

DETAILED BUSINESS CASE

A NATIONAL CYCLING EDUCATION SYSTEM

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VERSION 3

Prepared for the NZ Transport Agency and the Accident Compensation Corporation.



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Revision status

Revision number	Date	Completed By	Revisions
1	May 11 2017	Greer Hawley	Revisions in response to comments from project sponsors, the governance group and peer reviewers.
2	May 26-29 2017	Greer Hawley	Updated Cost Benefit Assessment, cost and reach information.

“... Bikes in Schools that we’re doing here today is so important... it’s getting a lifelong habit of biking amongst the children that we can see all around us and you know that’s got so many things about it that’s good, ultimately probably and from a transport perspective it might mean less cars on the roads over time but more than that it, it’s just creating happy healthy lifestyles for longer I am sure it is something we will want to keep going because you don’t mess with success.”

Hon Simon Bridges, Minister of Transport (Gate Pa School, April 2017)

“I want tips on what I should be doing, rather than just looking around [while riding to work] – what’s the best thing I should be doing?”

Novice Cyclist, Auckland (November 2016)

“We want to do school trips by bike to MOTAT, my ultimate goal is to get these students riding to school. It’s a life skill”

School Principal, Auckland (March 2017)

EXECUTIVE SUMMARY

Cycling, as a transport mode, a sport and a recreation activity, is experiencing recent growth and there is increasing recognition of the significant congestion, health and environmental benefits of cycling. Investment in cycling infrastructure is already receiving substantial focus through the New Zealand Cycle Trail and Urban Cycleway Programmes, and 10-year plans for connected cycle networks are underway in urban centres. However, the annual cost of ACC claims for cycling injuries has grown since 2011 by \$24.6 million, suggesting that unless a *full* Safe System approach is developed, a further increase in cyclist injury is likely to accompany increased investment and promotion. Therefore, to complement infrastructure investment, a comprehensive and proactive approach to educating cyclists is needed to truly establish a Safe System, and further drive cycling uptake to yield the wide range of benefits for New Zealand. The current approach to cycling education falls short of providing an acceptable solution.

This Detailed Business Case requests resources for a National Cycling Education System. The activities that form this investment, and the expected benefits, are part of a wider programme of work by the Transport Agency and partners to make cycling both physically **safer** and perceptually more **attractive**.

What is Cycling Education?

Cycling Education is about enabling New Zealanders to have the personal competencies to experience their communities by bike and, be a safe road user in general.

Why is further investment in Cycling Education needed now?

Building on the Strategic-Indicative Business Case (September 2016), this Detailed Business Case has confirmed the need for more investment cycling education for the following reasons:

- Cycling is growing, but it needs to grow at a faster rate if the benefits of cycling are to be gained at nationally meaningful levels.
- We will have more cyclists with less experience on our network in the next 5-10 years, and based on the upward trajectory of ACC cycling claims, the cost of injuries will continue to rise unless a comprehensive and proactive approach to education is taken, alongside infrastructure improvements. We need an approach to cycling education that focusses on habitualising safety behaviours and equipping people with the skills, knowledge and perspectives they need to safely get around by bike.
- There is emerging evidence of a knowledge or behaviour deficit amongst cyclists (novice and experienced), particularly in specific high-risk situations (i.e. safe behaviour around heavy vehicles, intersections and high cyclist speeds). If cycling is being promoted, improving access to key safety information is imperative in a Safe System approach.
- Heavy vehicles are over-represented in fatal cycling crashes, in addition to improvements in a safer network for cyclists, continuing to educate heavy vehicle drivers and cyclists about

how to share the road is needed, as reflected in the high priority recommendations of the Cycling Safety Panel (2014).

- The amount of time NZ children spend cycling, and the number of children who cycle to school, has dramatically decreased since 1990. Connected cycling routes will go some way to reversing this trend; however, increasingly, evidence points to a comprehensive, well-supported approach that provides opportunities to gain cycling experience, and involves schools, parents and whanau in the reinforcement of learning. Only with this in place can we expect child cycling numbers to substantially grow.
- There are imminent changes to Road User Rules (i.e. potential changes to footpath rules) and there needs to be an efficient mechanism for educating current and future cyclists about these changes in a high-quality way.

What's wrong with what we do now?

