

Change to walking

Using 'nudge' interventions to get more people walking



Change to walking



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Executive summary

Regular physical activity is important to supporting better health and wellbeing. However, more than half of Australian adults (56%) are either inactive or have low levels of physical activityⁱ and one in five Victorian adults (18.9%) don't engage in any physical activity during the weekⁱⁱ. Physical inactivity costs the Australian economy an estimated \$13.8 billion every yearⁱⁱⁱ.

Walking delivers significant physical and mental health benefits, helping prevent chronic disease, increasing workplace productivity, contributing to reduced traffic congestion and perceptions of safer neighbourhoods. Walking is the most accessible form of physical activity, yet people are walking less than previous generations.

The Change to Walking program, delivered in 2016 by Victoria Walks in partnership with VicHealth, sought to apply behavioural insights approaches to determine if 'nudge' strategies would prompt increases in walking for short trips. A 'nudge' approach uses targeted prompts and incentives to encourage walking, rather than mandating change or constraining choice. For example, increasing healthy eating choices in canteens by the prominent location of healthier options, or setting them as the default for side dishes (a side serve of salad instead of chips) with less healthy options still available.^{iv}

While behavioural insights have been employed successfully for interventions in healthcare settings and food retail outlets, there have been very few examples of well-evaluated 'nudge' interventions to increase levels of walking. In supporting councils to pilot and test a new approach to behaviour change, VicHealth and Victoria Walks have expanded the evidence base on the use of 'nudge' theory for future programs to increase physical activity.

Victoria Walks worked with five councils in Victoria to deliver Change to Walking projects, trialling behavioural interventions to increase walking to and from schools, workplaces, a public transport hub and a community hub. Each project aimed to increase walking behaviours and embedded real-world testing and evaluation to build the evidence base for 'nudge' interventions in encouraging walking for short trips.

During interventions spanning one to three months, 1,800 people were engaged through events as part of projects in the local government areas of Bendigo, Darebin, Geelong, Warrnambool and Yarra Ranges, with more than 1,000 people actively participating in interventions intended to stimulate changes in walking behaviour.

Across the five local government areas, two-thirds of respondents reported positive intentions to walk more as a result of participating in the local projects.

The program has generated considerable learning to inform design and delivery of future behaviour change interventions, in settings such as suburban train station catchments and local activity centres as part of the daily commute.

Across the five projects, two-thirds of respondents reported positive intentions to walk more for short trips as a result of participating. Four out of five projects indicated an overall increase in physical activity levels by participants.

Like all pilot programs, some aspects worked better than others and there are some important lessons for future projects.



Change to walking

Across all projects, longer timelines – 12 months rather than six months – would have strengthened project delivery and outcomes. This would allow greater lead time for working with external stakeholders as well as a longer intervention period, with more time for behaviour change to stick. Enlisting specialist advice and support from behaviour change experts is needed, and dedicated resources are recommended to monitor and evaluate projects, conduct stakeholder consultation and deliver ‘nudge’ interventions.

This report summarises the outcomes of the Change to Walking Program. Lessons from other behaviour change projects are included in the background report *Applying nudge theory to walking: Designing behavioural interventions to promote walking.*

This report details considerations for the design and delivery of future walking behaviour interventions with a focus on the interrelated elements of context, approach and timing. To design interventions with the best chance of success, the settings and target audiences (context) should align with the change sought and how it will be measured (approach) across a suitable timeframe.

Importantly, the Change to Walking pilot program extends the evidence base for local councils and other agencies to improve physical activity outcomes through programs that increase walking for transport. The participating councils have strengthened their capacity to partner with workplaces, community organisations and government agencies on future walking projects.

Victoria Walks is also well-placed to advise on the delivery of future behaviour change interventions for walking, underpinned with the evidence from these five pilot projects.

This publication outlines the key outcomes of the five Change to Walking projects, and shows how nudges can be implemented in future initiatives to increase regular walking for short trips – to school, transport hubs, shops, community centres and workplaces.

