

Guide to Mobility for Livable Pacific Cities Webinar Series

Webinar 1: Ensuring Safe Urban Speeds

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GUIDE TO MOBILITY FOR LIVABLE PACIFIC CITIES



Presentation purpose

To highlight the link between speed management / road safety and mobility for Livable Pacific Cities

- Create Livable Streets for People – one of our three ‘Game Changing’ Goals for creating mobility for liveable cities
- Providing a safe environment helps encourage walking and cycling, and greater use of public transport (modal shift from cars)
- We must provide Safe Mobility as part of any project development, especially when promoting active modes of travel
- Speed management plays a critical part in improving safety outcomes, as well as providing more pleasant street environments.

Three Game-Changing Goals and Nine Synergetic Strategies

Goal A Create Livable Streets for People

Strategy 1: Ensure safe urban speeds

Strategy 2: Design streets to prioritize walking, cycling and micromobility

Strategy 3: Use the power of community for quick and affordable street transformations

Strategy 4: Implement education and encouragement programs to promote active mobility

Goal B Promote Public Transit

Strategy 5: Make taking the bus the best choice for getting to the city

Strategy 6: Use land use planning to guide compact urban development

Goal C Manage Private Vehicle Ownership and Use

Strategy 7: Control the car fleet quality and quantity at entry, during use, and end of life

Strategy 8: Organize parking to make streets less chaotic

Strategy 9: Encourage the import and use of island-appropriate electric vehicles

Presentation overview

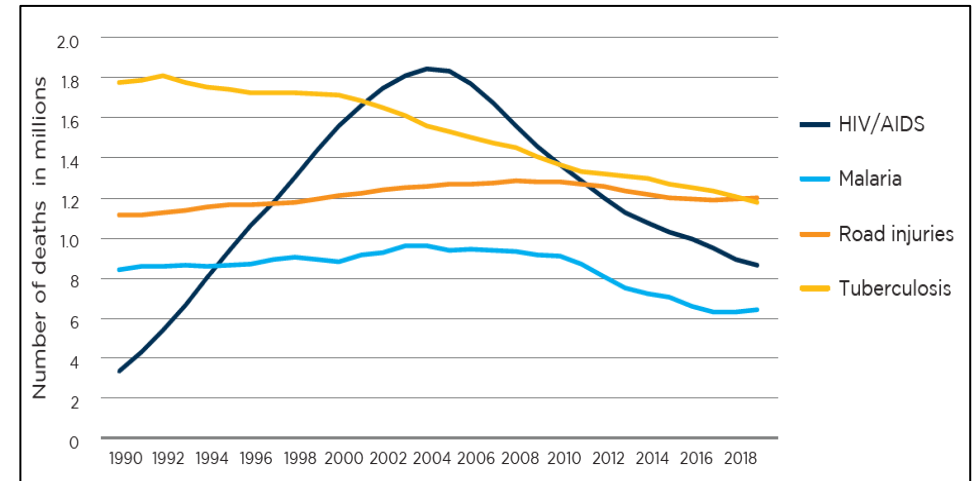
1. Road safety overview
2. The importance of speed
3. Solutions to support safe speeds on urban areas
4. Final comments

1. Road safety overview

Global road safety

- 1.19 million deaths and 50 million people seriously injured every year
- Leading cause of death for children and young adults 5–29 years of age
- More than half of the fatalities are vulnerable road users: pedestrians, cyclists, and motorcyclists
- 92% of traffic fatalities occur in LMICs
- High cost to health systems and economies - over 6.5 percent of GDP every year in LMICs.
- Missed opportunity for economic growth and ending poverty

Source: WHO, 2023; GRSF, 2020



Source: data from Institute for Health Metrics and Evaluation.

