

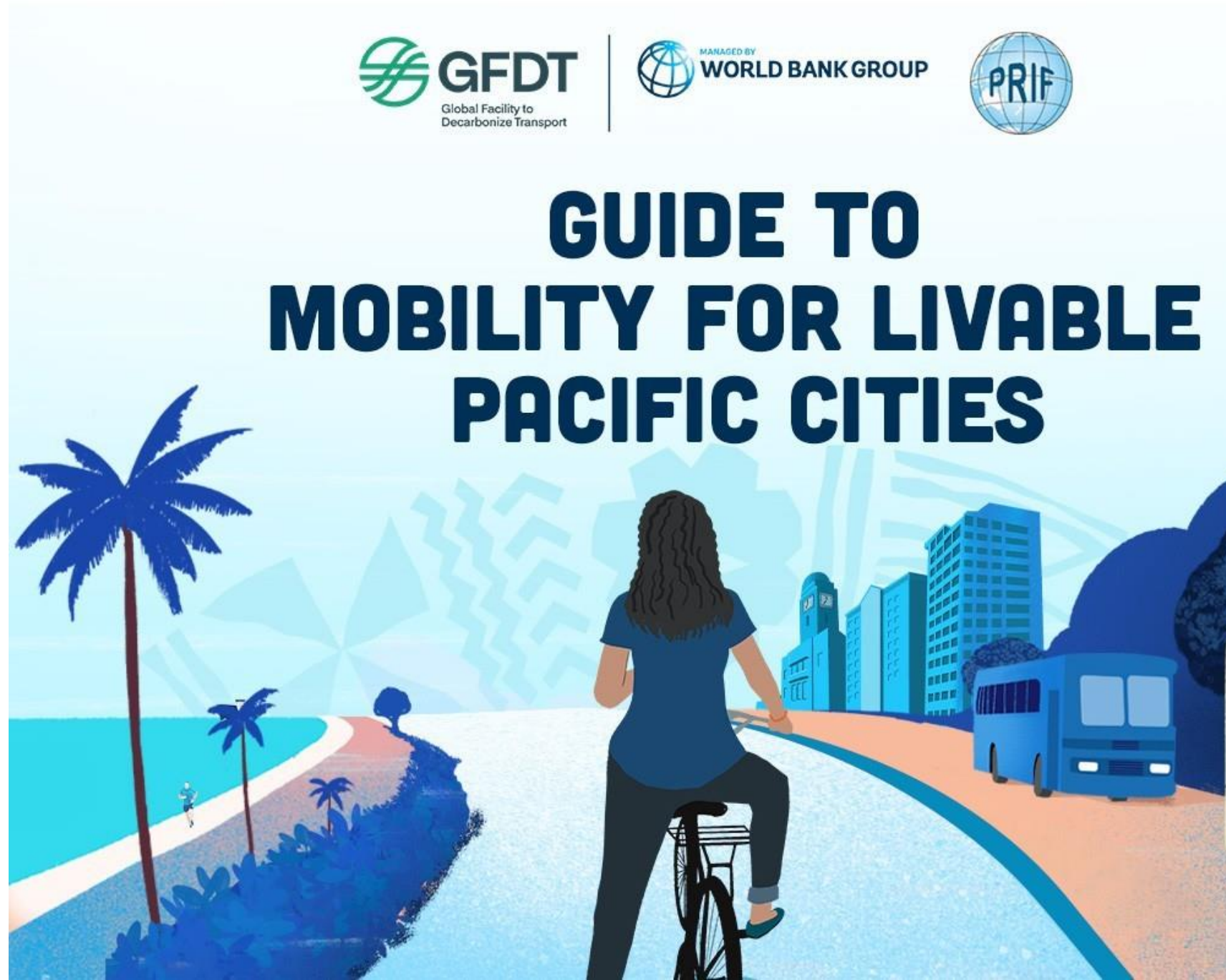
# Guide to Mobility for Livable Pacific Cities Webinar Series

