

# **Prioritisation process for funding of competing Transport related projects (Auckland Perspective)**

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## **ABSTRACT**

Auckland Regional Transport Authority (ARTA) is committed to a process of 'fair and transparent decision-making' in regard to the allocation of National Land Transport funds (NLTF) that are available to support new projects and initiatives. This paper outlines the process which will be used by the Planning and Programming (P&P) team in relation to that funding allocation. Please note that in some years there may not be discretionary funds to allocate, due to commitments in previous years and to maintenance and the operation of existing services. The size of the discretionary fund is determined each year by the New Zealand Transport Agency (NZTA) after consideration of the funding envelope and the commitments related to that. In 2008/09 the discretionary funding was more than 55% of total transport funding. Prioritisation of projects across the transport sector is challenging and it is recognised that the process will need constant refining to ensure that the process and results are robust.

Currently, the regional prioritisation tool - The Best Use of Available Resources: An approach to prioritisation is Auckland's regional tool for decision-making. The seven principles for this regional tool are:

- Seriousness and urgency of the transport problem
- Effectiveness of the proposed activity
- Economic efficiency of the scheme (calculation of benefit cost ratio)

The process we have developed therefore includes adherence to these principles and has been refined to take account of lessons learned over the past three years of preparing and funding the Auckland regional land transport programme. The process outlined in this paper describes ARTA's rigorous approach to project prioritisation principles and criteria designed to help direct available resources towards projects that will address the region's most pressing transport challenges.

## 1. INTRODUCTION

A large number of significant transportation capital investment projects are currently (Auckland Transport Plan, 2009) being proposed for the Auckland region by many public agencies. These agencies, which include the Auckland Regional Council, Auckland Highway Network and Operations, Auckland Regional Transport Authority, Auckland City Council, Franklin District Council, Manukau City Council, North Shore City Council, Papakura District Council, Rodney District Council and Waitakere City Council have each proposed, according to the 2009/12 Regional Land Transport Programmes, over 950 transport projects worth NZ\$4.36 billion over the next 3 years, far more than will be available through the traditional sources of funding and subsidies. As a result, the region must make important choices about how to prioritise these investments. The main objective of this paper is to illustrate the process of making rational and systematic choices based on economic and comprehensive regional transportation plan and objectives.

Evaluation of individual projects comes as a final stage in the strategic planning process. The Regional Land Transport Strategy and Auckland Transport Plan provide guidance on what projects are needed to improve the Auckland transport network, and individual transport agencies prioritise their own project before referring high-priority projects to this process. Generic profiles (shown later in Table 2) are used to give an indicative priority for different activities, before a detailed profile is developed for a specific project.

Once a project is submitted to the Regional Land Transport Programme (RLTP), the evaluation methodology applied incorporates acceptable transportation-economic methods. The main objectives of this paper are to define the investment decision problem that the stakeholders face, to describe the methodology used to evaluate and prioritise the projects.

The paper is organised as follows. Following the problem definition section, the next several sections provide details of the analysis, starting with the statement of regional priorities, the profiling principles and prioritisation process. Subsequently, as an example of how to profile and score, a discretionary non-generic project is given. The paper's final section discusses key results and some specific and general policy implications.

## 2. THE POLICY FRAMEWORK

A number of national, regional and local strategies and plans govern the Auckland's transport arrangements and improvements. They set out a broad range of objectives to which the Auckland Regional Land Transport Programmes must contribute and they have been used to establish the implementation framework for the Auckland Regional Land Transport Programme as shown in figure 1 below.

