



Ellie Craft

Mode biases in transport



The Changing
Face of Transport
in New Zealand



Stantec



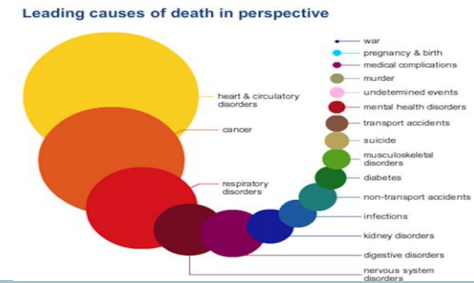
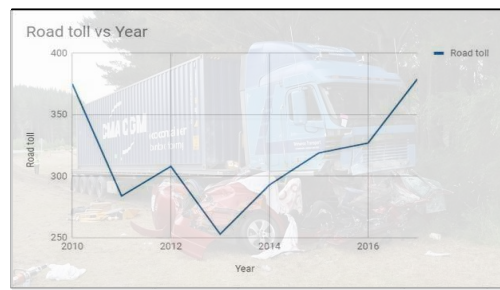
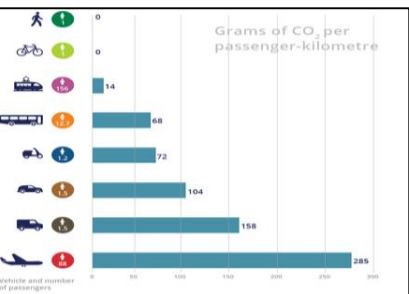
JACOBS

Removing Mode Biases

By Ellie Craft



Why address mode biases?



Active commutes
->
Regular activity

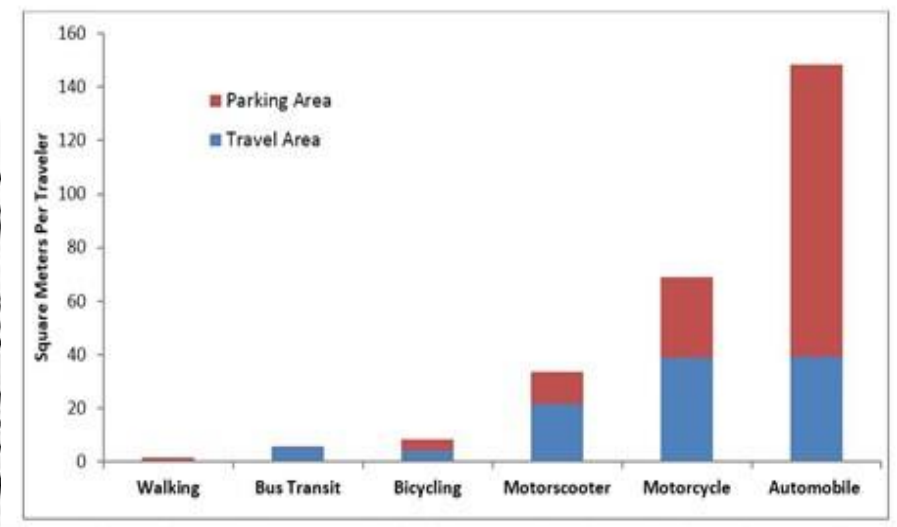
NEGATIVE EXTERNALITIES

Why address mode biases?



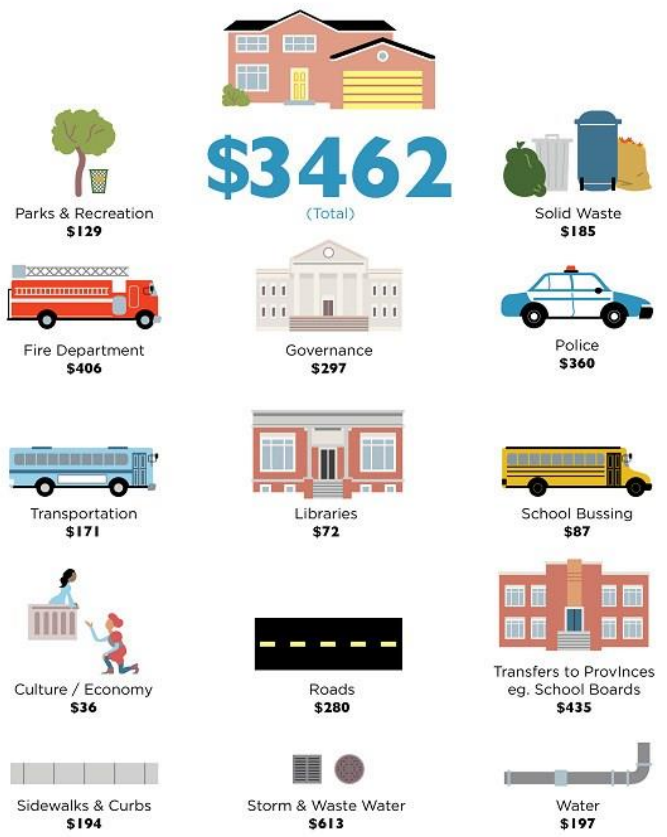
"Time saving swallowed up by destinations being further apart"

comics.com EMAIL: hpayne@detroitnews.com ©14



Suburban

City's Annual Cost, per Household



Urban

City's Annual Cost, per Household



- Agglomeration of business
- Cost of:
 - Accident
 - Road construction
 - Road maintenance (weight damage)
- Property value and business spending of livable streets



For more data and more reports, visit thecostofsprawl.com
Data based on Halifax Regional Municipality



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Why address mode biases?