1. Road safety overview

Road safety in the Pacific

WHO estimate of fatalities in example Pacific Island Countries

Average: 13.4 (per 100,000 population)

Samoa: 9.6

PNG: 14.9

Tonga: 8.5

Australia: 5

Europe: <3

High burden on vulnerable road users, especially pedestrians: up to a third of deaths, but as high as 45%

High economic impact: equivalent of up to 5% of GDP

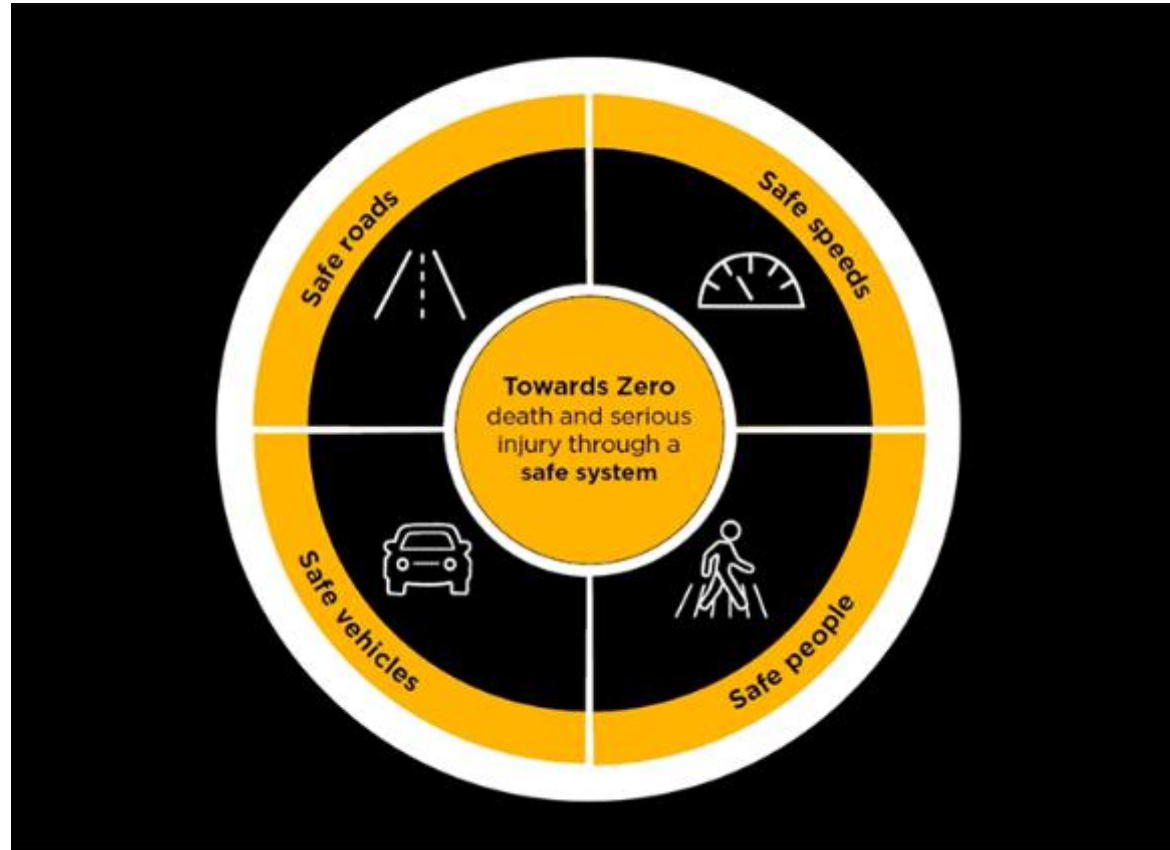


Source: GRSF, 2020

1. Road safety overview: Safe System approach

What is the Safe System Approach?

- Recommended global approach to improving road safety
- People make mistakes
- Shouldn't die because of these mistakes
- Should have a vision of a road system that protects road users when things go wrong
- Don't accept death and injury as a byproduct of mobility
- Shared responsibility



Source: NSW government

1. Road safety overview: Safe System approach

Shared responsibility



- Paint a warning line?
- Put up a warning sign?
- Teach people not to cross the line
 - Sensitization programs?
 - School education programs?