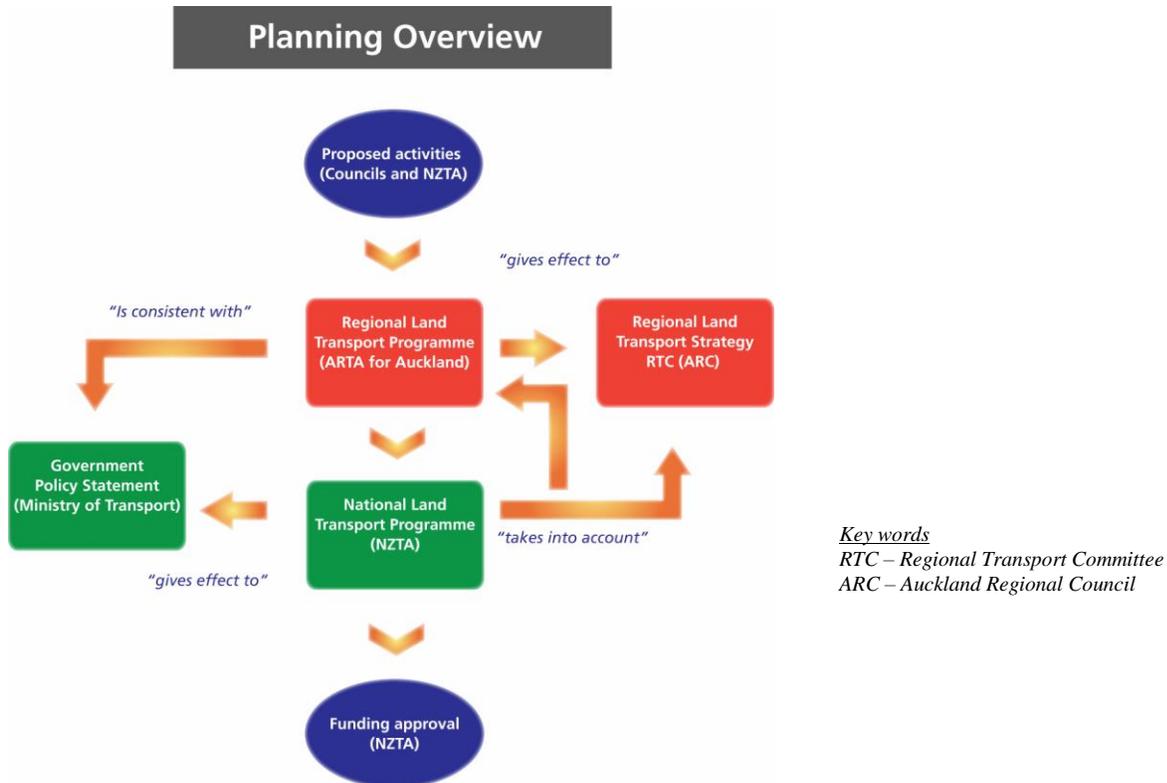


Figure 1: Policy Framework

## 3. THE RANGE OF PROJECTS PROPOSED FOR EVALUATION

Table 1 below summarises the funding requests submitted to the Auckland Regional Transport Authority for inclusion in the Regional Land Transport Programme (RLTP) for the next 3 years. It groups the projects together in similar types of schemes called Activity Classes. The table also shows Central Government indicative funding levels as distributed to the various Activity Classes over the next 3 years.

Table 1 : Comparison of Funding requested through the Regional Land Transport Programme and the 2009 Government Policy Statement Funding Allocations

Activity class	Final RLTP			Midpoint of 2009 GPS (\$000)	% Regional NZTA share of the 2009 GPS
	Local Share(\$000)	NZTA Share (\$000)	Region Total (\$000)		
	(1)	(2)	(3)	(4)	(5) = (2) / (4)
Transport Planning	\$9,811	\$34,046	\$43,858	\$105,000	32.4%
Demand Management and Community Programmes.	\$10,751	\$32,471	\$43,222	\$142,500	22.8%
Walking and Cycling Facilities	\$32,229	\$59,920	\$92,149	\$52,500	114.1%
Public Transport Services	\$326,821	\$386,761	\$713,582	\$630,000	61.4%
Public Transport Infrastructure	\$122,608	\$235,911	\$358,519	\$180,000	131.1%
Maintenance Local Roads	\$149,919	\$120,632	\$270,551	\$727,500	16.6%
Maintenance State Highways	\$0	\$182,046	\$182,046	\$927,500	19.6%
Renewal Local Roads	\$198,105	\$158,883	\$356,988	\$690,000	23.0%
Renewal State Highways	\$0	\$115,056	\$115,056	\$640,000	18.0%
New and Improved Local Roads	\$327,731	\$398,800	\$726,532	\$600,000	66.5%
New and Improved State Highways	\$0	\$1,462,219	\$1,462,219	\$2,962,500	49.4%
<b>Total</b>	<b>\$1,177,975</b>	<b>\$3,186,747</b>	<b>\$4,364,722</b>	<b>\$7,657,500</b>	<b>41.6%</b>