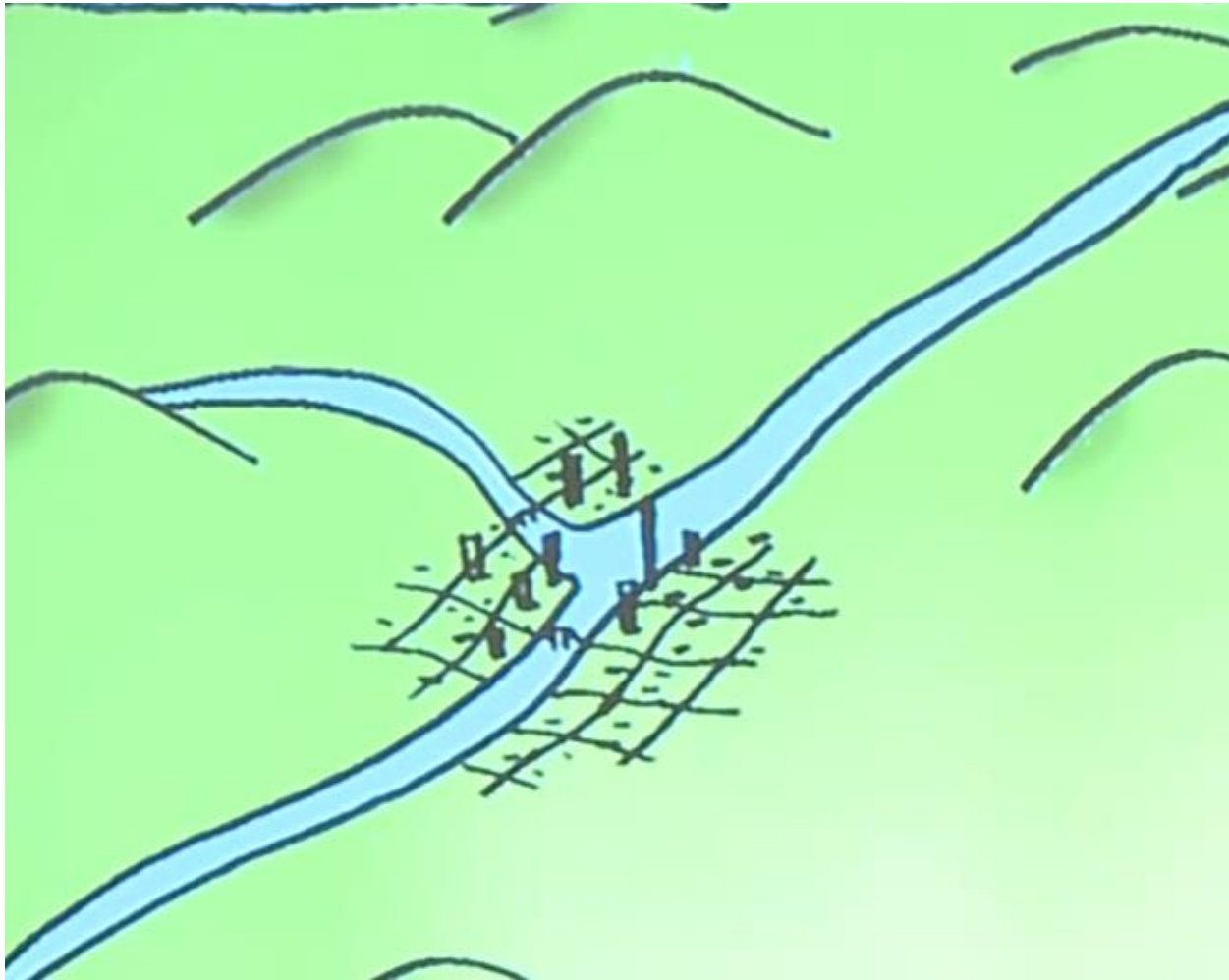
Barriers to mode shift factors:

- **Hard** -> Time and cost competitive
- **Soft** -> Mode status / Ego

Travel experience quality

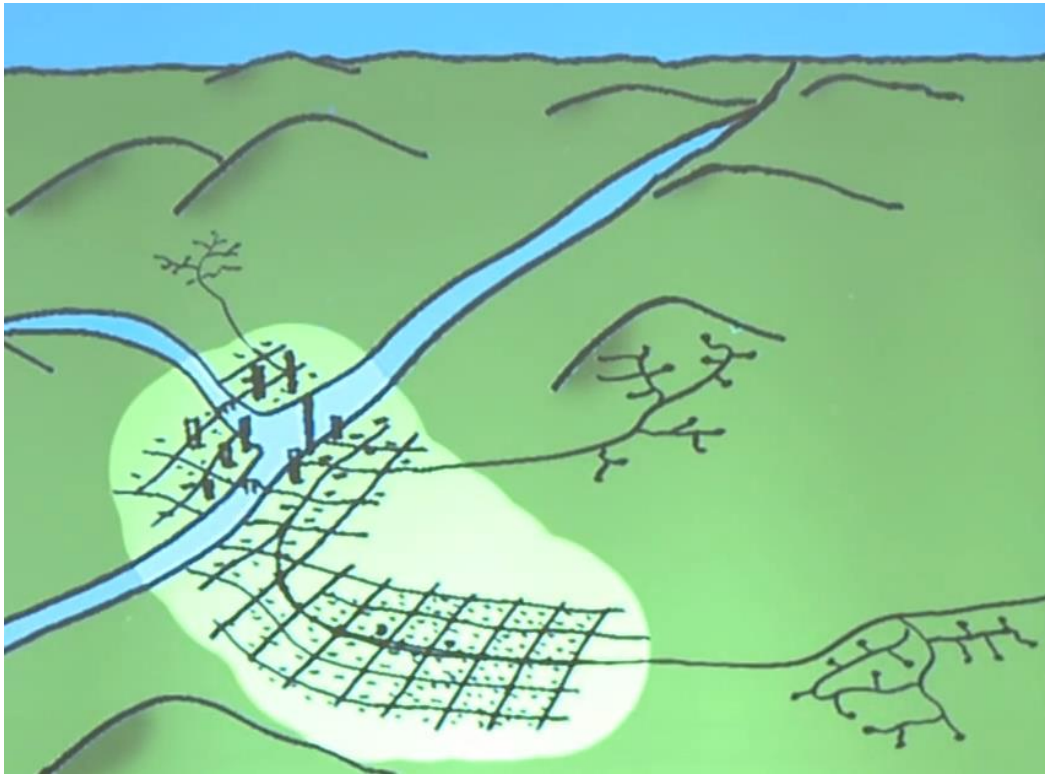
Mode biases sit in:

- **Public policies:**
 - Laws, taxes, subsidies, organizational processes and investment frameworks
- **Culture**
 - History/ language



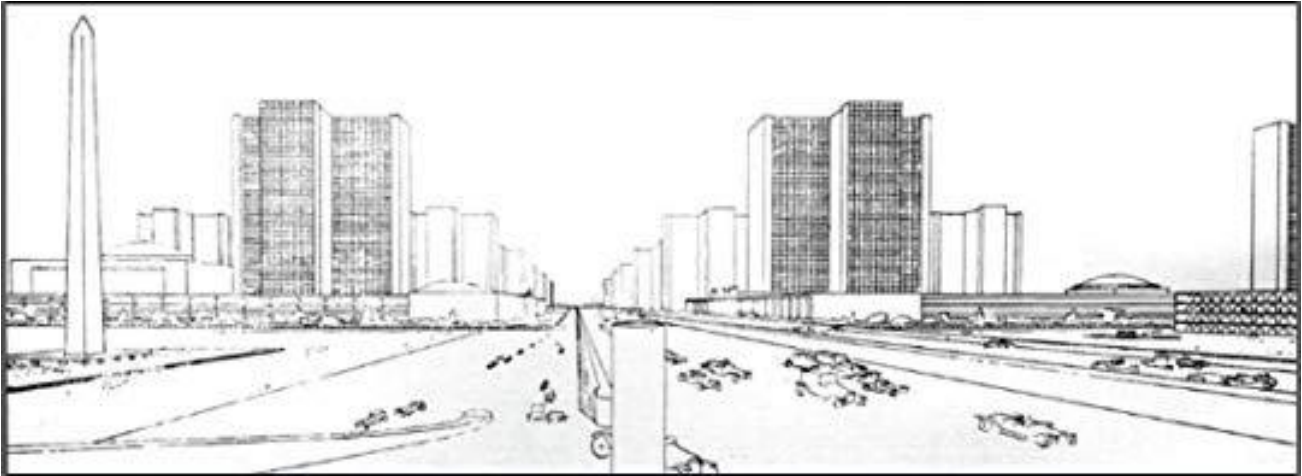
Traditionalism/ Traditional City

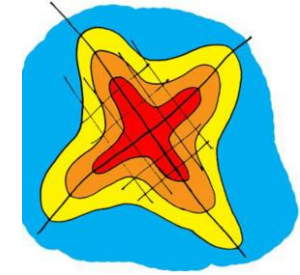
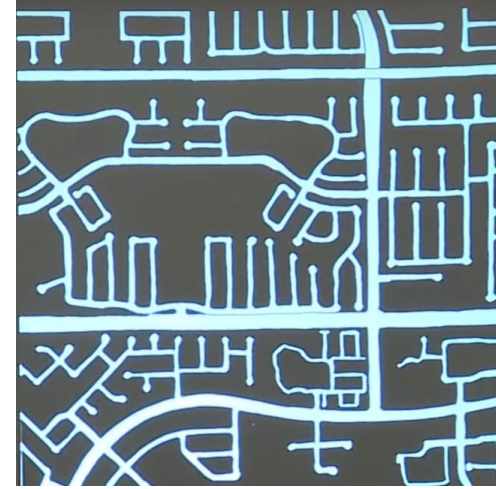
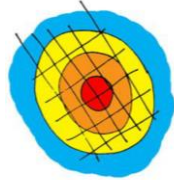
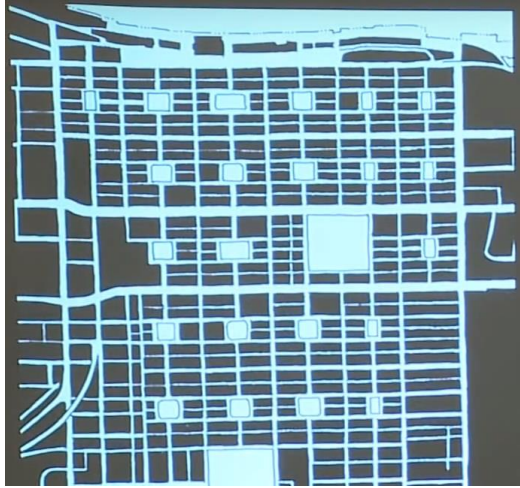
- Before cars
- Pedestrian-centered
- Efficient exchange.
- Need to create proximity and access