•Or



Source: NZTA / Waka Kotahi

2. The importance of speed

Speed is the single biggest contribution to road deaths and serious injury

More than 50% of deaths are caused by excess speed (above the speed limit or too fast for the conditions)

Reducing speed can bring significant benefits

The changes required can be highly cost-beneficial

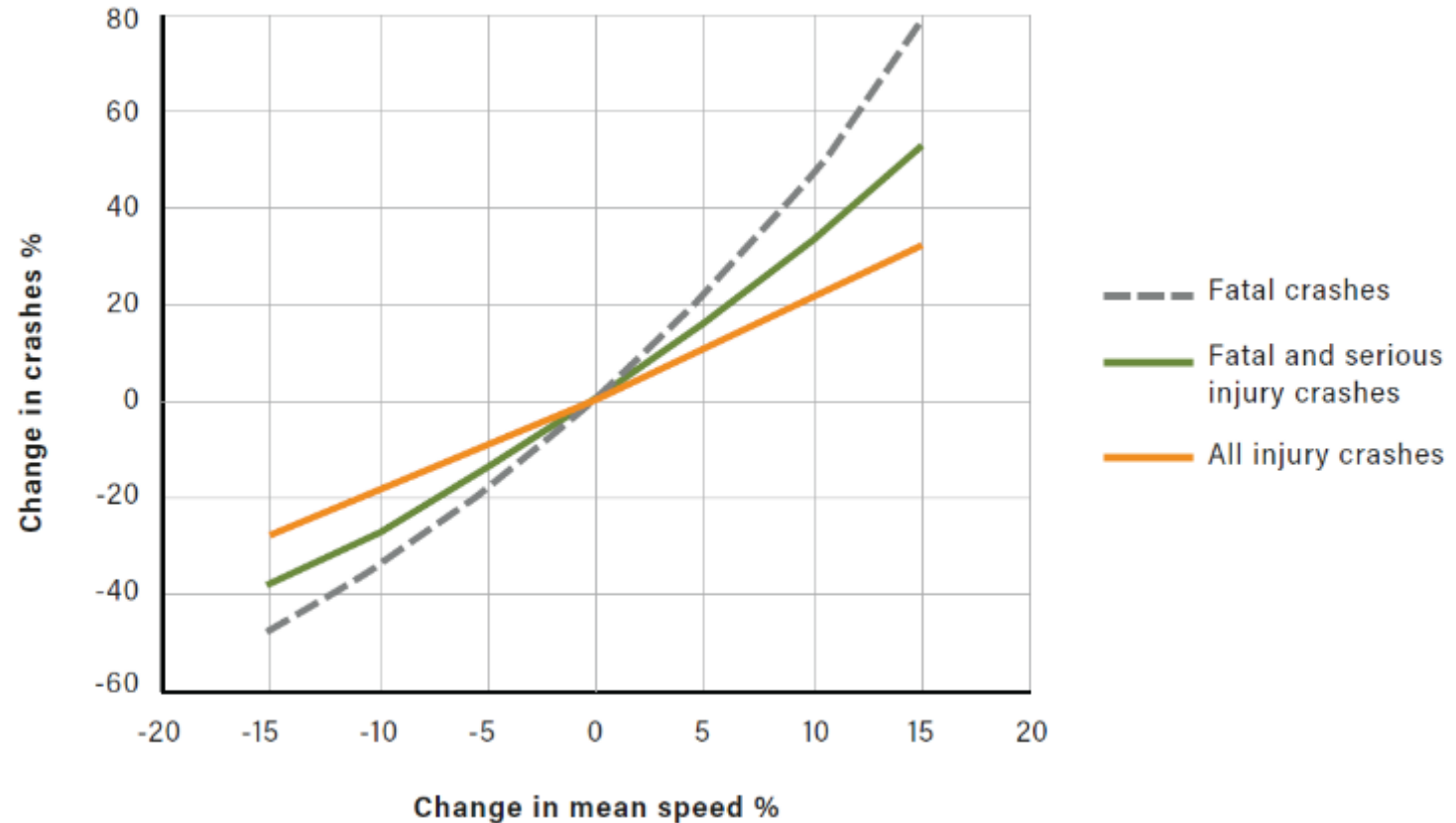
www.roadsafetyfacility.org/publications/guide-safe-speeds-managing-traffic-speeds-save-lives-and-improve-livability

Speed = travelling above the speed limit OR travelling too fast for the conditions