The column marked (4) from the above table refers to the midpoint of the 2009 Government Policy Statement (GPS) on the average available funding for each activity classes for the entire country. The column marked (2) indicates the New Zealand Transport Agency's (NZTA) subsidy (central government's share). Column marked (1) shows the local contribution from each approved organisation. In some cases, the projects are funded 100% from the central government as can be seen from the table above with state highway schemes. NZTA takes a wider view at issues facing the entire country while the Auckland Regional Transport Authority takes a more regional approach to address pressing regional issues. Overall, the regional objective must be consistent with the national objective.

Table 1 shows that the total funding sought through the Auckland Regional Land Transport Programme is over \$4.36 billion of which \$3.19 billion is from NZTA and \$1.18 billion from local share. Overall, about 42% of the entire National subsidy available is requested by the Auckland region which is about 33% of the Country's total population.

#### **4. REGIONAL TRANSPORTATION PRIORITIES**

The general priority for the region's transportation resource allocation is stated explicitly in the Auckland Transport Plan, 2009 in five Strategic Focus Areas (SFA). All five SFAs consider all road users (car users, PT passengers, pedestrians and cyclists) as well as freight. The Strategic Focus Areas are:

- SFA 1 - Greater focus on regional arterials
- SFA 2 - Greater focus on safety engineering for streets and roads
- SFA 3 - Optimise the use of the existing transport system to move people and freight
- SFA 4 - Strong focus on transport investments that are supportive of the regional growth strategy
- SFA 5 - Completion of key links in the region's strategic roading, passenger transport and cycle networks

#### **5. THE PROFILING PRINCIPLE**

An activity's profile consists of giving High, Medium or Low rating to each of the following three factors:

- i. Seriousness (of the issue being addressed) – Seriousness refers to the scale and importance of the transport problem to which the project responds. This is set out in more detail in Table 3.
- ii. Effectiveness (of the proposed solution) – refers to the extent to which the solution (the project) contributes to addressing the issue being addressed and the broad policy objectives as set out in the regional transportation priorities, also referred to as the strategic focus areas.
- iii. Efficiency (of the proposed solution) – the efficiency of activity is based on its Benefit/Cost Ratio. In calculating the Benefit/Cost Ratio, sensitivity analysis of the key Benefit/Cost Ratio drivers should be undertaken, and consideration given to including all benefits and costs.

The three factors named above are given equal weighting; the outcomes can result in activity profiles with the same seriousness rating. In such cases, the urgency of a project will be considered in order to further rank the priority of projects with the same seriousness rating. Urgency allows for the incorporation of any external factors that influence the timing of implementation.

The last part of profiling considers the activity's contribution to the strategic balance of the Auckland Transport Plan. This factor allows a structural judgment to be applied to ensure that the overall shape of the Auckland Transport Plan is acceptable, recognizes the modal shares and outcomes indicated in the Regional

Land Transport Strategy, and is consistent with the relevant GPS takes account of broader considerations that might influence the priority and timing of regional projects.

## 6. THE PRIORITISATION PROCESS

Within the framework of the adopted Regional transportation priorities described above, potential projects were assessed and evaluated. The flow chart below shows how the various steps in the prioritisation processes work together. To ensure its priorities for land transport investment to support national economic growth and productivity are met, the Government Policy Statement (GPS) sets funding limits on all activity groups.