**Webinar 4 of 9:**

**Education and  
Awareness**

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*Bram van Ooijen*



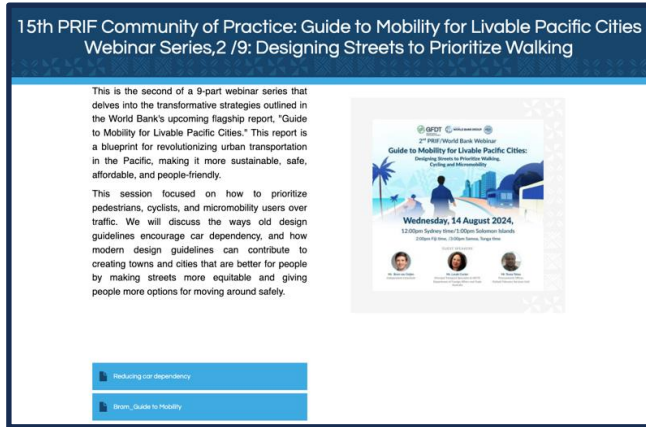
# About the Speaker

- Director at VOMobility
  - 15 years experience in planning and designing streets for active mobility, predominantly in China and Asia.
  - Projects include street design, bicycle networks, greenways, BRT corridor design, low-emission zones, parking management, TOD
  - Clients include Asian Development Bank, World Bank and GIZ.
  - Formerly with Institute for Transportation and Development Policy (ITDP) – China office
  - MSc in Civil Engineering, Twente University, the Netherlands
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- Involved in the Pacific since July 2023
  - Two visits, four countries, six weeks in the region
  - Time spent in Tonga, Kiribati, Fiji and Solomon Islands

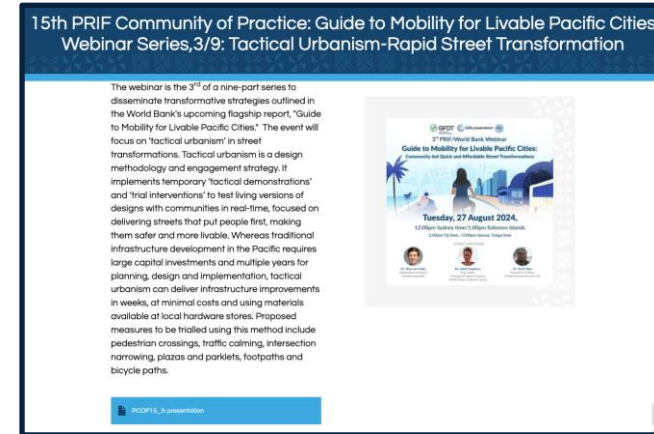


# Walking & Cycling Infrastructure is Necessary

Workshop on **street design for active mobility**. Info and slides at [this link](#)



Workshop on **tactical urbanism – rapid street transformation**. Info and slides at [this link](#)



## Key takeaways:

1. We need to design our streets better (and more) for **pedestrians and cyclists**
2. We need to see the street as a place for transport, but also **public space**
3. We need to include these ideas in our existing and future road, transportation and land development **strategies, investments, policies and projects**

# Content

Infrastructure for walking and cycling is necessary, but there is more that can be done:

1. Electric bicycles
2. Promotion and education through schools
3. Employers Incentives
4. Bicycle sharing
5. Bicycle Hubs – repair, maintenance, service and events
6. (e-)Bicycle financing
7. (Stray) dogs management
8. (Social) media campaigns