Collectively, the Transport Agency, Local Authorities, and ACC, already invest approximately \$2.4 million per year in cycling education. However, the problems below, identified in the Investment Logic Mapping process, and further developed in the Detailed Business case phase, prevent the status quo from being an acceptable solution.

PROBLEM A - Limited Reach

We fail to coordinate and provide contextualised cycling education (on-road), which means we are not reaching sufficient people to support more safe trips by bike as cycling's popularity increases.

PROBLEM B - Limited Quality

The current approach is narrow, and often a 'one-off' event and therefore it is less likely to equip people to ride a bike safely on the network.

PROBLEM C - Limited Integration

Cycling education is not integrated with other cycling initiatives or investments, including cycling infrastructure, which reduces the likelihood of these increasing the uptake of cycling as a transport mode.

PROBLEM D - We don't measure the benefits

We don't have strong quality assurance mechanisms or a robust approach to evaluating cycling education, meaning we don't understand the benefits of the current investment.

PROBLEM E - Duplication

We are duplicating the development of resources and materials resulting in inefficiencies and inconsistencies.

How does cycling education align with strategic goals?

✓	Supports the multi-modal focus in high growth urban areas and the road safety goals of the draft Government Policy Statement 2018
✓	A fundamental part of the Safe System approach (through the Road User pillar); an integrated approach to cycle safety is a core activity in the Safer Journeys Action Plan 2016-2020 and an area of Medium concern in the Safer Journeys Strategy
✓	Recommended as High-Medium priorities in the Cycle Safety Panel report 2014)
✓	A fundamental part of an Integrated approach to “making cycling a safer and more attractive transport choice”
✓	Aligns to ACC’s Statement of Intent to prevent the incidence and severity of injury
✓	Aligns to ACC’s SportSmart Framework, particularly the Skill and Technique principle
✓	Aligns to and delivers of elements of the Road Safety Partnership Programme between the Transport Agency, ACC and WorkSafe NZ
✓	Consistent with Sport NZ’s focus on physical literacy and the development of high quality physical education
✓	Aligns to the Ministry of Health’s Childhood Obesity Action Plan
✓	Aligns to the goals of the NZ Curriculum of ‘Young People who are confident, connected, actively involved life-long learners’

What is the proposed solution?

The proposed solution is a National Cycling Education System. This is a comprehensive and high-quality approach to cycling education that will provide multiple opportunities for New Zealanders to experience cycling, and obtain the competencies to be a safe road user on a bike.

For New Zealanders, this means...

- At an early age, developing a love of cycling and sound bike handling skills through the Bikes in Schools model;
- Learning about the concept of citizenship and being a responsible, safe road user through curriculum inquiry learning;
- Developing on-road cycle skills and hazard perception through high-quality on-road cycle training, supported by external instructors;
- Having learning consolidated by teachers, parents and whanau to reinforce safe behaviours and norms through developmental years;
- As an adult having access to further cycling education (if needed) through a range of tailored opportunities; and,
- Understanding the needs and perspectives of cyclists, once they become a motor vehicle driver.

For NZ Transport Agency and ACC...

The National Cycling Education System will provide:

- A system that is well understood by stakeholders across New Zealand, supported by a national brand;
- A consistent understanding of 'what good cycling education looks like' and quality assurance mechanisms to ensure agreed standards are being met;
- A funding and administration model that allows for a well-supported approach, cross-government collaboration, and the addition of future commercial partners;
- The ability to maximise the benefits of existing investment in cycling infrastructure and other promotional activities;
- A robust evaluation process to capture the benefits of cycling education; and,
- A platform for future growth and development of cycling education.

The Administration Model

This investigation has confirmed that an external 'National Administrator' is needed to effectively and efficiently operationalise the National Cycling Education System. The National Administrator will be responsible for national leadership, detailed design, and quality assurance, and will work alongside regional and national partners (including ACC, the Transport Agency and councils) to enable high-quality cycling education at a local level.