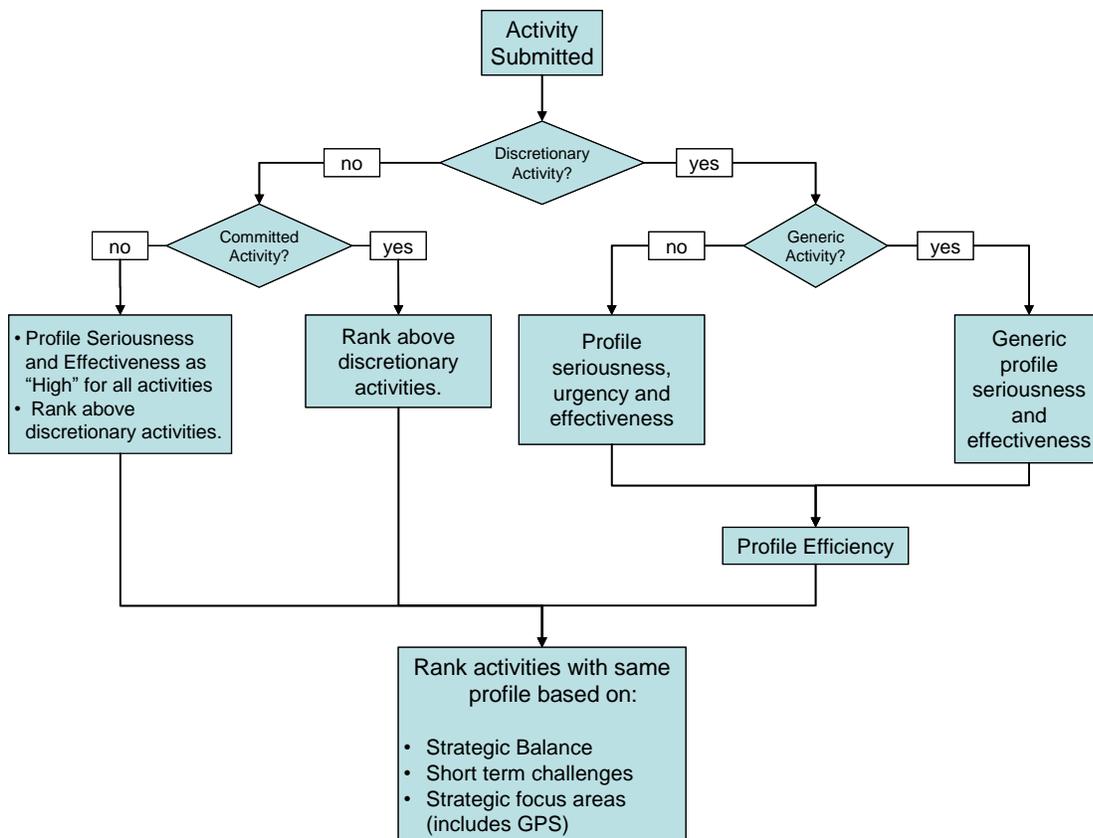


Figure 2 – Summary of the prioritisation process

## 6.1 Non – discretionary activities

The prioritisation process first extracts the following non-discretionary activities:

- Maintenance of existing public transport service.
- Committed activities – ongoing activities (including completion of projects approved in prior years.)
- Maintenance and renewals of local roads, state highways and public transport infrastructure.

These activities are treated as priorities and are funded before all other projects which are considered discretionary.

## 6.2 Discretionary activities

These activities are categorised according to whether or not they are able to have a ‘generic’ prioritisation profile applied to them. Projects with a generic prioritisation profile are usually below \$4.5 million in capital value and are generally simple routine types of capital improvements. Discretionary and generic activities are straightforward to prioritise as the profiles for these schemes have been developed and can be applied uniformly to the project using Table 2 below.

