risk register. The definition of the levels of concerns is as follows:

- **High concern** is assigned to communities with personal risk profiles greater than one standard deviation from the mean (1 STDEV).
- **Medium concern** is assigned to communities with personal risk profiles greater than half a standard deviation from the mean and below one standard deviation (0.5 STDEV).
- **Normal concern** is assigned to the remaining communities from 0.5 STDEV down to those that are performing much better around individual risk than other territorial authorities

Standard deviation is a descriptive statistic that is used to understand the distribution of a dataset. It is often reported in combination with the mean (or average), giving context to that statistic. Specifically, a standard deviation refers to how much scores in a dataset tend to spread-out from the mean. If the distribution is normal then 68% of TAs, in this case, will lie within 1 STDEV of the mean.

Other modes

'Other modes' in the context of Better Travel Options supports mode shift for trips in urban centres from private vehicles to more energy-efficient, low-cost and healthier modes like walking, cycling, public transport, and using micro-mobility devices such as e-scooters, e-skateboards and e-bikes. Other modes also include removing the need to make a trip at all, by providing a digital alternative (e.g. internet-based doctor's appointments or e-learning) or working or studying from home.

Programme

A 'programme' means a defined group of land transport activities.

This is intended as a broad definition as it is recognised that there are different ways that activities can be grouped:

- By location (e.g. local authority boundary, region, national)
- By theme (e.g. public transport, optimisation)
- By activity class (e.g. walking and cycling)
- By outcome (e.g. safety, resilience)

A programme may be delivered by multiple organisations, may extend across multiple activity classes, and span across different start dates.

Package

A 'package' means a group of activities that are inter-dependent activities.

'Inter-dependent' means that it is necessary for all of the activities to be delivered to optimise the expected outcomes, i.e. if an activity within the package is not delivered, then it would reduce the effectiveness of the remaining activities within the package.

Urban areas

Urban areas are classified by the size of their estimated resident population:

- major urban area – 100,000 or more residents
- large urban area – 30,000–99,999 residents
- medium urban area – 10,000–29,999 residents
- small urban area – 1,000–9,999 residents.

Urban boundaries are independent of local government and other administrative boundaries, that is, an urban area may be contained within one or more local government region or administrative areas.

Source: [Statistical standard for geographic areas 2018 from Stats NZ](#)

Tourism destinations

Local tourism destination – attracts primarily local (intraregional) day and/or overnight visitors

Regional tourism destination - attracts primarily inter-regional overnight (and some day) visitors, as well as local day and/or overnight visitors

National tourism destination - attracts primarily international overnight visitors, as well as some inter-regional overnight visitors

Alternative routes or modes

Viable alternative routes or modes to the corridor or section of the corridor should consider the length and travel time of the detour mode or route, whether it has capacity for the additional demand and whether all known users are able to use the route or mode.

This is particularly important for lifelines routes and/or routes for access to emergency services. As a general rule, Waka Kotahi accepts detours as viable on alternative routes or modes that add less than two hours of travel compared to the original route or mode.