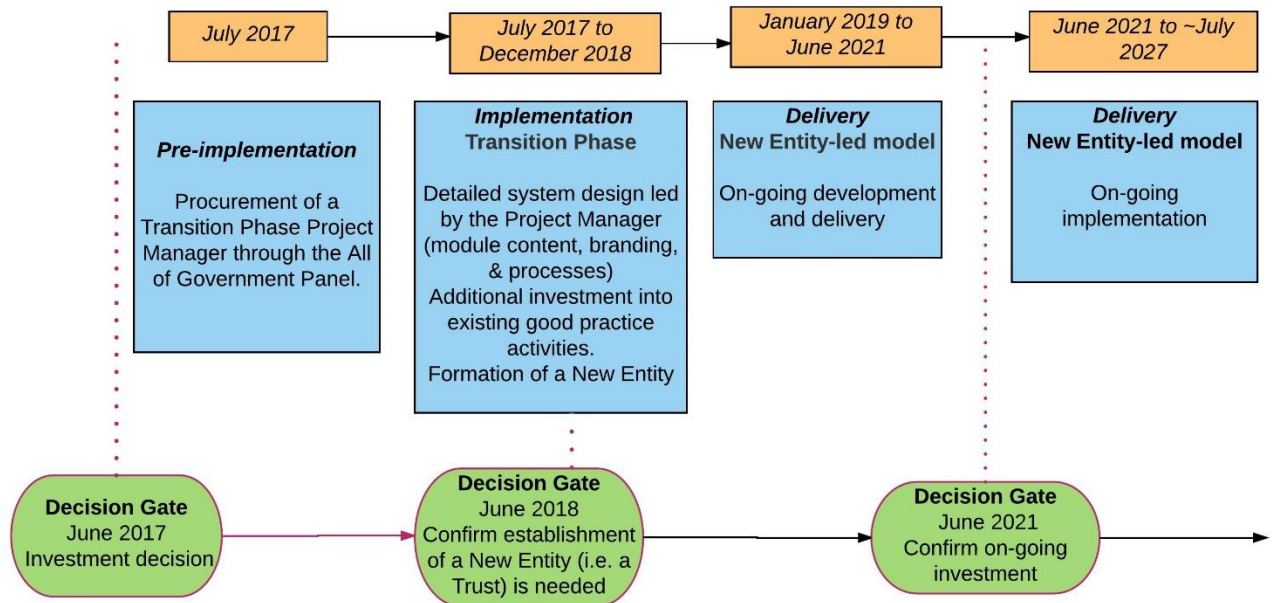
It is recommended that a new entity be established to take on this role as National Administrator. Compared to an existing organisation, a new entity is most likely to:

- Provide strong national leadership through a dedicated focus on achieving the goals of the National Cycling Education System;
- Be adaptable to cross-government objectives; and
- Leverage further investment from commercial sponsors and other government partners.

Legal advice, stakeholder consultation, and analysis of costs and risks, confirmed the New Entity Model as the optimal solution, with a Charitable Trust being the preferred organisational type. Precedent case studies from the UK and from the Ministry of Social Development also demonstrate the feasibility and benefits of a Charitable Trust model.

In the short-term (July 2017 to December 2018), it is recommended that a Transition Project Manager be contracted to act as an Interim National Administrator, and work with the Transport Agency and ACC to form the New Entity. This will include confirming that a Charitable Trust is the optimal model by June 2018.

Implementation Phase Process



The funding model

It is proposed that investment in the local delivery of cycling education be based on a one-third Transport Agency, one-third ACC, and one-third local share funding model. The Transport Agency and ACC will share the cost of the national administration in the first four-years, while sourcing other national partners in the future.

It is recommended that Local Authorities continue to apply for funding through the National Land Transport Programme process, through the Road Safety Promotion activity class, and ACC's contribution be integrated into this process. The funding model will also allow for contributions from other national partners, including commercial organisations, through the National Administrator. This funding model was deemed the optimal way to allow for cross-government partnerships, as well as reduce financial risk.

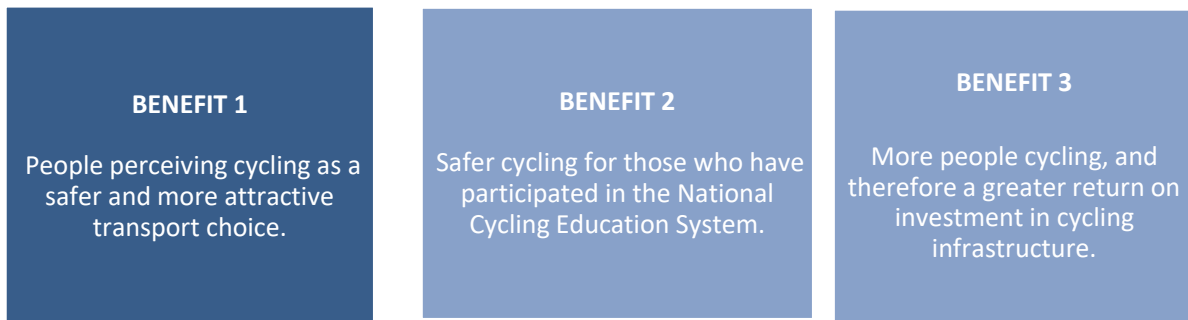
What are the outcomes and benefits of this investment?