**Table 2: Generic profiles for ‘Seriousness’ and ‘Effectiveness’**

Generic project description	Seriousness	Effectiveness
Traffic management: network efficiency	Medium	High
Effluent disposal facilities	Medium	Medium
Bridge renewals: structural, seismic strengthening - safety	High	Medium
Replacement of bridges: route efficiency	Medium	Medium
New Roads and bridges: safety	High	Medium
New Roads and bridges: route efficiency	Low	Medium
Road reconstruction: Route efficiency improvements at intersections or along routes	Low	Medium
Road reconstruction: Passing Lanes	High	Medium
Road reconstruction: Rural realignment (travel time)	Low	Medium
Road reconstruction: Rural realignment (safety)	High	Medium
Road reconstruction: Safety improvements at intersections/along urban routes	High	Medium
Road reconstruction: Safety retro-fitting	High	Medium
Road reconstruction: Seismic retrofitting	Medium	Medium

<b>Table 2 continued: Generic profiles for ‘Seriousness’ and ‘Effectiveness’</b>	<b>Seriousness</b>	<b>Effectiveness</b>
Road reconstruction: Street lighting improvements	High	Medium
Road reconstruction: Pavement smoothing	Low	Medium
Seal Extensions:		
· Community benefits	Medium	Medium
· User benefits	Low	Medium
Advanced property purchase: safety	High	Medium
Advanced property purchase: route efficiency	Low	Medium
Advanced property purchase: alternative modes	High	Medium
Purpose built walking or cycling facilities	High	Medium
Improvements to existing mixed walking or cycling networks	High	Medium
Passenger transport infrastructure improvements	High	High
Preventive maintenance	Medium	High

Activities with a capital value above the \$4.5 million threshold are referred to as larger and more complex activities. These larger, more complex activities are then ranked and profiled based on the process described below.

### **6.3 Seriousness and Urgency**

Seriousness considers the scale and importance of the transport problem to which the projects responds as assessed against the key challenges identified in the Table 3 below. The first step towards assessing the seriousness rating of a project is to identify the main issues each project is aimed at addressing and assess these issues against the challenges identified in Table 2. A High, Medium or Low (H, M, L) rating is then allocated to each of the challenges in Table 3 for the project being assessed.

All activities start with a default Low rating against each challenge listed in Table 3 below.

- A High rating for any challenge can be obtained if the project matches the principles listed below for that challenge.
- If the project is part way towards any of the challenges listed below, then a Medium rating is used for that challenge.

The second step is then to allocate an overall rating for the seriousness factor.

- An overall High rating for the seriousness factor only requires a High against one challenge.
- A medium rating requires one Medium.

Table 3 – Prioritisation principles and assessment criteria for Seriousness and Urgency

<b>Seriousness: the scale and importance of the transport problem to which the project/activity or package responds.</b>			
<b>Strategic Focus Area</b>		<b>Challenges</b>	<b>Prioritisation Principles</b>
SFA 1, 4, 5	S1	Increasing travel choices and reducing reliance on private cars	<ul style="list-style-type: none"> <li>• Highest priority will be given to the needs of those travelling to employment, education centres and vital social services</li> <li>• Ensuring viable alternative transport choices to and within town centres will be a priority</li> <li>• Priority will be accorded to providing transport mode choice in areas of high social deprivation and to the transport disadvantaged</li> </ul>
SFA 2	S2	Providing a transport system that is safe to use	<ul style="list-style-type: none"> <li>• Areas with demonstrated safety problems (both current and potential) will be addressed first (i.e. accident black-spots, recognised unsafe sites, etc)</li> <li>• Safety improvements for vulnerable users will be given a high priority</li> </ul>
SFA 1, 3, 5	S3	Minimising the impact of congestion and unreliable travel times	<ul style="list-style-type: none"> <li>• Highest priority will be given to addressing congestion which impacts on freight and commercial traffic movements, and all-day congestion that constrains business and community development</li> <li>• Priority will be given to reducing congestion which impacts on passenger transport and improving passenger transport travel times</li> <li>• Congestion that impacts on the safe and efficient operation of strategic corridors and the needs of inter-regional travel will receive a high priority</li> </ul>
SFA 1, 3, 5	S4	Encouraging and facilitating economic development	<ul style="list-style-type: none"> <li>• Priority to projects which support increased economic productivity, including intensification of employment, economic clusters, and effective heavy goods vehicle access</li> <li>• Improving accessibility to areas of intensified economic activity, including visitor concentrations</li> </ul>
SFA 4	S5	Ensuring integrated land use and transport provision	<ul style="list-style-type: none"> <li>• The Regional Growth Strategy (RGS) growth concept, as contained in the Regional Policy Statement (RPS), will be a key determinant in deciding priorities for investment in transport, with particular emphasis on: Intensification, proper land use and accessibility.</li> </ul>