2. The importance of speed

Speed and crash risk

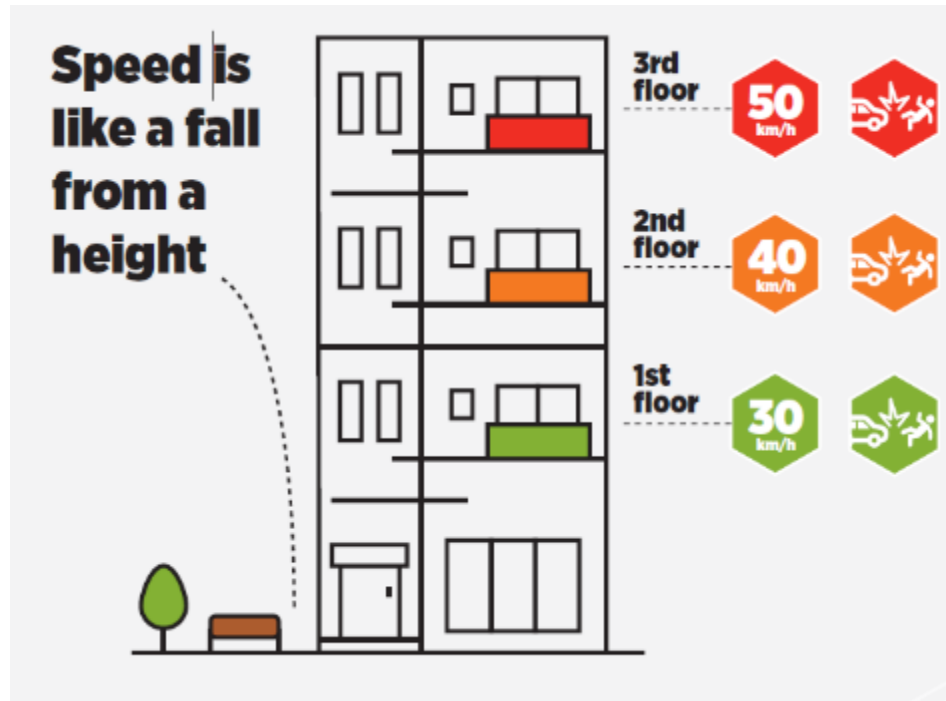


Source: Derived from Elvik et al, 2004

2. The importance of speed

Speed and crash risk

Limited human tolerance to crash forces



20% survival

70% survival

90% survival

Source: Auckland Transport

2. The importance of speed

Broader benefits of speed management

- Road safety improvements
- Decarbonization
- Vehicle operating costs reduced (reduced fuel costs; wear and tear on tyres, brakes)
- Smoother traffic flow and less congestion
- Mode shift to walking and cycling with subsequent health and environmental benefits
- Noise reduction
- Increased social interaction / social capital