Intermediate outcomes

More New Zealanders:

- equipped with the skills and knowledge needed to ride a bike for everyday trips;
- who can identify hazards and respond appropriately while riding a bike on the network;
- who understand key road sharing behaviours and the perspective of other road users;
- who know how cycling for everyday trips can benefit them, their communities and society;
- with competencies to contribute to a safe transport system and liveable communities.

Benefits



Isolating the benefits that are attributable to high-quality cycling education separately from other investments in cycling (such as infrastructure) is a significant challenge utilising current literature. However, there are strong lines of logic between the proposed activities in the Cycling Education System and the outcomes that are expected, which will be confirmed as implementation occurs. The 'Safety in Numbers' effect posits that as cycling participation reaches a threshold of mode share (approximately 5%-7%), a lower injury rate per cyclist will become evident; therefore, through supporting increases in participation, cycling education may also contribute to the safety of cyclists in this way.

The proposed evaluation approach will firstly confirm the system is operating effectively and then quantify the impact of cycling education on injury and participation outcomes. This evaluation approach includes the use of ACC claim data to track injury risk over time; an approach which will make a strong contribution to the international evidence base.

Key performance indicators: Improving reach, dose and quality

Based on the moderate investment scenario, in the 4-year period between June 2017 and June 2021:






- Approximately 180,000 individual New Zealanders will be reached;
- More than 1,200,000 hours of cycling education across the country will be delivered, an 80% increase compared to if status quo levels of delivery were maintained over the next 4-years;
- There will be a 135% increase in the amount of on-road cycle education (Grade 2) for adolescents (compared to current delivery levels); by 2021 33% of 10-11 year olds will receive on-road cycle education.

Module	Reach by age group estimate	Transition & Delivery Year 1 2017/2018	2018-2019 Year 2	2019/2020 Year 3	2020/2021 Year 4
Bikes in Schools*	5-9 years	10,500	10,500	10,500	10,500
Students participating in Grade 1 Cycle Education	10-14 years	13,960	14,615	14,615	14,615
Students participating in Grade 1 and 2 Cycle Education	10-14 years	11,783	15,056	18,329	21,602
Adults TOTAL	18-65 years	1,895	2,480	3,280	4,080
Heavy Vehicle Drivers	18-65 years	350	350	350	350
Total		38,488	43,001	47,074	51,147
4-year reach total (individuals)	179,710				

*The number of new students with access to Bikes in Schools each year

The number of individuals 'reached' over the 4-years from June 2017 to June 2021 has been used in the Cost Benefit Assessment and are presented in the totals above. However, it needs to be acknowledged that the strength of the National Cycling Education System is the cycle education opportunities across a person's life course. This results in a larger 'dose' for each individual, and means that learning is progressive, rather than being a 'one-off' event which we know is less effective. The Bikes in Schools model, where children can be exposed to cycling and cycle education messages often on a daily basis, is a good example of higher dose.

Similarly, the National Cycling Education System is about improving quality and preparing people to be safe road users. Therefore, increasing the overall reach of on-road cycle education (Grade 2), and improving alignment with the NZ School curriculum and best practice road safety education, are key components of the proposed solution. A strong focus on children, adolescents and families means we are taking an early intervention approach, aiming to facilitate the development of life-long safe cycling behaviours. Adult cycling education will focus on people who are new to riding on the network, as well as high-risk groups and behaviours.