SFA 3, 4	S6	Promoting environmental sustainability	<ul style="list-style-type: none"> <li>• Priority will be given to reducing dependence on non-renewable resources (including fuel, land, and aggregate)</li> </ul>
SFA 3, 4	S7	Promoting public health outcomes	<ul style="list-style-type: none"> <li>• Priority will be given to addressing air emissions from vehicles in areas with high population exposure</li> </ul>
<p>Urgency: allowing the incorporation of any external factors that influence the timing of implementation.</p> <p>Does the project have particular timing or interdependencies with other actions that make its implementation urgent, such as:</p> <ul style="list-style-type: none"> <li>• The potential failure of critical infrastructure?</li> <li>• The potential foreclosing of significant future development or transport opportunities if action is not taken?</li> <li>• The need for completion in time for specific events of regional or national significance, particularly the Rugby World Cup?</li> <li>• The need for the project as a prerequisite for other high-priority activities (for example advance land purchase)?</li> </ul>			

## 6.4 Effectiveness

The evaluation of effectiveness on all activities start with a default Low rating against each objective listed in Table 4 below:

- A High rating for any objective can be obtained if the project matches the principles listed below for that objective.
- If the project is part way towards any of the objectives listed below, then a Medium rating is used.

The second step is then to allocate an overall rating for the effectiveness factor.

- An overall High rating for the effectiveness factor only requires a High against one objective.
- A Medium rating requires one Medium.

Table 4 – Prioritisation principles and assessment criteria for Effectiveness

<b>Effectiveness: the extent to which the solution (the package or project/activity) contributes to the broad policy objectives as stated below.</b>		
Objective		Assessment Criteria
E1	Integration of transport networks, services and land use	<ul style="list-style-type: none"> <li>• How effective is the project in contributing to a transport network which integrates all modes?</li> <li>• How effective is the project in increasing the choice of mode?</li> </ul>
E2	Impact on sustainability of transport network	<ul style="list-style-type: none"> <li>• How effective is the project in retaining benefits over time?</li> <li>• To what extent does the project have an impact on other parts of the transport network?</li> </ul>
E3	Contribution to the Regional Growth Strategy	<ul style="list-style-type: none"> <li>• To what extent does the project actively support the RPS and RGS growth concept, including centre intensification and/or high-density corridors?</li> </ul>
E4	Economic development	<ul style="list-style-type: none"> <li>• How effective is the project in reducing travel time variability for freight movement between key economic hubs?</li> <li>• To what extent will the project encourage shorter journeys that deliver economic advantages?</li> <li>• To what extent does the project have the potential to unlock private sector investment and development benefits?</li> </ul>
E5	Safety and personal security	<ul style="list-style-type: none"> <li>• To what extent will the project reduce crashes?</li> <li>• How effective is the project in improving the safety and personal security of vulnerable transport?</li> </ul>
E6	Access and mobility	<ul style="list-style-type: none"> <li>• To what extent will the project improve the transport choices available?</li> <li>• How effective is the project in improving access to appropriate transport for vulnerable users, the transport disadvantaged and their caregivers?</li> <li>• To what extent does the project remove barriers to people's ability to access opportunities for work, education, health and social services (especially the transport disadvantaged)?</li> </ul>
E7	Public health	<ul style="list-style-type: none"> <li>• How effective is the project in increasing the use of active modes?</li> <li>• How effective is the project in reducing harmful air emissions?</li> <li>• How effective is the project in reducing traffic noise and vibration?</li> </ul>
E8	Environmental sustainability	<ul style="list-style-type: none"> <li>• To what extent will the project reduce reliance on non-renewable resources?</li> <li>• To what extent will the project improve fuel efficiency?</li> <li>• How effective is the project in reducing adverse water quality impacts?</li> <li>• To what extent does the project avoid environmental damage and reduce the adverse impacts of transport on the natural and physical environment?</li> <li>• To what extent does the project reduce community dislocation?</li> </ul>