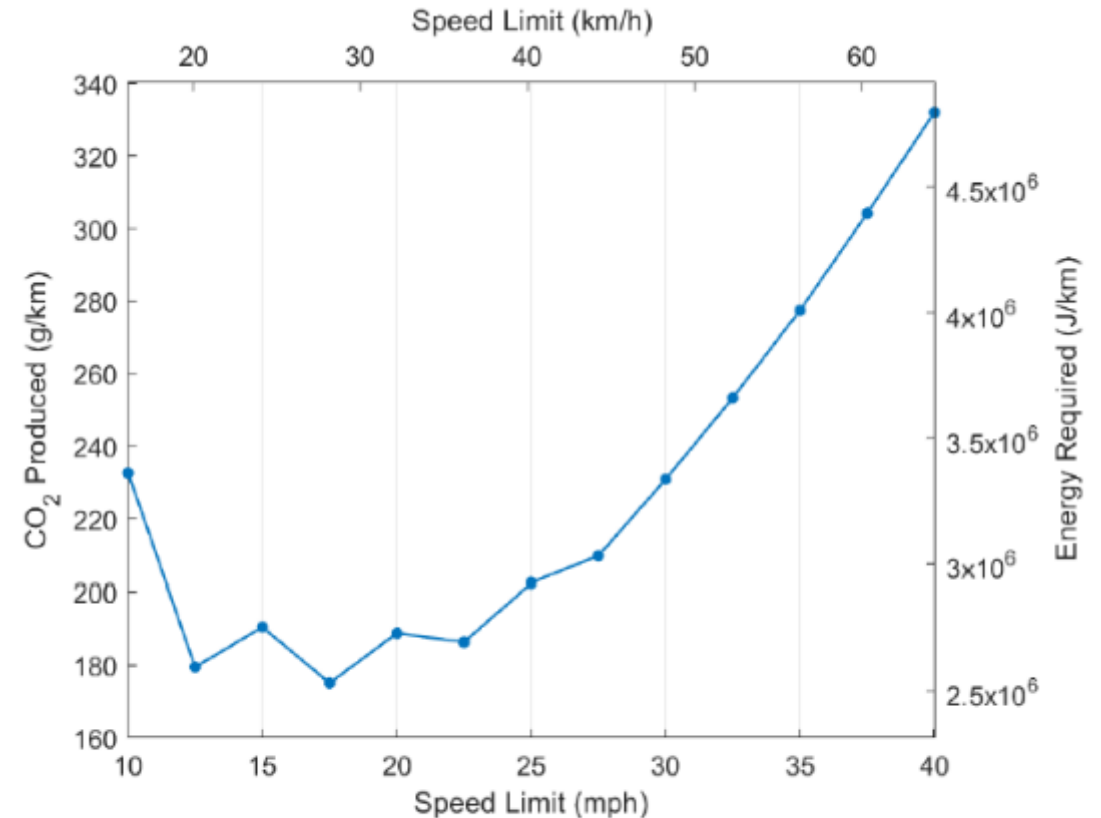


Fig. CO₂ emissions and energy required for the simulated Ford Focus EcoBoost.

Source: <https://futuretransport.info/urban-traffic-research/>

2. The importance of speed

There are implementation barriers to change

Use evidence to dispel the myths:

- Speed is the biggest cause of crash risk, and it does have other negative outcomes
- Speed limit reduction will have minimal impact on journey times, especially in urban areas
- The public understand the need for slower speeds, especially at risk locations, and are supportive
- Even small changes matter
- Speed reduction usually brings about net economic benefits

<https://www.globalroadsafetyfacility.org/speed-management-hub>

GRSF | **MANAGED BY WORLD BANK GROUP**
Global Road Safety Facility

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SPEED MANAGEMENT HUB

Overview Explainer Videos Tools Resource Library **FAQs**

Frequently Asked Question

▾ 8. Speed management fallacies / myth busting

- > 8.1. Myth: Speed has very little impact on road safety outcomes
- > 8.2. Myth: Lower speed limits create congestion
- > 8.3. Myth: Increasing traffic speeds by only 10 kph will not have negative effects on road safety
- > 8.4. Myth: Reducing speed by small amounts (such as 1 or 2 kph) won't have any effects on the crash outcome
- > 8.5. Myth: Putting up a sign with a lower speed limit will convince people to driver slower
- > 8.6. Myth: Lowering the speed limits will negatively impact the economy
- > 8.7. Myth: Speed bumps and rumble strips create noise and are unsafe
- > 8.8. Myth: Speed isn't the problem, bad drivers are.
- > 8.9. Myth: Things are different in my country compared to Europe – adopting similar speed management activities is practically impossible.
- > 8.10. Myth: Safer speed limits will always make trips longer.
- > 8.11. Myth: The idea behind speed management is to reduce speed rather than save lives.
- > 8.12. Myth: Modern vehicle technologies mean that I can now drive faster safely
- > 8.13. Myth: Lower speed limits create more air pollution.
- > 8.14. Myth: If I drive 35 on a 30 kph road there is no harm done, correct?
- > 8.15. Myth: People want high speeds

3. Methods for improving speed and road safety

Interventions

- Speed management strategy (see GRSF, 2024 report)
- Speed limit change (legislative review; revise speed limit defaults; signs)
- Speed limit change will often need to be supported with:
 - Infrastructure
 - Enforcement
 - Vehicle technology
 - Campaigns