Key outcomes:



Projects directly influenced walking participation – **62%-94% agree***



Increase in participants' **physical activity** levels*

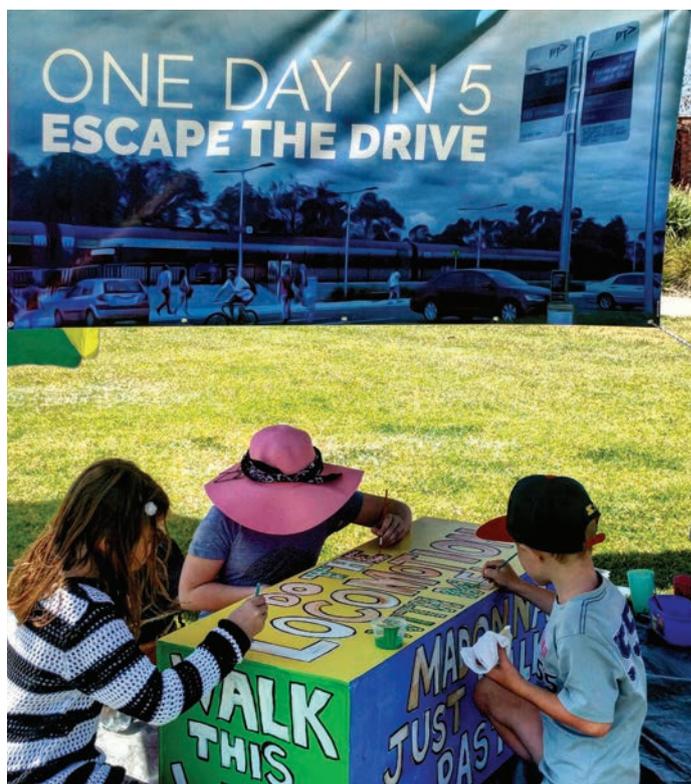


High intentions to walk more post-project – **60%-100% agree***



At least three **future walking projects planned** by councils involved.

* Across four of the five projects.



Nudge theory and walking

In recent years, behavioural insights have been increasingly employed to improve public policy outcomes by governments around the world. ‘Nudges’, as they are often called, have been used particularly in the United Kingdom to improve service responses such as rates of tax returns and payment of parking fines.

Real-world testing and learning is essential to build an understanding of what interventions or ‘nudge’ strategies work in different settings with different participants.

“...it is possible to design public health interventions and campaigns tailored to how humans actually think and make decisions, rather than how ‘we think they think’.”^v *David Halpern, Behavioural Insights Team*

The UK Government’s Behavioural Insights Team (BIT) has developed models to help design more effective behaviour change interventions. The action-oriented ‘EAST framework’ focuses on techniques that make behaviour change ‘Easy, Attractive, Social and Timely’. The EAST framework is summarised in the following table.



Table 1: EAST framework

Behavioural Insights Team’s EAST framework

Make it easy	<ul style="list-style-type: none"> • Use the power of defaults – making people opt out rather than opt in • Reduce the ‘hassle factor’ of taking up a service • Simplify messages (to reduce errors and grow response rates)
Make it attractive	<ul style="list-style-type: none"> • Attract attention (use of salience, personalising information) • Design rewards and sanctions to maximum effect (use of lotteries, scarcity, ‘gamifying’ activities)
Make it social	<ul style="list-style-type: none"> • Show that most people perform the behaviour you are seeking • Use the power of networks (reciprocity and mutual support) • Encourage people to make a commitment to others
Make it timely	<ul style="list-style-type: none"> • Prompt people when they are likely to be most receptive • Consider the immediate costs and benefits • Help people plan their response to events (goal-setting, breaking down complex goals into small steps)

Further examples of behavioural insights and nudge strategies used to increase walking are included in Victoria Walks’ background report *Applying nudge theory to walking: Designing behavioural interventions to promote walking*. This report contains lessons from other behaviour change projects, and important information on behavioural insights to guide the design of such initiatives.

Change to walking

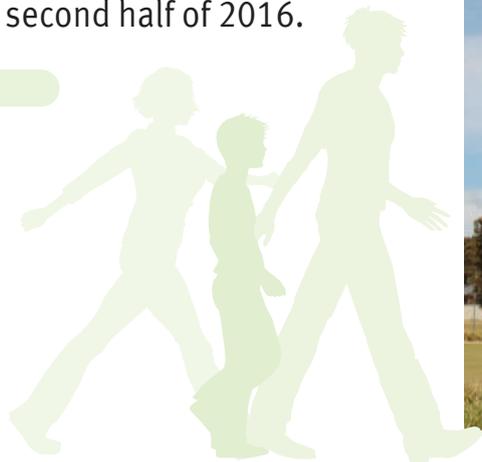
Five projects to encourage a Change to Walking

The Change to Walking program, delivered in 2016 by Victoria Walks in partnership with VicHealth, sought to apply behavioural insights approaches to determine if 'nudge' strategies would prompt increases in walking for short trips.

The program was initiated with a call for expressions of interest from Victorian Councils to obtain grant funding. This generated enquiries from 35 councils, with 17 formal expressions of interest received from a range of metropolitan and regional municipalities.