Other panelists

Questions & Discussion

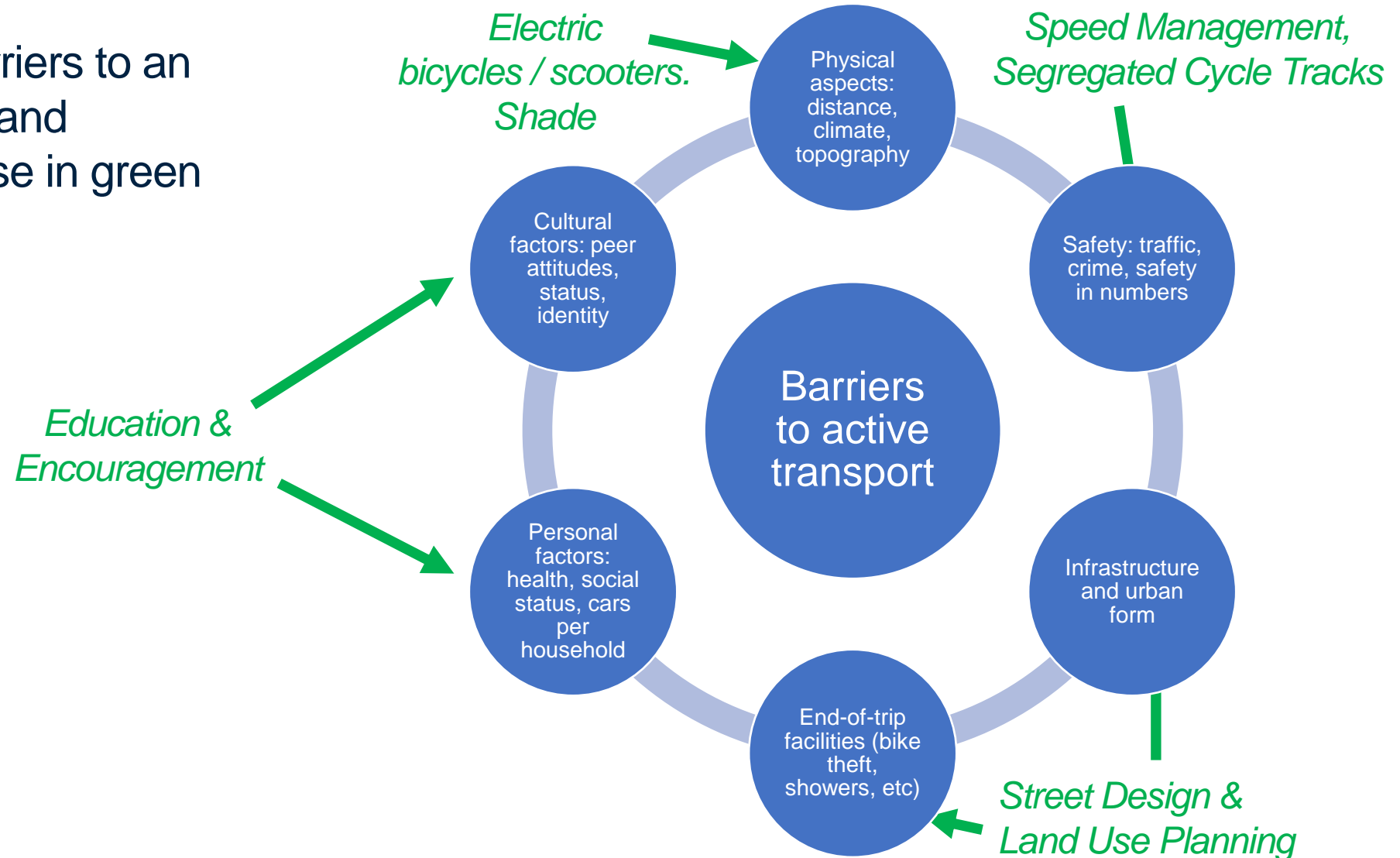
# Intended Lessons

The 5 E's of active transport planning and design:

Engineering	Education	Encouragement	Enforcement	Evaluation
<i>Discussed in Strategy 3</i>	<ul style="list-style-type: none"> <li>• Walking and cycling skills education at schools</li> <li>• Workplace Travel Plans and incentives</li> <li>• Civil society, NGOs and faith-based organizations</li> <li>• Private vehicle driver training</li> <li>• Heavy vehicle driver training</li> <li>• Cycling skills training for adults</li> </ul>	<ul style="list-style-type: none"> <li>• E-bicycles</li> <li>• Bicycle loan, financing and distribution</li> <li>• Bicycle and scooter sharing</li> <li>• Bicycle parking and maintenance hubs</li> <li>• (Stray) dog management</li> <li>• Community events</li> <li>• Communication with the public including advertising</li> </ul>	<i>Not discussed – city-specific</i>	<ul style="list-style-type: none"> <li>• Monitoring and publishing results</li> <li>• Applying lessons learned</li> <li>• Celebrating successes</li> </ul>

# Intended Lessons

This graph shows the barriers to an uptake in cycling in blue, and measures to mitigate these in green



# Could cycling really become a viable option in the Pacific?

## Why it may NOT work:

1. Pacific cities are hot and wet
2. Some cities are hilly
3. Some people travel long distances, too far for cycling
4. There is no road space for bicycle lanes
5. It's unsafe to ride bicycles
6. It's not in our culture

most trips are short,  
cycling gives a breeze?

many aren't.  
electric bicycles!

sure, for some trips it won't  
work, but most trips are short.  
and, electric bicycles!

bicycle lanes don't take up much space.  
on most roads we only need traffic calming

nor were cars 😊 how things can change!  
it was in the culture of Tonga and other

with the current street design, cycling is not  
too safe, but we can easily change this!

