



NZ TRANSPORT AGENCY
WAKA KOTAHI

New Zealand Centre for Sustainable Cities

Making change happen

Transport strategies

Towards a resilient transport system

Richard Hurn / 19 February 2009

A resilient transport system: Summary

- Characteristics of a resilient transport system
- Leadership is the key determinant of transport outcomes
- Sustained and focused implementation delivers desired results
- Transport strategy musings
 - Business as usual is not affordable or desirable
 - The transport system can be made more resilient
 - Transport networks can deliver greater efficiencies
 - Integrated transport investments support desired land use patterns and travel behaviour outcomes
 - Managing travel demand actively improves resilience
 - Managing travel demand actively can be a “no regrets” approach

- Conclusions

Characteristics of a resilient transport system

- Resilient transport networks:
 - Are responsive to changes in consumer demands
 - Are adaptable to changes in energy sources
 - Provide people with low impact travel choices
- Characteristics of a resilient transport system include:
 - Delivers targets and outcomes
 - Supports liveable and thriving urban and rural communities
 - Enables the efficient movement of people and freight
 - Contributes to desired land use objectives and travel behaviour outcomes
 - Has a safe, low energy and environmental impact
 - Exhibits a high priority on maintaining existing road infrastructure assets and preserving route security
 - Maximises the use of existing road infrastructure assets
 - Provides efficient connections between key areas of economic activity
 - Has interconnected networks
 - Minimises transport costs

Leadership is the key determinant of transport outcomes

Leaders can:

- Overcome shortfalls in policy and governance
- Provide a clear vision of success
- Ensure decision making processes are outcome focused - and not driven by diagnostic tools
- Enable integration between land use and transport
- Develop long-term strategies and implementation plans



Sustained and focused implementation delivers desired results

Leaders can ensure:

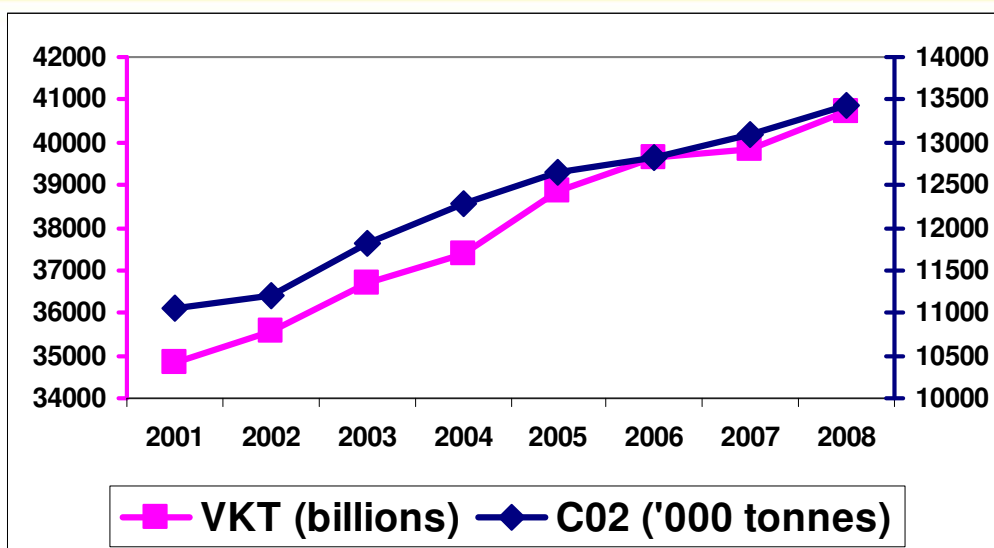
- Transport investments are prioritised to deliver economic development goals, desired land use patterns, travel mode shares
- Consistent, systematic and unwavering implementation, over time
- Alignment of activities and policies with outcomes
- Collaboration between engineers and planners
- Innovation

Business as usual is not affordable or desirable



- Business as usual growth has high impacts on: urban form, amenity, community severance, social cohesion, health, road trauma, local air quality, equity, affordability, etc
- The case for urgent improvements in transport decision making has been proven:
 - “formidable challenges” face the transport sector
 - Transport needs to be less reliant on oil
- Future economic growth depends on smart adaptation to changes in travel demand and fuel types

The transport system can be made more resilient



- Transport networks need to enable the efficient movement of people (rather than vehicles) and freight
- The time to act is now - there are long lead times between identifying the need for action and implementation