Three regional cities (Bendigo, Geelong and Warrnambool), one inner metropolitan (Darebin) and one fringe metropolitan council (Yarra Ranges), were funded. Projects received grants of between \$24,000 and \$47,000, which could be used for external costs, consultants (including assistance in designing interventions) and employment of project managers. Each council contributed varying levels of either cash or in-kind resources, primarily staff time, to support their projects, bringing total project costs (cash and in-kind) to between \$37,000 and \$84,500.

The five projects featured behaviour change interventions aimed at increasing walking for short trips, and walking for transport. All interventions were delivered over a period of one to three months in the second half of 2016.



City of Greater Bendigo

SETTING: Transport hub
TARGET AUDIENCE: Commuting workers
DELIVERY PERIOD: Four weeks in November 2016

The 'One Day in 5 – Escape the Drive' project encouraged residents in the booming urban-fringe suburbs of Epsom and Ascot to leave the car at home one day each week, and instead walk and use public transport to travel into town. By changing to public transport, people would walk more by default – possibly to their local train station or bus stop, and almost certainly from the train or bus at the destination end.

Refer to the case study on page 10 for more information.

ONE DAY IN 5 ESCAPE THE DRIVE



City of Darebin

SETTING: Community centre
TARGET AUDIENCE: Families with young children
DELIVERY PERIOD: September to November 2016

The 'Step Out Reservoir' project encouraged people to walk short trips rather than travelling by car. It targeted groups regularly visiting the Reservoir Community and Learning Centre and Reservoir Library, particularly families with young children. 'Nudge' strategies employed included drawing upon or introducing relevant social norms; and associating walking with an existing routine.

The highest rated element of this project was a walking card stamp scheme where participants received instant recognition for walking to the local community centre. Pram walking groups, which had been trialled before unsuccessfully, also proved popular.



“My walking has changed since I engaged in the group. I walk a lot further now as I realised that the main (Reservoir) shops are actually a walkable distance and that I now feel comfortable to do the walk by myself.”

Darebin participant



City of Greater Geelong

SETTING: Workplace
TARGET AUDIENCE: Commuting workers
DELIVERY PERIOD: Four weeks in October 2016

The 'Change to Walking – Park and Walk Challenge' was designed to encourage employees of participating workplaces to park at least 1km or a 10 minute walk from their place of work. The four-week challenge aimed to support employees to try a new way of commuting to work, to try a new routine and build their confidence to establish new behaviours. A key incentive was to highlight free parking opportunities as an alternative to paying for parking closer to work.

The 'Park and Walk Challenge' was designed to be delivered in a workplace with the support of a local workplace coordinator. Participants were supported with a range of resources to help facilitate the desired behaviour change. The highest ranked element was the walking groups which made participation a social event. This project had a strong focus on making walking easy through the provision of park and walk sites, wayfinding, maps and attractive routes.

CHANGE TO WALKING PARK AND WALK CHALLENGE



Change to walking

Warrnambool City Council

SETTING: School
TARGET AUDIENCE: Primary school children and their parents
DELIVERY PERIOD: September to November 2016

A partnership with St Joseph's Primary School engaged parents of children 8 years and older to allow their children to walk to and from school for at least 3 trips a week. The project encouraged parents to share their personal experiences of active travel to school and build confidence in allowing their children to travel independently. The project incorporated nudges (easy, cheap and not mandatory actions or messages), and used children's art work to engage parents. The project generated a significant increase in the number of people walking three or more trips each week (+ 11%), between August and December 2016 and also achieved a 13% increase in students walking part of the way to or from school.



“Saves me time parking up here. We are new to the school and not used to the traffic so I pick spots away and the kids walk.”

Warrnambool participant



Yarra Ranges Council

SETTING: School
TARGET AUDIENCE: Primary school children and their parents
DELIVERY PERIOD: Six weeks from 10 October to 18 November 2016

Building on past participation in VicHealth's 'Walk to School' month, Council's Sustainability Unit collaborated with the Recreation and Active Living team to develop a project aiming for lasting changes in behaviour. 'Free Range Kids' aimed to increase children's walking to and from school with the ultimate goal to increase children's independent mobility within their community. The program was primarily delivered in class, and designed with children as the lead change agents.

Refer to the case study on page 13 for more information.



FREE-RANGE KIDS
What's your adventure?



Project Outcomes

The following table shows the number of participants across the five projects, as well as the survey sample sizes. A total of 1,803 people were directly engaged through events and more than 1,000 people actively participated in activities to stimulate changes in walking behaviours. Yarra Ranges was most successful in converting all 590 people who were engaged into active participants.

The outcomes set out in the tables and graphs below are based on results of a standard survey that was sent to participants in all of the projects.