# Could cycling really become a viable option in Suva?

## Why it may work:

1. Many other cities pose these same barriers to cycling, but cycling has become very popular, with mode shares of 10+% (Brisbane, Darwin, Seville, Bogota)
2. In peak hours cycling is much quicker in congested areas
3. Cycling offers door-to-door mobility, buses do not
4. Cycling is cheap (compared to driving), fun, healthy
5. Bicycle parking is easy, quick and free
6. Not everyone needs to shift to riding bicycles. A 5% shift from cars to bicycles will have large positive impacts on traffic flow.
7. Cycling infrastructure is cheap and quick to build and maintain, and needs little road space
8. Smaller streets, where with fewer and slower cars need little more than traffic calming
9. Urban goods deliveries (esp. small parcels from e-commerce) could be made by e-cargo bicycle

# Could cycling really become a viable option in Suva?

## And...

- There was lots of enthusiasm for cycling during the 2023/2024 'Reducing Car Dependency' workshops in the Suva, Honiara, Tongatapu and South Tarawa.
- Suva just opened a 3.0km bicycle lane along Queen Elizabeth Drive. More to come?



# 1. E-bicycles (I)

Electric bicycles can increase the number of cyclists on the road. It is effortless, and greatly increases the distance that can be travelled, compared to human-powered bicycles. Electric 'pedal-assist' bicycles are another option, where some physical effort is required.

Range: 40-80km

Charging: 0-80% in 2 hours, 100% in 7 hours

Price (China): ~200-500 US\$



Source: Yanko Design



Source: Baidu Baike



Source: Suning

# 1. E-bicycles (III)

## Benefits for riders:

- Quickest
- Most convenient: door-to-door
- Cheap to purchase (compared to a car)
- Cheap to operate (electricity, maintenance, parking)

In comparison (Guangzhou, China), a car:

- is 24-50 times more expensive
- Is 20-25% slower than e-bikes during peak hours
- uses 5.5 times more road space to transport the same amount of people on e-bikes

## Benefits for the city:

- No noise and exhaust fumes
- Requires much less road space
- Requires much less space for parking



# 1. E-bicycles (IV)

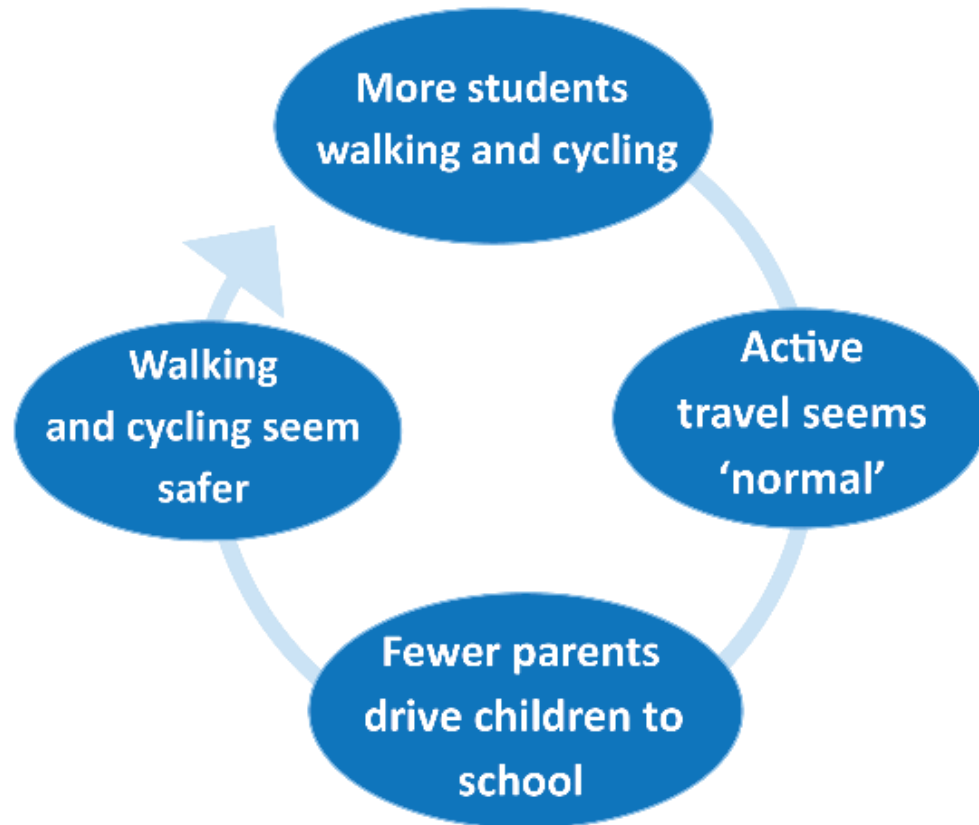
- Dominant mode of (urban) transport in Chinese cities (350 million e-bikes across China)
- Guangzhou, in Southern China (~18 million residents) has an estimated 5 million e-bikes (April 2023) - private car ownership of 3.6 million
- Daily travel volume of e-bikes was an estimated 6 million trips