Modernism

- Mass-automobile production (1910s/ 1920s)
- Valued quickly connecting distant objects





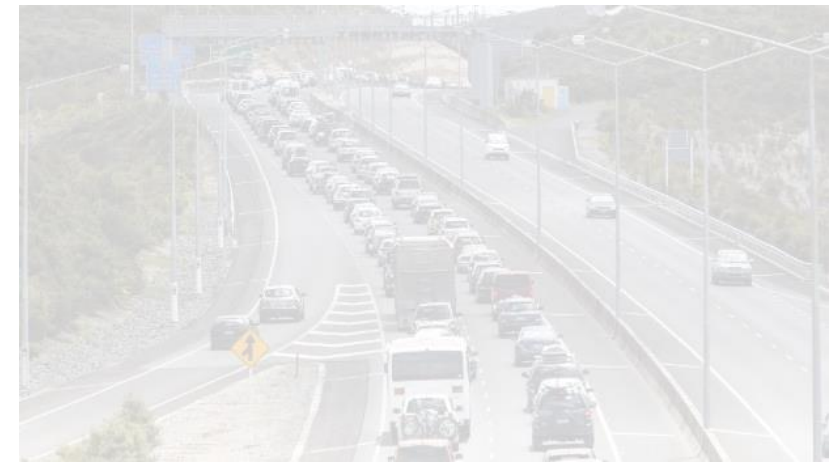
Traditionalism

- Goal: PROXIMITY TO THE CENTRE
 - Maximise intersection and exchange points (corner shop value)
- Grid street networks ->
 - Trips spread/dispersed over network.

Modernism

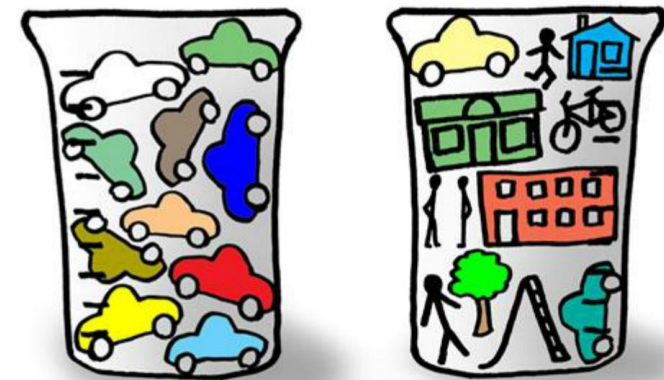
- Goal: TRAVEL TIME TO THE CENTRE
 - Minimising interaction, and traffic delay points
- Hierarchical based street networks ->
 - Cul de sacs converged/ truncated on to larger streets.

- **NZTA originally a road authority**
- **Origin of fuel tax**
- **Categorising government transport funding by mode and the impact on the ability to capture multi-modal benefits**
- **The destablishment of the AT walking and cycling team and it's impact on the goal of encouraging active modes**



Fireman AND man-powered -> -> Firefighter and human powered

- Upgrade/ Improvement
- Alternative mode
- Capacity
- Level of service
- Optimisation
- Vulnerable user
- Transport as a pure science?