Table 2: Participation numbers and survey responses

	Bendigo	Darebin	Geelong	Warrnambool	Yarra Range	TOTALS
No. of people who took part in events to promote individual projects	215	427	85	486	590	1,803
No. of people who actively engaged in the individual projects	105	57	91	206	590	1,049
No. of survey responses	19	19	62	86	74	260

School settings were most effective in increasing walking:

The projects delivered in school settings (in Warrnambool and Yarra Ranges) were very effective in engaging their target groups and contributed most to the program's participant numbers. School-generated traffic congestion was a motivator for each school to participate in the project. The projects had support and commitment from the three school principals in advance, which enabled them to reach a large population of more than 1,000 students.

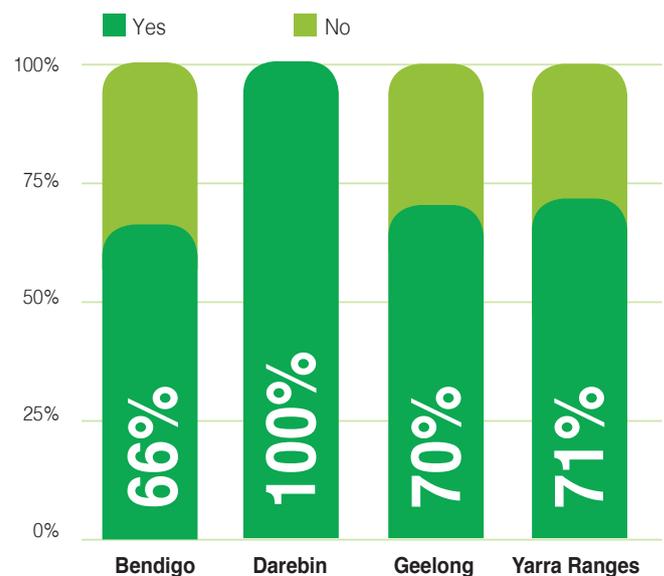


Participants' intention to walk more was strong:

At least **two thirds of respondents reported positive walking intentions** as a result of participating in the local projects. For Darebin, this was 100% of respondents.



Chart 1: Intention to walk more post-project



No data was available from Warrnambool.

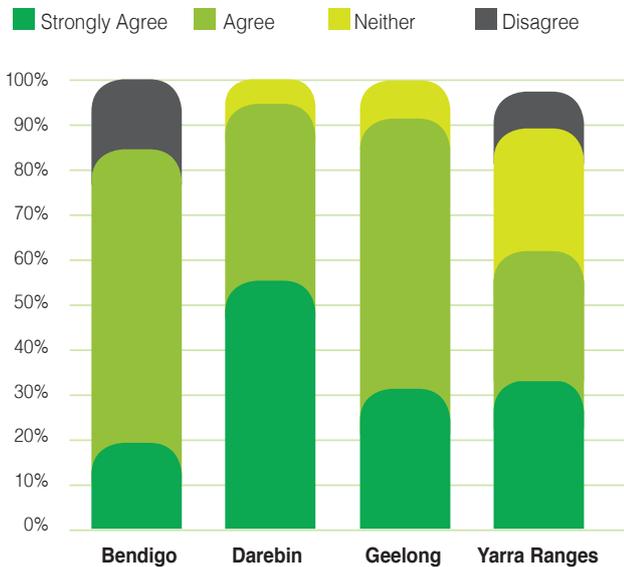
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Respondents rated the influence of the projects on their participation in walking highly:

The vast majority agreed or strongly agreed that the projects directly influenced their levels of walking. The combined agree and strongly agree responses were 84% Bendigo, 94% Darebin, 91% Geelong and 62% Yarra Ranges.



Chart 2: Influence of the program on walking participation



No data was available from Warrnambool.

Majority of projects increased physical activity levels:

Four out of five projects indicated overall increases in physical activity levels by participants. When looking at actual increases in physical activity three or more times per week, the following increases were reported in Bendigo (+8%), Darebin (+16%), and Warrnambool (+11%). Geelong used different options for the frequency of physical activity participation in their surveys, and achieved a 42% increase in respondents' physical activity levels 4-7 times per week.

Yarra Ranges showed a marginal improvement (less than 1%) for respondents walking three or more trips per week. Surveys were completed by parents, and the low reported change could be attributed to more children walking independently, and less parents walking with them.



Future walking projects:

Since the completion of the five projects, three similar walking-related projects have been initiated, arising from councils' participation in the Change to Walking program. A further three projects are also planned in the future.