## 2. Promotion & Education at Schools (I)

### Train the next generation

Give children independence in travel



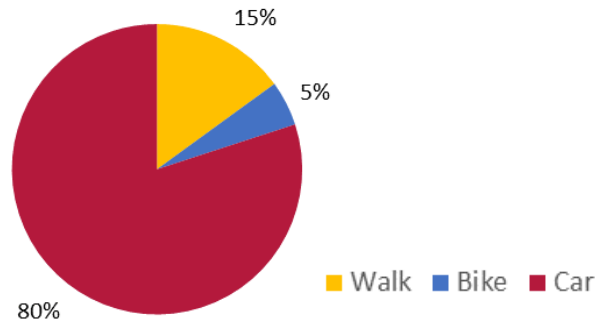
Traffic Inducing Traffic

Source: Lockwood

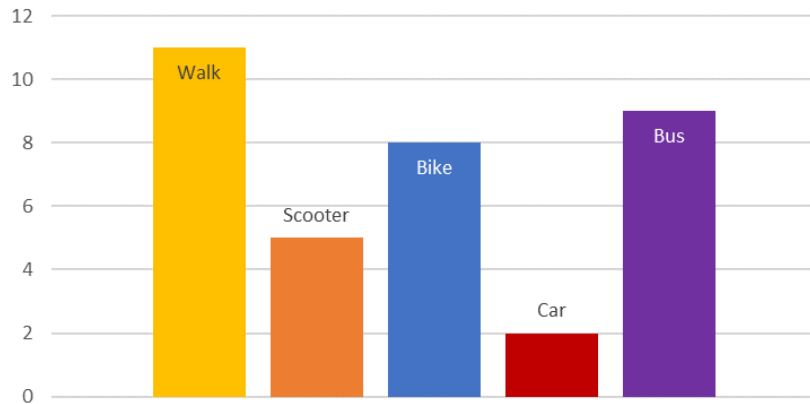
# 2. Promotion & Education at Schools (II)

## Streets for People – Aranui Connections, New Zealand

How do you travel now?  
St James and Chisnallwood



What do you want to do?  
St James and Chisnallwood



Source: Torin Smith (2023)