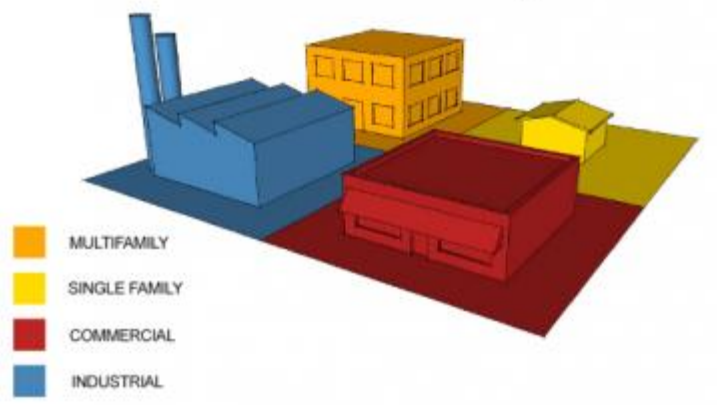


"Capacity" of a Street

Transport Planning Biases



Single Use Zoning

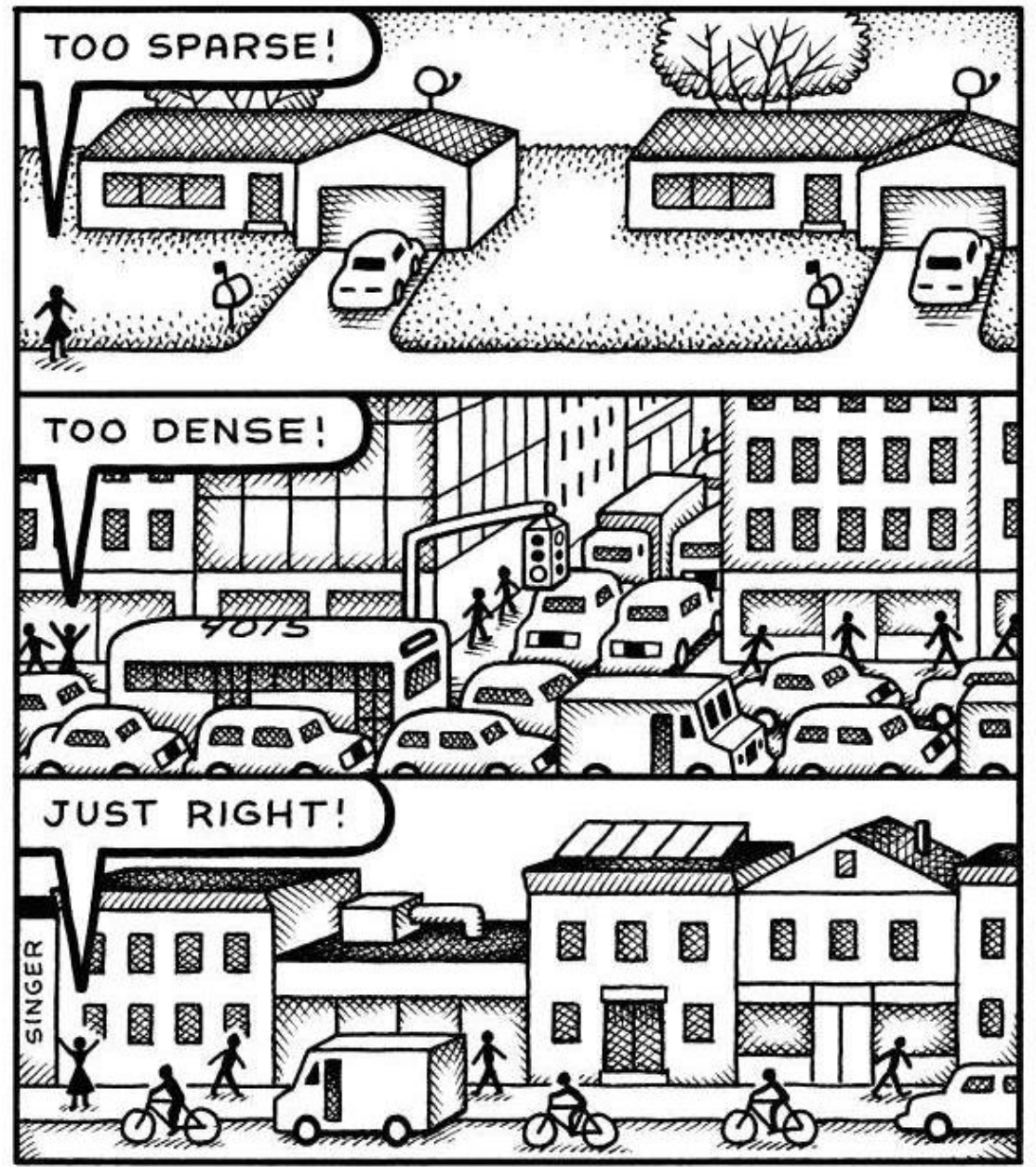


TOD- What development should we encourage next to good transit hubs?

Mixed-Use



GOLDBLOCKS EVALUATES DENSITY:





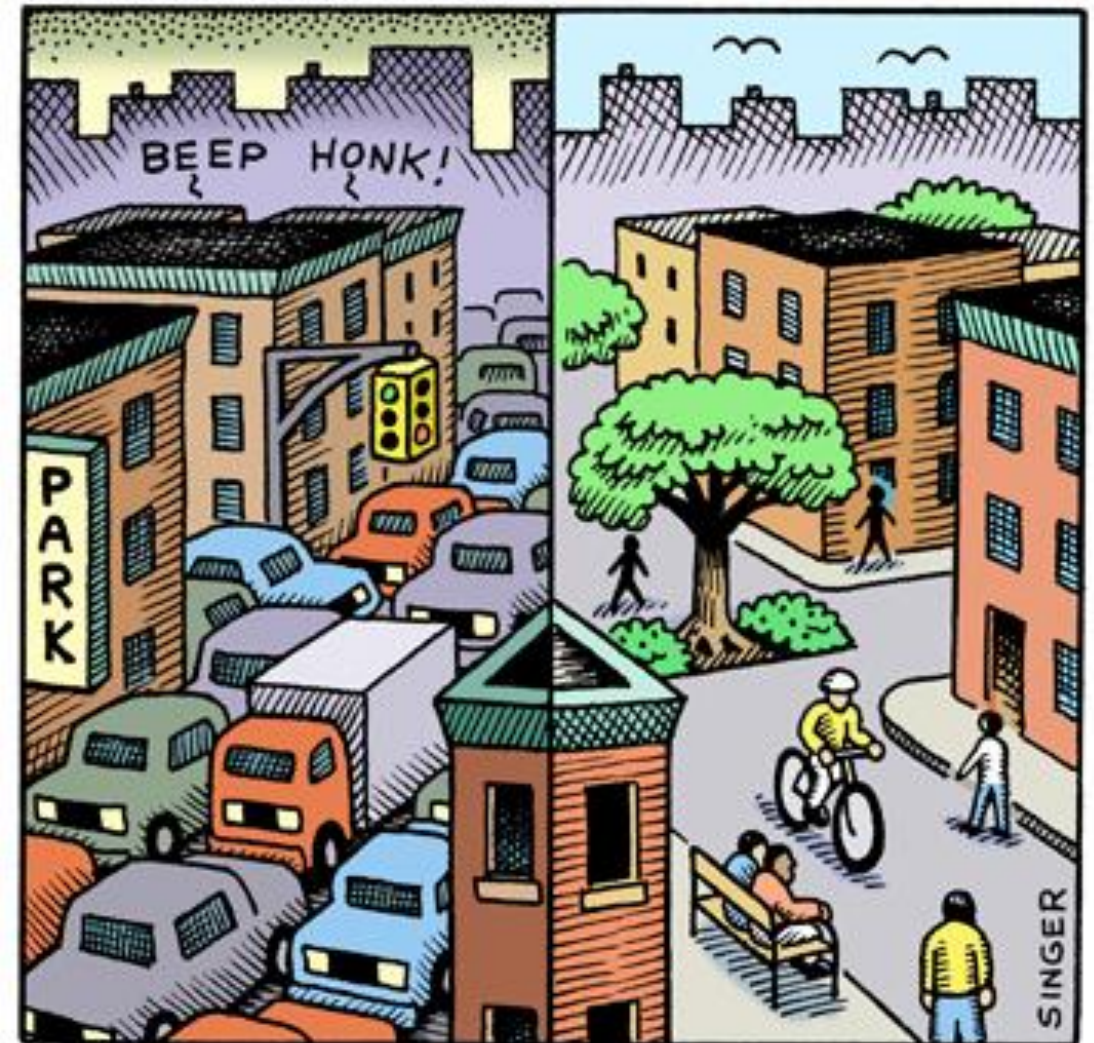
Carrots Versus Sticks





- National and regional strategies
- Best practice guidelines
- Built environment professional bodies
- Non-automobile advocacy groups

WE'VE APPEASED NON-SMOKERS...
NOW, LET'S APPEASE NON-DRIVERS!!
DIVIDE CITIES INTO TWO SECTIONS:
DRIVING AND **NON-DRIVING**



Mode equity alignment to changing national and regional strategies:

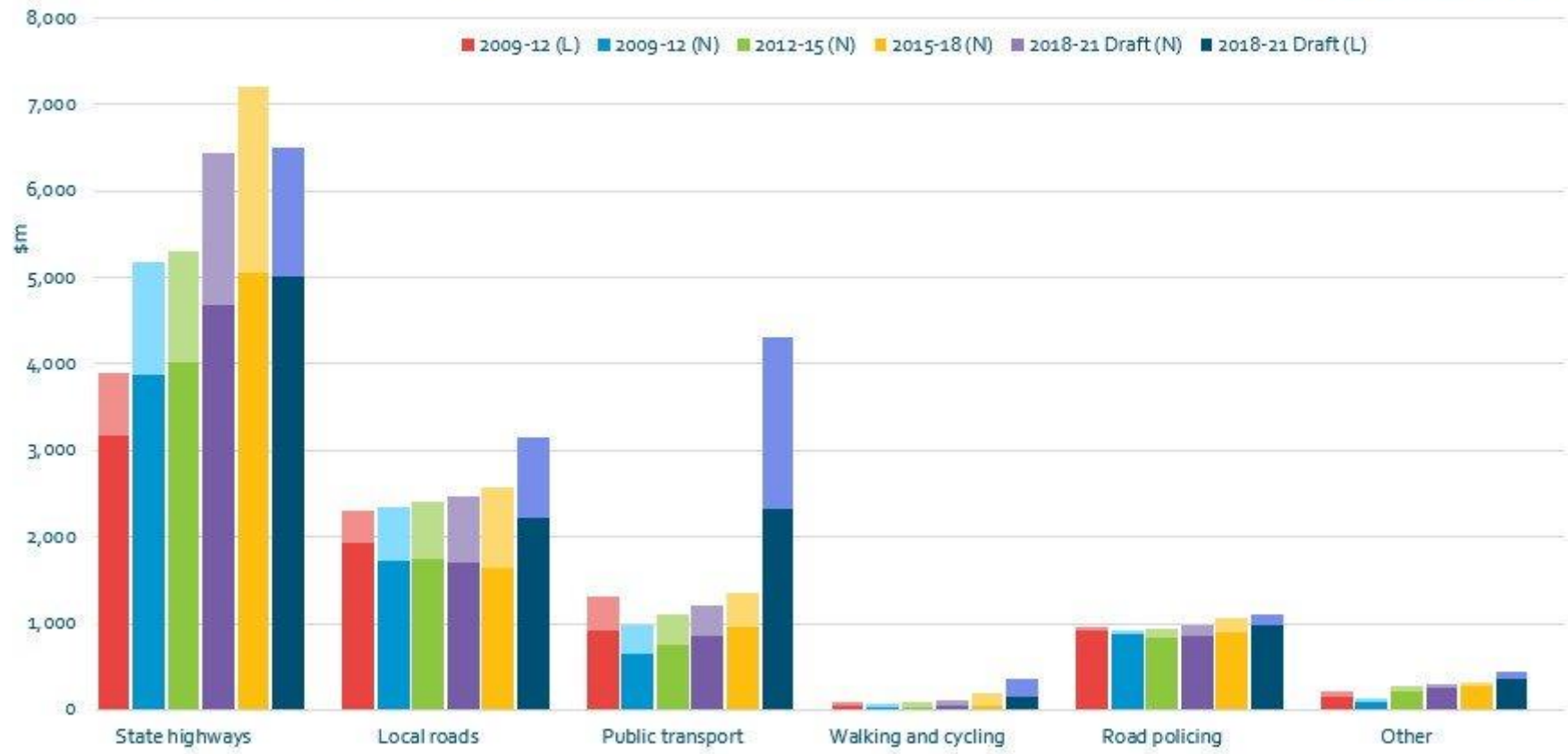
- **Ministry of Transport**
 - Government Policy Statement (transport priorities)
- **NZTA**
 - NZ Transport Agency Statement
 - New Zealand Road Safety Strategy
- **Ministry of Environment**
 - Zero Carbon Act
- **Auckland Council**
 - The Auckland Plan
 - Letter of Expectation (Mayor of Auckland)
 - C40 Cities Climate Leadership Commitment
- **Auckland Transport**
 - Auckland Transport Statement of Intent 2018-2021
 - Auckland Transport Alignment Project
 - Regional Land Transport Plan
 - Regional Public Transport Plan
 - Auckland Road Safety Strategy