Nudge strategies with the most influence

The following table shows selected nudge strategies used in projects, which tested positively in survey responses by participants. They have been aligned with the EAST categories in the final column – easy, attractive, social. None of the projects focused on ‘timely’ nudge strategies, hence this category is not included in the table. In some projects up to 17 ‘nudges’ were employed; this table highlights a selection of strategies that tested well with participants when they rated the influence of project elements on their behaviour.

Table 3: Selection of influential nudge strategies

Project element	Behavioural strategy applied	EAST framework link
Yarra Ranges: Adventure stories re-imagining my own adventure of walking to school	<ul style="list-style-type: none"> • Conjure up positive memories of similar experiences 	Make it attractive
Darebin: Walking card stamp scheme	<ul style="list-style-type: none"> • Introduce or increase present gains 	Make it attractive
Bendigo: Direct invitation to participate in the program letter-dropped to all residents in the target neighbourhood with incentives to participate	<ul style="list-style-type: none"> • Use surprise to make gains more pleasurable • Set up positive expectations • Reframe losses and gains • Associate new behaviour with existing routine • Avoid overwhelming amounts of information 	Make it attractive
Darebin: Storytelling and promotions, including children’s walking treasure hunt map and signage on the footpath along walking route to Reservoir Library	<ul style="list-style-type: none"> • Associate new behaviour with an existing routine 	Make it social
Warrnambool: Thank-you postcards mailed to parents by all students who took part in Walk to School in October – with the “thank you for letting me walk to school; I did not have to miss out on feeling grown-up” messages.	<ul style="list-style-type: none"> • Reframe losses into gains 	Make it social
Warrnambool: “Some of the Way is Ok!” Parking and dropping off at locations a short distance from the school.	<ul style="list-style-type: none"> • Associate new behaviour with existing routine 	Make it easy

Case study 1: Bendigo

One day in five, escape the drive



The challenge

Rapid residential growth in Bendigo's northern suburbs of Epsom and Ascot has contributed substantially to traffic congestion on Napier Street, the main north-south arterial route into central Bendigo. Despite growing frustration about traffic congestion, the area has a strong driving culture: Epsom and Ascot residents are more likely to have two or more cars (67%) than other Greater Bendigo residents (55%); 73% drive to work compared with the Greater Bendigo average of 68%.^{vi}

The project tackled entrenched driving behaviours in a community where the recently opened \$4 million Epsom train station is under-utilised. V/Line provides fourteen train services each weekday and the trip from Epsom Station takes just under ten minutes to central Bendigo.

Significant road upgrade works on Napier Street are likely to start in 2017, and will cause further delays and disruption for drivers. It was originally thought that the project might be timed to coincide with the works, in order to capitalise on driver frustration with construction related delays. This would have fully utilised the 'make it timely' dimension of the EAST framework. While this was not possible, the timing of

the project may make drivers more open to alternative travel options when construction begins.

The strategy

The project aimed to capitalise on driver frustration and introduce a one-day-per-week change in travel choice by switching to public transport and walking as a quick and easy alternative to driving. While the limited train service availability and frequency was seen as a barrier to some audiences, the quality of the new station held great appeal. The first step in the behaviour change process was to increase residents' awareness of, and receptivity to, choosing walking and public transport.

A total of 1050 households within 800 metres of Epsom Station were targeted with incentives and 'nudges' (see following table). The campaign messages focused on changing from driving to public transport, aware that people would walk more by default at either the start or end of their journey. It was a conscious 'behaviour change by stealth' approach.

Partners

The City of Greater Bendigo partnered with V/Line, Public Transport Victoria and the Department of Economic Development, Jobs, Transport and Resources to deliver the project over four weeks during November 2016.

Effective 'nudge' approaches

The highest rated element of this project was the direct invitation to engage in the project delivered to nearby households. This included several behavioural strategies including creating surprise, setting up positive expectations and associating the behavioural goal with the audience's current routine. Bendigo's launch event in a local park also proved very popular with participants, providing an opportunity to engage directly and ensure participants were not overwhelmed with information. The various incentives employed (including free myki cards and vouchers, coffee and newspapers) also proved popular. These incentives were all redeemable at the target venue, Epsom Station.

The use of low-cost wayfinding interventions, such as footpath stencils and corflute signs, was successful. However, a more concentrated approach was recommended by the project team in future, to make a bigger impact on one particular walking route rather than dispersing these items across multiple routes to the station.

The table below outlines the behavioural strategies employed in Bendigo and the rating of each element developed by the Program Evaluator based on participants' survey responses. The scores are not definitive, but give an indication of the comparative influence of particular strategies on participants' behaviour.