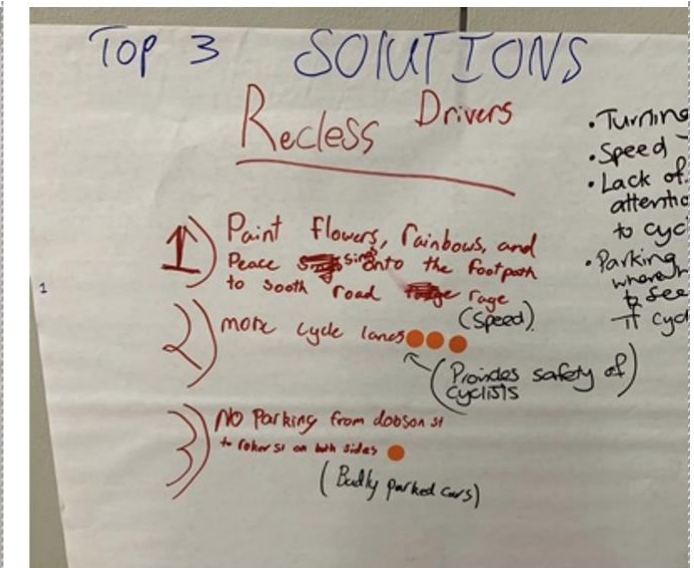
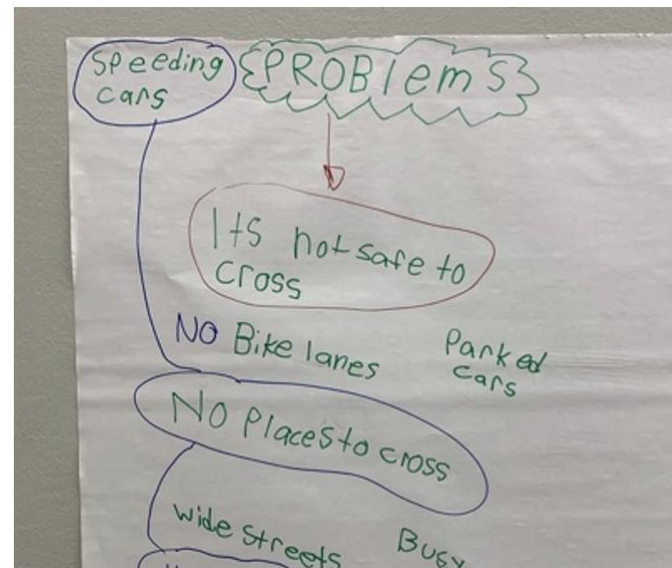
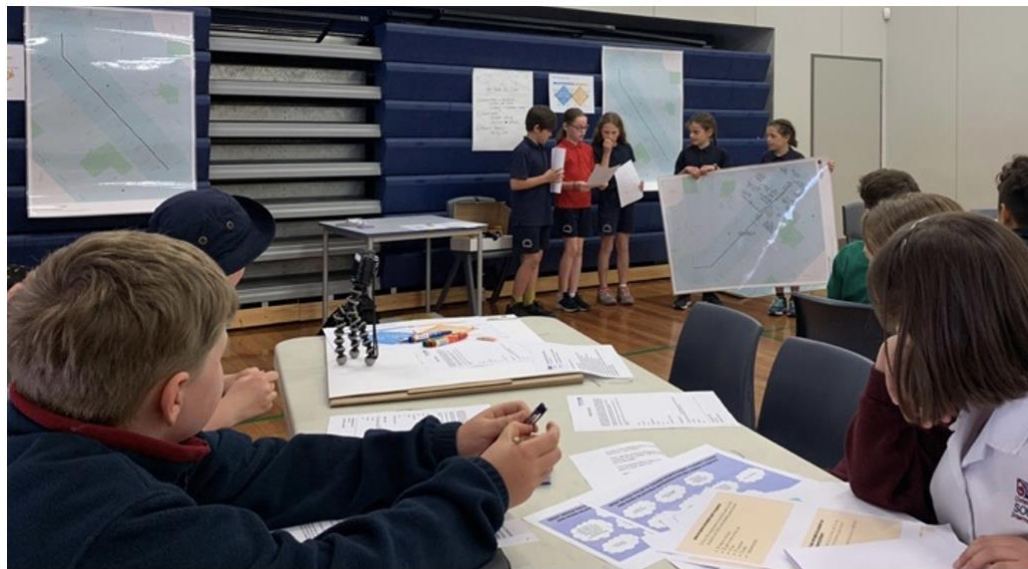
## 2. Promotion & Education at Schools (III)

Kerikeri, New Zealand - School Design Jam

**Improve safety for travel and play near school**

Students work on defining goals, identifying problems, conducting site visits, producing solutions and designs

Source: John Lieswyn (ViaStrada)



## 2. Promotion & Education at Schools (IV)

### Ban of vehicles at school opening & closing hours.

In Paris and London, the cities implemented (temporary) car-free zones at hundreds of schools during school drop-off and pick-up times