Show me the money!!!

GPS Funding Ranges 2009/12 to draft 2018-21

Source: Ministry of Transport



Summary of strategic direction section

Safety in GPS 2018:

- reflects a significant increase in the level of ambition for delivering a land transport system free of death and serious injury
- signals a greater focus on investing in safety improvements on high risk state highways and local roads across the network, including speed management and primary safe system treatments
- outlines a commitment to deliver a new road safety strategy for New Zealand
- drives improvements in safety outcomes for all road users, including increased investment in footpaths and cycleways to support access to, and uptake of, active travel modes.

Access in GPS 2018:

- has a new focus that prioritises improving New Zealanders' access to economic and social opportunities. The increased focus includes:
 - urban areas (cities and towns)
 - regional development that supports thriving regions, for example through the Provincial Growth Fund
 - nationally important freight and tourism connections that are safe, efficient, resilient and minimise greenhouse gas emissions
 - improving resilience of the land transport system by placing greater focus on resilience to climate change impacts.

Equity in GPS 2018:

- prioritises road transport and other forms of transport and electric vehicle links to the wider Government, target of reducing 30 percent by 2030 more ambitious
- recognises the harmful transport of walking and
- recognises the creating lives improve access

Value for money in GPS 2018:

- increases the maximise the Government's
- indicates that account the the whole life of possible investment across a wide range of different scenarios
- places greater emphasis on transparent investment

Safety in GPS 2018:

- drives improvements in safety outcomes for all road users, including increased investment in footpaths and cycleways to support access to, and uptake of, active travel modes.

- Vision Zero
 - ACCEPT NO ROAD DEATHS.
 - Does this include deaths from road pollution and physical inactivity?
- New road safety strategy for New Zealand reference group wide engagement:

"This was the first time that we [walking and cycling advocacy group] have taken part in initial strategy discussions....It was beneficial."



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 - regional development that supports thriving regions, for example through the Provincial Growth Fund
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 - improving resilience of the land transport system by placing greater focus on resilience to climate change impacts.
- The increased focus on urban areas is to ensure that transport and land use planning reduces the need to travel by private motor vehicle (excluding commercial vehicles) by:
 - improving access by reducing the need to travel long distances to access opportunities like employment, education and recreation
 - supporting a mode shift for trips in urban areas from private vehicles to more efficient, low cost modes like walking, cycling and public transport.

Environment

- prioritises the transport and form of transport and electric vehicle links to the wider Government target of reducing greenhouse gas emissions by 30 percent by 2030
- more ambitious
- recognises the harmful transport modes of walking and cycling
- recognises the benefits of creating liveable communities and improve access

Value for money

- increases the value for money of the Government's investment
- indicates that the Government will account for the whole life cycle of possible future investment in transport across a wide range of modes
- places greater emphasis on decision-making outcomes across the system

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Environment in GPS 2018:

- prioritises reducing greenhouse gas emissions from transport and supports a mode shift to lower emission forms of transport, including walking, cycling, public transport and lower emission vehicles (such as electric vehicles)
- links to the wider environmental commitments of the Government, such as achieving the Paris Agreement target of reducing greenhouse gas emissions to 30 percent below 2005 levels by 2030, and setting a more ambitious reductions target for 2050
- recognises the public health benefits of reducing harmful transport emissions and increasing uptake of walking and cycling
- recognises the importance of urban form for creating liveable cities that value public space and improve access.

Value for money in GPS 2018:

- increases the emphasis on value for money to maximise the Government's investment
- indicates that account the whole life of possible future investment is across a wide range of outcomes
- places greater emphasis on decision-making outcomes

Environment in GPS 2018:

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Value for money in GPS 2018:

- ^{136.} Traditional approaches to transport economic evaluation can overstate the travel time benefits from new infrastructure and under-estimate the contribution from walking, cycling and public transport in providing more network capacity and other non-transport benefits. An investigation into the appropriateness of current economic evaluation approaches will be a priority to ensure they are fit for purpose, with this investigation to occur in 2019.

Addressing biases

New best practice guidelines/standards

- The new roads and streets framework at AT
- Multi user assessment tools
- Walking strategies → MRCagney is working on a walking strategy for Auckland



Figure 11 Roads and streets family

New best practice guidelines/standards



**TRANSPORTATION
GROUP NEW ZEALAND**

“The Group strongly supports the vision demonstrated by the draft GPS. The three overarching themes proposed which include mode neutrality.... is very sensible and offers a lot of scope for changing the way we have traditionally delivered transport.”