Table 4: Behavioural strategies used in Bendigo

Project elements	Behavioural strategies ^{ix}	Behavioural Insights (E.A.S.T Framework)	Scores out of 100
<p>Direct invitation to participate in the program</p> <p>Letter drop to all residents in the target neighbourhood with incentives to participate</p>	<ul style="list-style-type: none"> • Use surprise to make gains more pleasurable • Set up positive expectations • Reframe losses and gains • Associate new behaviour with existing routine • Avoid overwhelming amounts of information 	Make it attractive	62
<p>Launch events</p> <p>BBQ and Picnic social event, with incentives</p>	<ul style="list-style-type: none"> • Set up positive expectations • Avoid overwhelming amounts of information • Shift the current reference point • Provide opportunities to pre-commit • Introduce or increase present gains 	Make it social	60*
<p>Incentives</p> <p>Various incentives, including free myki cards, myki vouchers, coffee, newspapers and magnets</p>	<ul style="list-style-type: none"> • Introduce or increase present gains 	Make it attractive	56*
<p>Support week</p> <p>Staff on hand to support participants, including incentives</p>	<ul style="list-style-type: none"> • Minimise risk associated with the desired behaviour • Associate behaviour with existing routine • Use surprise to make gains more pleasurable • Reciprocity • Introduce or increase present gains 	Make it easy	45
<p>Placemaking</p> <p>Locally designed street furniture, artwork and wayfinding along the main route to the train station</p>	<ul style="list-style-type: none"> • Use surprise to make gains more pleasurable • Introduce ownership • Associate new behaviour with existing routine • Reciprocity • Avoid overwhelming amounts of information • Shift the current reference point 	Make it attractive	46
<p>Role Models</p> <p>Sharing personal stories of regular train users who already walk to the station</p>	<ul style="list-style-type: none"> • Highlight colourful personal stories • Draw upon or introduce relevant social norms • Reframe gains and losses 	Make it social	32
<p>Photo Competition</p> <p>Prizes provided for participants who share photos of their journeys</p>	<ul style="list-style-type: none"> • Introduce ownership • Draw upon or introduce relevant social norms • Conjure up positive memories of similar experiences 	Make it social	No data

* Average taken from multiple scores

Change to walking

Walking trips increased 38% from 3.9 to 5.4 per week



The outcomes

There were positive changes in walking frequency, with survey data showing the average number of walking trips per week increased by 38% from 3.9 to 5.4. The walking distance and duration for each of these trips remained constant, indicating a 38% increase in total walking by the survey respondents from August (prior to the project) to November, during the last week of the intervention.

A longer timeframe would have been beneficial – the one-month campaign duration was not considered enough to change entrenched driving behaviours. However, the positive behaviour change achieved over this shorter timeframe is encouraging.

The project team has a clearer understanding of community attitudes, behaviour and barriers to walking and public transport that can be applied to future interventions. When compared with infrastructure investments of \$4 million in the Epsom Station and \$31 million in the Napier Street upgrade, this project proved a low cost (\$84,500 total cash and in-kind) and scalable approach to supporting behaviour change away from driving and toward walking and public transport use.



Case study 2: Yarra Ranges

Free Range Kids

The challenge

Australian children are now among the world's least active. The most recent data shows that only one in five children met the physical activity guidelines of at least 60 minutes of moderate to vigorous physical activity every day.^{vii} The Free Range Kids project aimed to increase walking in primary school aged children through active travel to and from school and by encouraging children's independent mobility within their communities.

The project ran in the outer urban suburbs of Mooroolbark and Kilsyth, and tested a range of behavioural insights to encourage students to increase their walking. The participating schools were Bimbadeen Heights Primary School, (537 students) and Kilsyth Primary School (187 students) which both had reasonable supporting infrastructure and footpath connections around the schools.

The strategy

While children were the lead change agents in this project, the influence of teachers and engagement of parents was critical. Seventeen nudge strategies were incorporated to drive participation from the three main audiences, and barriers to participation such as perceptions of safety and safe routes to school were addressed.

Twelve walking routes were audited for safety, and drop off points were established on each. Routes were given catchy names, signs stated the number of minutes to school, and chicken feet were painted on paths to help with wayfinding. The drop off zones provided an opportunity for families who already drive to school to associate a new behaviour – walking part of the way to school – with an existing routine.

Partners

Across Yarra Ranges Council there were 16 internal partners, including representatives from the strategic planning, infrastructure management, community development, sustainability, recreation and active living teams. External partners were Kilsyth and Bimbadeen Heights primary schools. David Engwicht from Creative Communities, an experienced behaviour change practitioner, guided program design and developed project resources.