Guangzhou, China



Source: Jesse Coburn

Paris, France



London, UK

Source: Sam Balfo

## 2. Promotion & Education at Schools (V)



### School 'buses'

Teachers / parents / volunteers walk or cycle with students



Source: Ron Johnson

## 2. Promotion & Education at Schools (VI)

### Cycle training at school



Source unknown



Source: Algemeen Dagblad



Source unknown

### 3. Employers Incentives

Employers (e.g. government offices) can play an important role in stimulating sustainable transport options for their employees:

- Purchasing bus passes for employees
- Organizing private buses for employees' commutes (occasionally used)
- Purchasing bicycles for employees, provide bicycle parking, lockers, showers at the office
- Bicycle loan and financing schemes
- Team challenges – walk / bike / take-the-bus-to-work days (there are apps & websites):  
<https://at.govt.nz/travelwisebusiness>

## 4. Bicycle Sharing (I)

City- or area-wide network of public bicycles, available for free or cheap use. Bicycles can be picked up and dropped off at different stations (integrated with bus stops). Bicycle sharing serves short trips (500m to several kilometres) and can provide quick access to and from bus stops. Visitors may also use these systems. Dockless systems are also possible.



Source: Sina (2020)



## 4. Bicycle Sharing (II) – Oahu, Hawaii

Biki bicycle sharing system serves locals and tourists. Bicycles can be picked up and dropped off at any station, making cycling easy and affordable.

- Tourists pay US\$4.50 for a ride of up to 30 minutes, or US\$12 up to 24 hours
- Locals can use the system for US\$15-25 for the entire year



Source: Flashpacking America



Source: Flashpacking America

# 4. Bicycle Sharing (II)

**Product PROSPECTUS**  
BUSINESS TO BUSINESS

LAUNCH SPECIAL PROMOTION  
LIMITED TIME OFFER

SMART BIKE

Find us on

## Qaqi Mai (Suva, Fiji) - Eliko Dakuitoga B2B model: hotels

### Rent a Bike at Reception



**1**  
Get the bike rent card at Reception of the Hotel

### Start to Use the Bike

Swipe the card Over the "Swipe Sensor Area" of the lock of the bike, the lock will be opened automatically.



### Temporarily Stop and Parking

Swipe the card over the "Swipe Sensor Area" of this bike, you can lock the bike manually.



### Return

Keep the card over the "Swipe Sensor Area" of this bike, in the meantime, please lock the bike manually. And then, send the card to the Reception to return the bike and finish the payment.

### Temporarily Stop Cancellation

Swipe the card again over the "Swipe Sensor Area" of this bike, the lock will be open automatically.



# 5. Bicycle Repair & Maintenance

## Bicycle cooperatives / Bike Hubs:

- Trained mechanics for servicing and maintenance of bicycles
- Use of tools for self-repair (free or a small fee) & spare parts
- (e-)bicycle rental: short/long-term
- Police donate abandoned bikes
- Sale of new and second-hand bicycles and accessories
- Local information and advice
- Events
- Café
- Community
- Job-creation

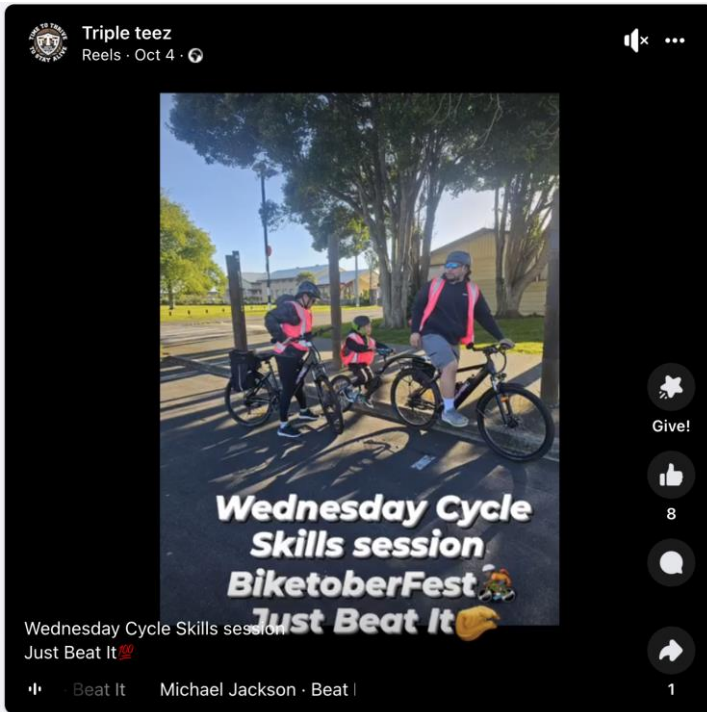


Source: Eillie Anzilotti (2016)

# 5. Bicycle Hubs & Community Service and Events

Time to Thrive – Community Bike Hub in Māngere, New Zealand

<https://www.facebook.com/tripleteez>



Source: Triple Teez

## 6. (E-) Bicycle Financing

Bulk purchase of bicycles. Distribution among people with limited transportation options.