3. Speed solutions for urban roads

Infrastructure: Match road design to desired speed environment



Source: Chris Jurewicz

3. Speed solutions for urban roads

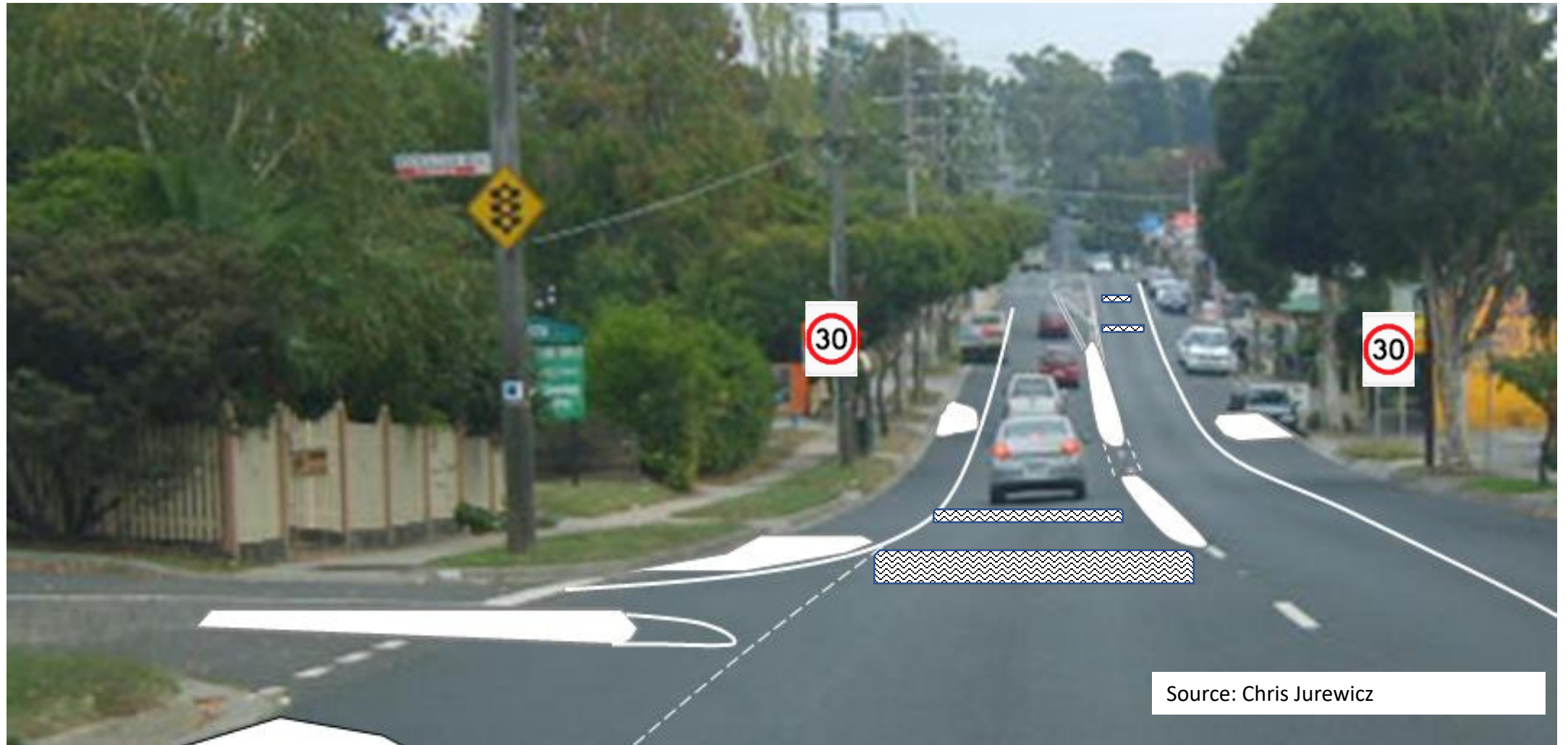
Infrastructure: Match road design to desired speed environment