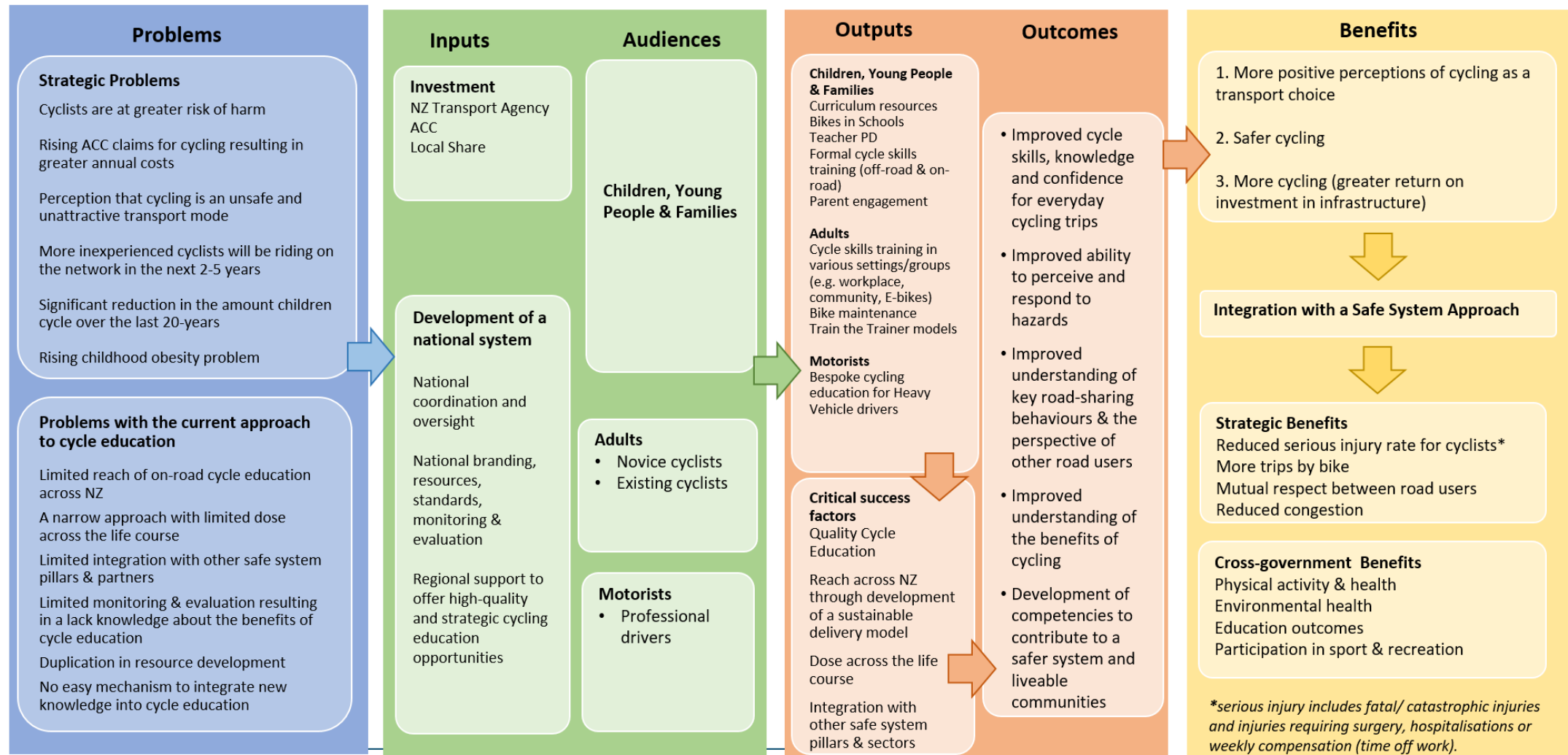
Now... <i>Estimate of status quo annual levels of reach</i>	2020-2021... <i>Estimate of annual levels of reach in Year 4 of the national system</i>	Growth in reach <i>Status quo vs 2020/2021 reach levels</i>
75 schools with Bikes in Schools¹	215 schools with Bikes in Schools¹	186% increase ¹ 
42%² of 9-11 year olds participating in 'Preparation for On-Road riding' (Grade 1) cycle skills training each year	58% of 9-11 year olds participating in 'Preparation for On-Road riding' (Grade 1) cycle skills training each year	38% increase 
14% of 10-14 year olds participating in 'Introductory On-Road' cycle skills training (Grade 2) each year (9,164 students).	33% of 10-14 year olds participating in 'Introductory On-Road' cycle skills training (Grade 2), and a further 3% participating in more advanced on-road training.	135% increase 
~1200 adults reached through adult cycling education each year.	~4000 adults reached through cycling education in this year, and the development of a sustainable delivery model to improve reach over time.	233% increase 
~250 heavy vehicle drivers annually.	~350 heavy vehicle drivers reached in this year and the development of a sustainable delivery model to improve reach over time.	40% increase 

¹ Bikes in Schools figures refer to the estimated total number of schools (and students) with access to the Bikes in Schools model at the end of the stated financial year, as opposed to annual reach figures.