An example is Buffalo Bikes:

- Designed for riding long distances over rugged terrain with heavy cargo
- Simple to maintain. Easy to repair.
- Bicycle + lock + light < 165 US\$



Source: Buffalo Bikes



## 6. (E-) Bicycle Financing

AfricroozE, German KfW initiative in Africa since 2020.

- Used as taxis, ambulances and transport bikes, supporting economic life in Uganda (100 bicycles). Now, 600 more are planned for distribution around Africa.
- Can carry up to 100 kilograms
- Made it look like a motorcycle because the humble bicycle is not a status symbol in Africa.
- Low cross bar so that women can also ride while wearing skirts



Source:  
AfricroozE

## 7. (Stray) Dogs

(Stray) dogs can make walking and cycling an unpleasant experience.

It goes beyond the scope of this study, but international best practices suggest that a sterilization program is the most humane and effective measure to handle the issue.



Source: Edward Cavenough

# 8. (Social) Media Campaigns

Online and social media to be used for:

- Communicating ongoing transportation projects
- Gaining feedback on transportation issues
- Promoting walking, cycling and public transport



## Intro

The official government page of the City and County of Honolulu Complete Streets Program

**Page** · Government organization

711 Kapiolani Boulevard, Suite 1600, Honolulu, HI, United States, Hawaii

completestreets@honolulu.gov

hnlcompletestreets

linktr.ee/hnlcompletestreets

honolulu.gov/completestreets

Closed now

## Photos

See all photos



Facebook page of Honolulu's Complete Streets Program



Honolulu Dept. of Transportation Services  
February 2

Ulu Pono and KITV presents "Multimodal Mondays", a series dedicated to getting around the island with transportation choices.

This episode: TheBus

Getting around Oahu via #TheBus is easy, relaxing, and cheap! With the power of our HOLO card, you can load money and passes online, obtain transfers, and never pay more than a daily or month pass.

Don't like paying for gas? Try TheBus. Don't like looking for parking? Try TheBus. Don't like sitting in traffic and wishing you could be watching your favorite show? Try TheBus.

Thank you to [UluPono Initiative](#)

Catch Multimodal Mondays on Island Life, [KITV4](#)

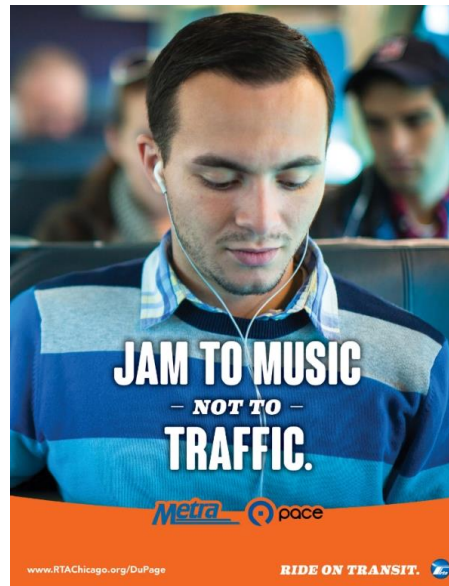
[#HOLOWithUs](#)

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## 8. (Social) Media Campaigns

Some successful campaigns for increasing bus ridership:

- Free entry or discounts for buses for certain events / on certain days or times / for certain groups (students, elderly, mothers, etc.)
- San Diego: 'Choose Transit' campaign - a spike of over 52,000 trips on their Ride Free Day. Increased ridership on buses (15%) and trolleys (17%).
- Chicago Regional Transportation Authority – 'Ride On' campaign



Source (left):  
Chicago Regional  
Transportation  
Authority

Source (right):  
IslandPress