Source: Chris Jurewicz

3. Speed solutions for urban roads

Infrastructure: Match road design to desired speed environment



Source: Chris Jurewicz

3. Speed solutions for urban roads

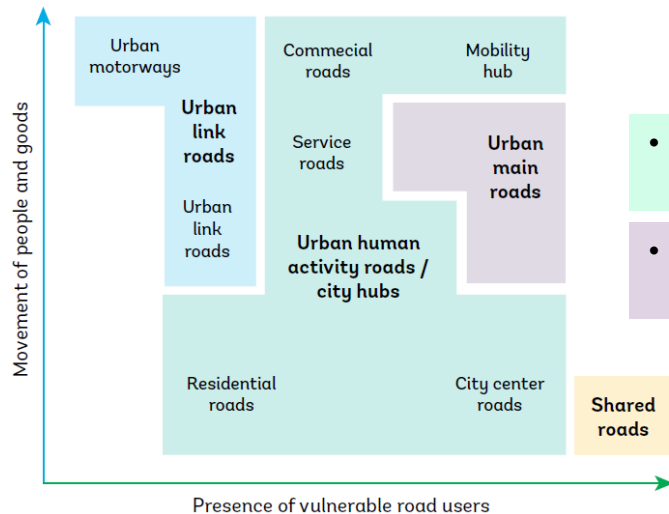
Speed limits - a good place to start.....

Action 1.1: 30 km/h for built up areas where there is human activity

Action 1.2: 50 km/h for main roads in other urban areas where there is no human activity

Action 1.3: Install signs to make motorists aware of speed limit

- Evidence of greatest benefit when supported by engineering treatments or enforcement program



- 30 km/h in Urban human activity areas

- 50 km/h on Urban main roads (with provision for vulnerable road users)



3. Speed solutions for urban roads

Action 1.4: Increase enforcement through the use of speed measurement devices and cameras



Source: GRSF

3. Speed solutions for urban roads

Action 1.5: Install raised pedestrian crossings

- Priority to pedestrians whilst reducing vehicle speeds
- Much better performance than normal pedestrian crossing
- Good speed reduction
- Good evidence of crash reduction (40-60% for pedestrians)



3. Speed solutions for urban roads

Start around schools - some of our most vulnerable road users



Source: Bram van Ooijen

3. Speed solutions for urban roads

Start around schools - some of our most vulnerable road users



Source: Bram van Ooijen

3. Speed solutions for urban roads

Action 1.6 – Install gateway treatments

- Used to mark transition between high & lower speed environment
- Highly effective between rural and urban (35% reduction in casualty crashes when a pinch point is used; 25% reduction in speed)
- Also used in urban areas to mark change in speed



Source: NZTA



Auckland City. Source: TES



Kiribati. Source: World Bank

3. Speed solutions for urban roads

Urban solutions – Gateway Treatment



Source: Bram van Ooijen

3. Speed solutions for urban roads

Urban solutions – Gateway Treatment



Source: Bram van Ooijen

3. Speed solutions for urban roads

Action 1.7: Install calming (humps) on residential streets and other high risk locations

- Most commonly used tool
- Speed reductions on approach and between
- Good speed reduction and safety improvement
- Use in a coordinated way



3. Speed solutions for urban roads

Action 1.8: Narrow oversized intersections

- e.g. Kerb build-out, painted islands
- Potential for lower speed through narrowing
- Shorter crossing distance for pedestrians



Source: Government of Japan



Source: GDCI

3. Speed solutions for urban roads

Action 1.9: Narrow travel lanes except in exceptional circumstances

- Painted or constructed from concrete
- Combine with pedestrian facilities to help crossing



Image source: WRI



Image source: iRAP

3. Speed solutions for urban roads

Provide training

Action 1.10: Provide training on why and how to achieve safe speeds

- Government – decision makers and technical staff
- Road design and construction industry
- Media
- Public



Source: GRSF



Source: Youtube

Final Comments

- Speed management:
 - is a very effective way to address road safety – especially for vulnerable road users
 - will assist with modal shift
 - links to other agendas (e.g. liveability, decarbonization) with other benefits
- To maximise impact:
 - Work towards a strategy
 - Communicate on importance of speed and the need for change
 - Start with agreement on speed limit selection
 - 30 km/h for urban centers, higher speeds for main roads - if supporting infrastructure is provided
 - Support with other measures, especially infrastructure
 - Prioritize at highest risk locations
 - Consider tactical urbanism to get started

Thank You

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