² Percentages are based on a total pool of 65,460 students in Year 6 (i.e. the cohort of 10-year olds).

Problems to benefits: a one-page logic model of the National Cycling Education System

New Zealanders with the competencies to be responsible, safer citizens ON and AROUND Bikes.



How have the views of partners and stakeholders been incorporated?

There is strong support for the proposed approach across a wide range of stakeholders, including Local Authorities and existing cycle education providers. This process has also built relationships with Sport NZ, the Ministry of Health, and the Ministry of Education, opening doors for future collaboration. Formal letters of endorsement are attached from Sport NZ, the Automobile Association and the Ministry of Health.

How much investment is required?

Estimate of Anticipated Expenditure	2017-2018		2018-2019	2019/2020	2020/2021	Annual Average	4-year Total
	Transition Year and Delivery Year 1		Year 2	Year 3	Year 4		
	<i>Existing allocation</i>	<i>New investment</i>					
Transport Agency¹	\$1,222,400	\$1,200,000	\$2,200,000	\$2,400,000	\$2,670,000	\$2,423,100	\$9,692,400
ACC		\$1,200,000	\$2,160,000	\$2,370,000	\$2,670,000	\$2,100,000	\$8,400,000
Local Share	\$800,000	\$200,000	\$1,450,000	\$1,650,000	\$1,840,000	\$1,485,000	\$5,940,000
Total	\$4,622,400		\$5,810,000	\$6,420,000	\$7,180,000	\$6,008,100	\$24,032,400

¹The predicted status quo investment from the National Land Transport Fund over the next 4-years (primarily through the Road Safety Promotion Activity Class) is estimated at \$5,555,900; therefore, the 4-year total represents a 74% increase in investment for the Transport Agency.

Is the solution value for money?

A Benefit Cost Assessment of the proposed solution has estimated a Benefit Cost Ratio of over 5 after 4-years and 10 years. The high, moderate and low investment scenarios all returned similar positive value scenarios indicating value for money. The moderate scenario is recommended as it balances strategic targets around increased cycling against affordability.

By June 2018 \$333 million will have been spent on cycling infrastructure since the Urban Cycleways Programme was announced in August 2014. The estimated 4-year cost of this cycling education investment is just 7% of this infrastructure cost. In addition, the initial four years of investment will establish a system for future efficiency and is predicted to attract the investment of other partners.

Is the proposed solution feasible?

- ✓ A Transition Phase to establish processes, develop resources and prepare for implementation (July 2017- December 2018)
- ✓ A core suite of education modules with proven feasibility - meaning that an initial pilot period would have limited value

- ✓ A funding mechanism with proven rigour (NLTP)
- ✓ Realistic yet ambitious delivery targets
- ✓ A national administration model based on in-depth option analysis, and learnings from international and local case studies

What are the risks?

A wide range of risks have been considered, with input from stakeholders and project sponsors. The National Cycling Education System, and national administration option, is designed to mitigate the following key risks:

- Lack of accountability for national investment. This is mitigated by the cycling education funding remaining within the National Land Transport Programme process. Accountability and quality assurances processes have also been established across multiple levels.
- Reduced commitment and changing objectives for national partners, resulting in reduced investment over time. This will be mitigated through formal agreements and the development of clear objectives and expectations in the development phase, as well as explicitly seeking further investment partners as time progresses.
- Councils fail to recognise the importance of cycling education, and therefore fail to contribute their local share. This is mitigated by a funding model that incentivises local investment by allowing a one third local contribution (as opposed to half), the ability to leverage non-ratepayer local funding sources and a gradual roll-out process to allow time to confirm local buy-in and development. An engagement process with councils is also planned for in the 2017/2018 financial year.

Ultimately, the risk of not investing is that the problems with the status quo remain: we won't reach enough people through a high-quality approach to have a meaningful impact on safe cycling, and we will fail to maximise participation in cycling, resulting in less return on investment in cycling infrastructure.