## **6.5 Efficiency**

The efficiency of an activity is based on its Benefit/Cost Ratio (BCR). In calculating the BCR, sensitivity analysis of the key BCR drivers should be undertaken, and consideration given to, and including all benefits and costs such as agglomeration impacts, enhanced land use outcomes and positive urban design outcomes.

The profile relationship for the efficiency is:

- High - if the  $BCR \geq 4.0$
- Medium – if  $2.0 \leq BCR < 4.0$
- Low –  $1.0 \leq BCR < 2.0$

Where no details on the efficiency of a project are known at the planning stage, a default Low value is assumed in the project evaluation.

## **7.0 EXAMPLE OF HOW TO USE THE PROFILING WORKSHEET**

Worksheet 1 below provides a summary of the general assessment criteria used for the evaluation of seriousness, urgency and effectiveness rating. The information required to populate the worksheet is a subset of the information given in the prioritization principle and assessment criteria for seriousness, urgency and effectiveness given in Table 3 and 4 above.

## Worksheet 1 – Evaluation Worksheet 1

<b>Project Name:</b> ABC Corridor & Streetscape Improvements				
<b>Project Description:</b> Corridor improvements in sub regional growth centre. Includes road widening, intersection improvements, bus priority measures and provision of on road cycle path.				
<b>Seriousness</b>		<b>High</b>	<b>Medium</b>	<b>Low</b>
S1	Increasing travel choices and reducing reliance on private cars	Commuter & education related congestion. RGS indicates growth centre. Provides additional choice to vehicular travel (mode shift from private vehicles)		
S2	Minimising the impact of congestion and unreliable travel times	Increases in bus frequency, reliable travel times.		
S3	Encouraging and facilitating economic development		Existing growth centre, unreliable travel times and heavy congestion particularly in AM peak.	
S4	Ensuring integrated land use and transport provision			No significant issues – supports RGS
S5	Providing a transport system that is safe to use		Provision of on road cycle path will improve safety outcomes	
S6	Promoting environmental sustainability			No significant issues
S7	Promoting public health outcomes			No significant issues
<b>Seriousness rating</b>				<b>High</b>
<b>Effectiveness</b>		<b>High</b>	<b>Medium</b>	<b>Low</b>
E1	Integration of transport networks, services and land use	Corridor improvements will include bus priority measures at signalised intersections and ARTA has agreed to double frequency of bus services. Additional on road cycle lanes will also be created (part of RCN)		
E2	Impact on sustainability of transport network		Bus and cycle improves	n/a

			sustainability	
E3	Contribution to the Regional Growth Strategy		Supports RGS	
E4	Economic development			n/a
E5	Safety and personal security		The safety audit identified some safety improvements to the ABC/DEF Roads intersection that will be incorporated in the final design.	
E6	Access and mobility	The upgraded corridor provides additional widening for cycling, provides increased PT frequency.		
E7	Public health			n/a
E8	Environmental sustainability			n/a
<b>Effectiveness rating</b>				<b>High</b>
<b>Urgency factors</b>				
None				

## 7.1 EXAMPLE OF HOW TO USE THE PROFILING WORKSHEET 2

Benefit cost ratio as described in 6.5 above focus on the economic efficiency of the proposed solution. The projects, in general are at an early stage of planning and much of the detail necessary for a full evaluation has not been done by the proposing agencies. The calculated preliminary (benefit/cost) information shown below is then used to rank projects similar seriousness and effectiveness profile. The higher the efficiency value for similar projects with the same seriousness and effectiveness profile the greater the priority placed on such project. Activities with Efficiency less than 1.0 are usually rejected as not being economically viable.