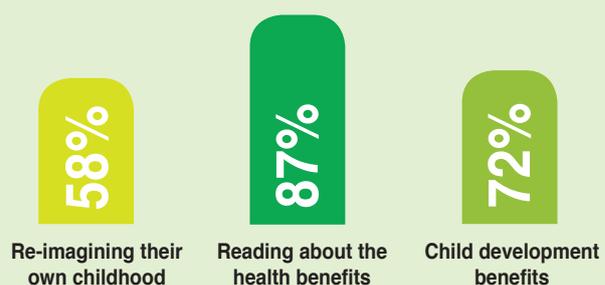
Effective 'nudge' approaches

Free Range Kids employed 17 different nudge strategies. This included a brochure which was sent to parents and carers with strategically placed prompts in the content to encourage families to participate in the program. The brochure used a strategy of conjuring up positive memories of similar experiences by inviting parents to recall their own childhood. The survey responses show 58% of parents agreed that re-imagining their own childhood influenced their participation. Even higher numbers of parents agreed that reading about the health benefits (87%) and child development benefits (72%) influenced their participation.

The highest rated element of this project was the adventure stories, where school children could re-imagine their journey to school as an adventure, which helped to conjure up positive memories, and create new ones, of similar experiences. The adventure routes and drop off zones also proved popular, helping to make walking easy for the children and their parents.

Another key element was the Free Range License, which was an agreement signed by parents allowing their children to walk independently. While the take-up was relatively low compared to walking participation numbers – 55 licenses completed and 590 walking participants – it tested favourably as a nudge strategy, and is perhaps more likely to be successful in families with children aged eight years and older.

Effective 'nudge' approaches that influenced parent participation in the Free Range Kids Project



Change to walking

The table below outlines the behavioural strategies employed in the Yarra Ranges and the rating of each element developed by the Program Evaluator based on participants' survey responses. The scores are not definitive, but give an indication of the comparative influence of particular strategies on participants' behaviour.

Table 5: Behavioural strategies used in Yarra Ranges

Project elements	Behavioural strategies ^x	Behavioural Insights (E.A.S.T Framework)	Scores out of 100
Adventure stories Re-imagining my own adventure of walking to school	<ul style="list-style-type: none"> • Conjure up positive memories of similar experiences 	Make it attractive	64
Adventure routes & drop off zones The attractive walking routes.	<ul style="list-style-type: none"> • Conjure positive memories of similar experiences • Opportunity to pre-commit • Associate a loss with the undesirable option or behaviour • Making the desired outcome the default option • To minimise risk associated with the desired behaviour 	Make it easy	62*
The free range license Child development benefits (eg. confidence, resilience, negotiating risk, connection to community) Discussion with other parents. Child asking to be part of the program.	<ul style="list-style-type: none"> • To introduce ownership • To minimise risk associated with the desired behaviour • To provide opportunities for people to pre-commit • To use facts to lend credibility and memorability • To avoid overwhelming amounts of information 	Make it attractive	50*
Free Range Kids brand strategy Communicated through social media stories and articles in newsletters	<ul style="list-style-type: none"> • Associate a loss with the undesirable option or behaviour • Conjure up positive memories of similar experiences • Align the desired outcome with the user's identity • Reframing losses and gains • Shift the current reference point 	Make it attractive	49*
Free Range Champs	<ul style="list-style-type: none"> • Draw upon or introduce social norms • Highlight colourful and personal stories 	Make it social	No data
Free Range Kids points & rewards	<ul style="list-style-type: none"> • To introduce or increase present gains • To break up larger gains into smaller gains • To give the user frequent feedback about the consequences of their actions 	Make it attractive	No data

* Average taken from multiple scores

71% of parents surveyed intend to walk more after taking part in Free Range Kids.



The outcomes

Free Range Kids ran for six weeks, starting on 10 October 2016. All classes participated at both schools – a total of 30 classes.

A significant number of survey respondents in the Yarra Ranges (71%) intend to walk more following their participation in Free Range Kids.

A good spread of participants was evident, with 462 students (86%) at Bimbadeen Heights Primary School and 128 students (68%) at Kilsyth Primary School walking at least once during the six-week intervention. Overall there was a 35% increase in walking at Bimbadeen Heights.

Other observations included:

- The number of walks recorded increased throughout the intervention period with no decline or plateau in the number of children walking.
- Children proudly wore their Free Range Kids licence when they walked to and from school.
- Children exhibited strong program ownership.
- The program did not attract any parent volunteers for the parent champion role, although 45% of parent survey responses agreed that discussion with other parents influenced their participation.
- Children wanted to walk all the routes to school, and 30% of parent survey responses indicate using more than one drop off point.