Final recommendation

The Transport Agency and ACC invest in a National Cycling Education System to equip New Zealanders to participate in safe cycling, and ensure that the many benefits of cycling can be realised.

Letters of endorsement



26 May 2017

To whom it may concern,

Letter of Support for National Cycling Education System

Sport New Zealand supports the NZ Transport Agency's (NZTA) proposal to further invest into cycling in New Zealand. The proposed National Cycling Education System closely aligns with Sport New Zealand's Community Sport Strategy of being participant focused, system leading and performance driven.

Sport New Zealand has a major focus on young people and NZTA's proposal will compliment this focus well. Sport New Zealand seeks to provide quality opportunities and experiences for all young people, so they develop a lifelong love of being physically active.

Sport New Zealand see a positive alignment with our pilot approach, Play.sport, to improve physical education, sport and physical activity in schools. We see Play.sport and the Cycling Education System adding value in a sustainable and meaningful way to communities, schools, students, coaches and parents.

Sport New Zealand is happy to continue to provide support and advice in how this system can align and add additional value to the comes we are seeking to achieve.

Yours sincerely

Geoff Barry
General Manager Community Sport



9 May 2017

Chris Moller
NZTA Board Chair
NZ Transport Agency
WELLINGTON

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CC: Mike Tulley – Chief Customer Officer (ACC)

Dear Chris

National Cycling Education System

The AA represents 1.6 million motorists in New Zealand and our Members represent a very large portion of the motoring public. However, our Members don't only drive cars. Our surveys show that 11% of our Members consider themselves to be cyclists, using bikes for sport, fitness, commuting and to get around town.

Our Members also encounter cyclists as they drive (or walk) on the roads and footpaths around the country. When we asked our Members how they react when encountering cyclists on the road, the most common reaction is "concern, that you might hit them." We found that this level of concern declined when the motorist was an experienced cyclist themselves. Similarly, levels of "annoyance, at lack of consideration for other road users" decline as their own level of cycling experience increases.

This suggests to us that to improve "sharing the road" behaviours we need to grow participation in cycling. This will, over time, improve motorists understanding of how to interact with cyclists, and cyclists understanding of how they are perceived by motorists, and how to respond accordingly.

This is a long term goal. It cannot be achieved overnight. A nationwide, well structured, and properly resourced cycling education system is critical to achieving this. As more New Zealanders develop safe cycling experience, particularly from a young age, they will become more skilled cyclists and more empathetic motorists. For that reason, the AA has been a strong supporter of investment in cycling education and we commend the New Zealand Transport Agency and the Accident Compensation Corporation for developing the proposal to implement a nation-wide cycling education system, and the investment that is being made into safe, well designed infrastructure to compliment this.

A handwritten signature in black ink, appearing to read 'Simon Douglas'.

Simon Douglas
National Manager Policy & Research | Motoring Affairs

GUIDING LIFE'S JOURNEYS
FOR OVER 110 YEARS.
New Zealand Automobile Association





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4 May 2017

Chris Moller
NZTA Board Chair
NZ Transport Agency
WELLINGTON

Cc: Mike Tully – Chief Customer Officer (ACC)

Dear Chris and Mike

National Cycling Education System

The Ministry of Health supports the NZ Transport Agency (NZTA) and Accident Compensation Corporation (ACC) joint partnership and proposed further investment to increase cycling within New Zealand. The proposed National Cycling Education System uses a best-practice, safe cycling approach to education, promoting cycle safety skills while also focussing on all road users.

This approach is consistent with the Ministry of Health's New Zealand Health Strategy, utilising a system wide approach to live well, stay well and get well. The emphasis on starting early, and helping our children to become more active and develop healthy transport habits aligns with the Ministry's Childhood Obesity Plan and physical activity guidelines, as well as the World Health Organization's Ending Childhood Obesity Report.

The Ministry has welcomed the engagement with NZTA and ACC on the development of the National Cycling Education System. The proposal demonstrates a whole of government shared response to addressing one of the determinants of health. More New Zealanders developing safe road skills early in life, and more New Zealanders cycling will help support multiple health outcomes including injury prevention, increased physical activity with consequent reduction in obesity and long term conditions, and reduced air pollution.

The Ministry of Health is happy to continue to provide advice as the initiative is further developed, refined and implemented.

Yours sincerely

Dr Caroline McElnay
Director of Public Health
Protection, Regulation and Assurance Business Unit
Ministry of Health