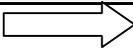
## Worksheet 2 – Evaluation Worksheet

Given the following Road and traffic data from Road Asset Maintenance Management Record:	
Annual Average Daily Traffic	1,800
Traffic Growth	2.50%
Existing Roughness	80 NAASRA
Predicted Roughness	64 NAASRA
Length of Job After Improvements	1.06m
Existing Traffic Speed	90 Km/hr
Predicted Traffic Speed	100 Km/hr

BCR calculations using the New Zealand Transport Agency's Economic Evaluation Manual:	
<b>Benefits</b>	
Travel Time Cost Savings (TTC)	\$218,312
Vehicle Operating Cost Savings (VOC)	-\$89,076
Accident Cost Savings (AC)	\$160,629
<b>Cost</b>	
Do-Minimum (DM)	\$334,478
Cost of Option (CO)	\$397,177

Benefits Cost Ratio (BCR)		$\frac{TTC + VOC + AC}{DM - CO}$
		$\frac{\$218,312 - \$89,076 + \$160,629}{\$397,177 - \$334,478}$
		4.6 (efficiency profile is 'High', using 6.5 above)

## 8. Ranking Schemes

Over 900 schemes that were submitted to ARTA are grouped into 11 activity classes (as shown in Table 1 above). Projects are then ranked in order of priority within each activity class using the seriousness and urgency, effectiveness and efficiency criteria as described above. It is beyond the scope of this paper to examine the prioritisation process within all the 11 activity classes. Suffice it to say that in this study, 10 projects from the activity class called – New and Improved Infrastructure for State Highways (Table 1 above) will be listed in order of priority using the process described above.

Table 5 – Selected Example of Prioritised List of Schemes

Project Name	Project Phase	Work Category	Cost	Seriousness & Urgency	Effectiveness	Efficiency	Preliminary BCR Value
Auckland Improved traffic management group	Group allocation	Road reconstruction	\$3,754,512	M	H	H	20
McKinney Road / Wech Drive Intersection	Construction	New roads	\$11,506,000	H	M	H	11.1
Auckland Road safety group	Group allocation	Road reconstruction	\$32,789,505	H	M	H	4.7
Schedewys Hill Dev	Design	New roads	\$3,371,000	H	H	M	3.3
Hobsonville Deviation	Property	Property purchase	\$4,100,000	M	M	H	4.3
Papakura Interchange Upgrade Stage 1	Investigation, Design & Construction	Road reconstruction	\$28,512,150	H	M	M	3.6
Lincoln Rd I/C Upgrade	Investigation, Design & Construction	Road reconstruction	\$8,934,000	H	M	M	3.2
St Lukes to Te Atatu I/C Upgrade	Property, Investigation & Design	New roads	\$13,413,000	H	M	M	2.5
Dome Hill Realign	Design	Road reconstruction	\$320,000	H	M	M	2.3
Falls Bridge Realignment	Investigation	Road reconstruction	\$265,225	H	H	L	1.7

## 9. CONCLUSION

A sizeable number of large scale infrastructural projects have been proposed for the Auckland Region by the Approved Organisations to the Auckland Regional Transport Authority for close scrutiny, evaluation and assessment. The key result that characterizes the “best” scheme is that they ranked highest on all the three scale of seriousness and urgency, effectiveness and efficiency as it relates to the set regional strategic focus areas. If two projects are equally meritorious with respect to the criteria discussed above, then the larger will have a greater impact in terms of the criteria. The available measure of size in our case is the construction cost.

Finally, the role of a professional public planning agency (like ARTA) in the project selection and prioritisation processes cannot be over emphasized as it counter-balances political stakeholder demands, regional equity and resources availability in regional transportation investment decision making processes.

## **10. REFERENCES**

1. Auckland Regional Transport Authority, 2009/10 – 2011/12 Auckland Regional Land Transport Programme, July 2009.
2. Auckland Regional Transport Authority, Auckland Transport Plan 2009 – 2019, July 2009.
3. New Zealand Transport Agency, Economic Evaluation Manual Volume 1, September 2008.
4. New Zealand Transport Agency, Planning, Programming and Funding Manual, August 2008.