The intervention was designed so that it could be replicated by schools with little external support from a council. All project resources are available at <http://www.creative-communities.com/learning-centre/> to download for free, which allows any motivated individual, parent, or teacher to roll out Free Range Kids in their local school.



Recommendations for future walking behaviour interventions

The insights and recommendations from the five Change to Walking pilot projects are being shared to guide future behaviour change interventions by councils and other organisations looking to engage less active audiences to walk more.

Behavioural strategies can be applied in a range of settings including transport hubs, workplaces, growth area communities, regional townships and schools. As the Bendigo project demonstrates, it makes sense to link walking behaviour change programs with the design of new train stations or public transport hubs.

Three elements have been identified for designing and delivering walking behaviour nudge interventions with the best chance of success – context, approach, timing – and the following recommendations are grouped accordingly.

Context

- Interventions should be designed around the motivations of their target audiences (e.g. drawing on Bendigo's 'stealth' approach which focused conversations on using public transport, and indirectly encouraging walking).
- Choosing appropriate settings (e.g. schools, workplaces) for projects are key to engaging target audiences and the right setting can make it easier to engage and participate. Also consider settings that provide the opportunity for regular, short walking trips.

Approach

- For those who are new to designing or delivering behavioural insights approaches, enlisting specialist advice and support from behaviour change practitioners will strengthen capacity to design, deliver and evaluate interventions.
- Real-world testing and evaluation is essential to building an understanding of what interventions or 'nudge' strategies work in different settings with different participants. Monitoring should be clearly defined and measured, with pre and post data collected to demonstrate change (via surveys or travel data, for example). Where there are skill or capacity limitations, monitoring and evaluation should be outsourced.

- Resources need to be carefully scoped, particularly personnel, to effectively and efficiently deliver projects. Behavioural interventions can deliver effective solutions, but they need sustained human resources in data collection/evaluation; stakeholder engagement; and 'nudge' design and delivery.
- Stakeholders and partners should be engaged during the design process, with the aim of achieving early 'buy-in' and mitigating delays in approval processes or delivery.

Timing

- Planning and designing nudge strategies and testing their effectiveness takes time. A 12-month or more implementation period – including project design through to delivery – would allow responsive project adjustments to be made as results come in. A longer intervention period also allows more time for change to stick and to inform policy changes for longer-term impact.

Venn diagram 1: Designing walking interventions with the best chance of nudge success:



Conclusion

The five pilot projects have shown promising results in using behavioural insights to get more people to choose walking. All projects were delivered in short timeframes and achieved good participation numbers, particularly in the school-based programs.

When future interventions are planned, program teams can apply the interrelated elements of context, approach and timing to design walking behaviour interventions with the best chance of nudge success.

In supporting five councils to pilot and test a new approach to behaviour change, VicHealth and Victoria Walks have expanded the evidence base on the use of 'nudge' theory for future approaches to increase physical activity through walking.

Endnotes

ⁱ Department of Health 2014 *Make your Move – Sit less – Be active for life!* brochure p.5 <www.health.gov.au/internet/main/publishing.nsf/Content/health-publth-strateg-phys-act-guidelines#apaadult>.

ⁱⁱ VicHealth 2016, *VicHealth Indicators Survey 2015 Selected findings*, p.12 Victorian Health Promotion Foundation, Melbourne.

ⁱⁱⁱ VicHealth 2016 *Physical activity and sedentary behaviour evidence summary* p.3 Victorian Health Promotion Foundation, Melbourne. <www.vichealth.vic.gov.au/search/physical-activity-and-sedentary-behaviour>.

^{iv} Woodruff, A (2017), *Applying nudge theory to walking: Designing behavioural interventions to promote walking*, p.2 Victoria Walks, Melbourne.

^v VicHealth 2016 *Behavioural insights and healthier lives* p. 15 Victorian Health Promotion Foundation, Melbourne.

^{vi} Woodruff, p.3.

^{vii} Australian Bureau of Statistics 2011 ABS household census.

^{viii} Australian Bureau of Statistics 2011 *Australian Health Survey: Physical Activity 2011-12* cat. no. 4364.0.55.004 viewed 6 March 2017.

^{ix} Brains, Behavior & Design Group 2011 *Brains, Behavior & Design*, viewed 15 March 2017 <www.brainsbehavioranddesign.com/pdf/StrategyCards_BBDv1.0.pdf>.

^x Brains, Behavior & Design Group.





Victoria Walks: Level 7, 225 Bourke Street, Melbourne VIC 3000

P: 03 9662 3975 E: info@victoriawalks.org.au W: www.victoriawalks.org.au