Values: “By quality urban places this means places that:... are easier to move around by a range of forms of transport”



Urban Design

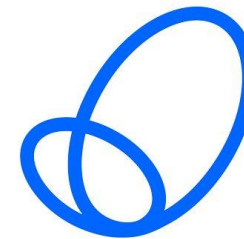
September 2007



PRACTICE NOTE

10

Practice note that encourages NZ engineers to adopt the Ministry for Environment Urban Design Protocols



*Engineering NZ Code of Ethics:
You must in the course of your engineering activities, take reasonable steps to safeguard health and safety of people*

OUR ALLIANCE, OUR FRIENDS

Get in touch if you'd like to join our alliance.

add your email



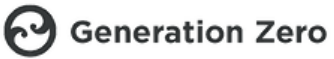
DOCTORS FOR
ACTIVE SUSTAINABLE
TRANSPORT

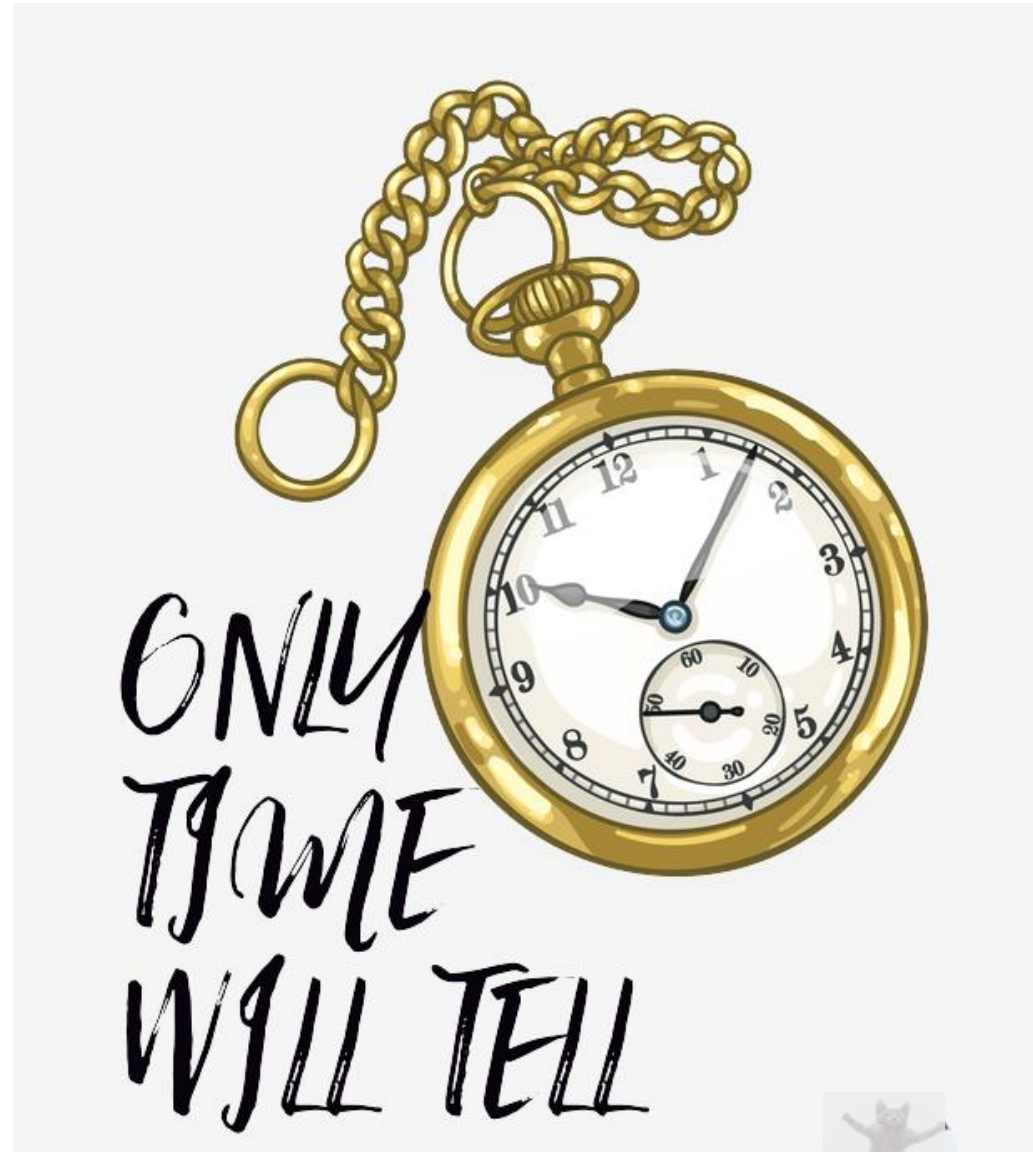
TRANSITION TOWN
PT CHEVALIER



Women in
Urbanism

MOVEMENT
SAFE JOURNEYS for ACTIVE KIWIS





Ellie Craft:

- Cares about:
 - Climate change
 - Air pollution
 - Road deaths
 - Community
 - Long commutes
 - Equity issues
- HATES driving
- Loves biking.....



IS ELLIE CRAFT BIASED??



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JACOBS