Transport networks can deliver greater efficiencies



- A stronger focus is required on people orientated urban design (that provides high quality public realm, and encourages walking, cycling, car pooling and public transport)
- Competing demands for existing road space need to be balanced - using hierarchies for road functions and road users
- A phased approach is required to manage travel demands
- Freight needs to be moved efficiently, with each mode playing its part
- Concentrate investment on key corridors, freight nodes, neighbourhoods (avoid *peanut buttering*, focus on small zones)

Integrated transport investments support desired land use patterns and travel behaviour outcomes

- Urban design influences travel choices, behaviours, and costs
- Intensification (mixed land use and high density housing – with quality public realm, desirable amenity, and good transport choices) can deliver better outcomes than residential and industrial sprawl
- Land use policies need to encourage transport activity that is affordable and desirable in the long-term
- Transport investments (including levels of service) need to contribute to desired long-term land use patterns, travel behaviours, and enable efficient freight movements
- We need to accommodate growth where the marginal costs are low

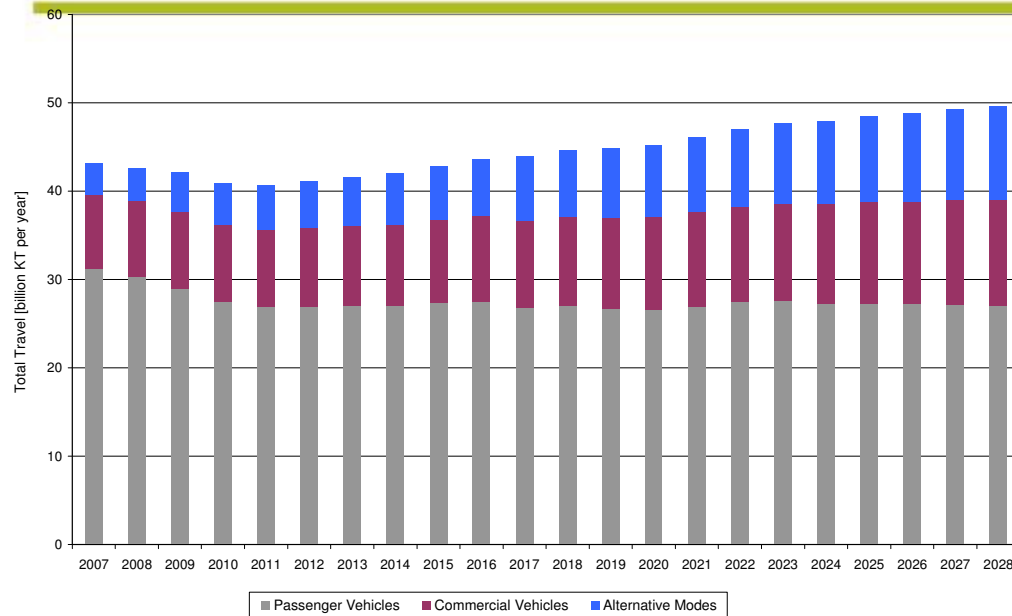


Managing travel demand actively improves resilience



- Maximise existing road corridor capacity by:
 - Providing better quality information about existing travel mode options
 - Retrofitting networks with low-cost, area-wide, interventions to improve public transport and active mode travel options
 - Promoting public transport and active mode choices
 - Implementing (technology based) traffic management practices to maximise efficient movement of people and freight
 - Constructing minor improvements, before major improvements
- Maximise (high value) exchange space and minimise (high cost) movement space – support compact urban forms that improve quality of life

Managing travel demand actively can be a “no regrets” approach



- Keep options open, assess proposed packages against several scenarios
- Regularly review growth estimates and policies, the need for transport improvements, the impacts of phased transport solutions
- The six-pack “what’s in it for me”: (1) Better transport outcomes, (2) Reduce dependence on oil (costs), (3) Mitigate increases in transport costs, (4) Mitigate environmental impacts, (5) Improve transport choices, (6) Achieve economic development

Conclusions

We can make change happen, through transport strategies. It requires:

- Visionary leadership
- Unambiguous implementation
- Integrated land use and transport
- A focus on minimising the high costs of movement while maximising mobility
- Managing travel demand actively with an intervention hierarchy
- Regular, rigorous, review processes to ensure solutions are fit-for-purpose



More information

Attached diagrams:

- An integrated approach to land transport planning
- Interaction between key land use and transport planning documents
- Hierarchy of land transport strategies, policies and programmes

NZTA transport strategy and programming guidance

<http://www.landtransport.govt.nz/information-for/local-transport-authorities/index.html>

Managing Transport Challenges When Oil Prices Rise

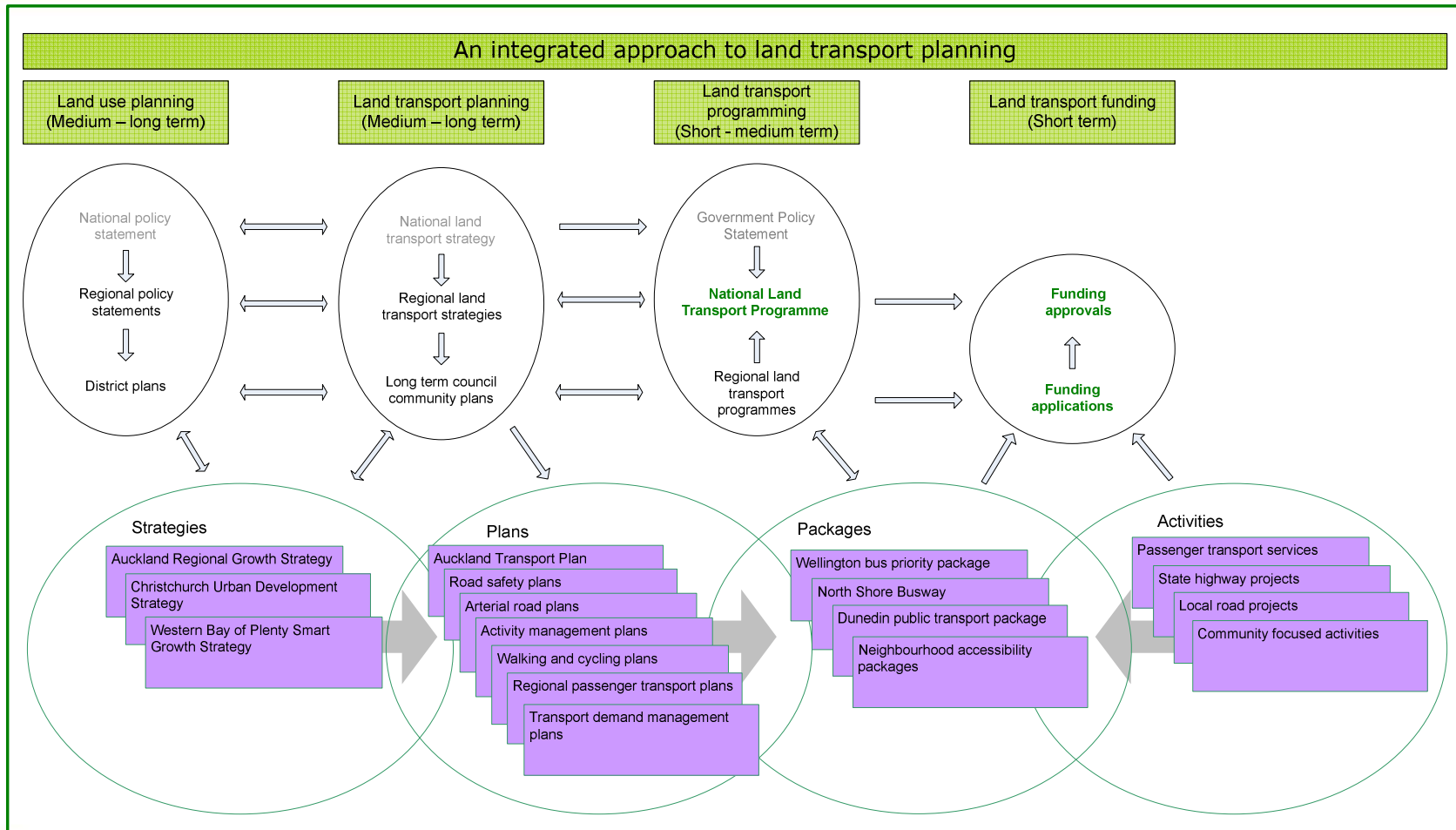
McCormick Rankin Cagney, 2008

<http://www.landtransport.govt.nz/research/reports/357.pdf>

Transport Network Optimisation, ViaStrada, 2008

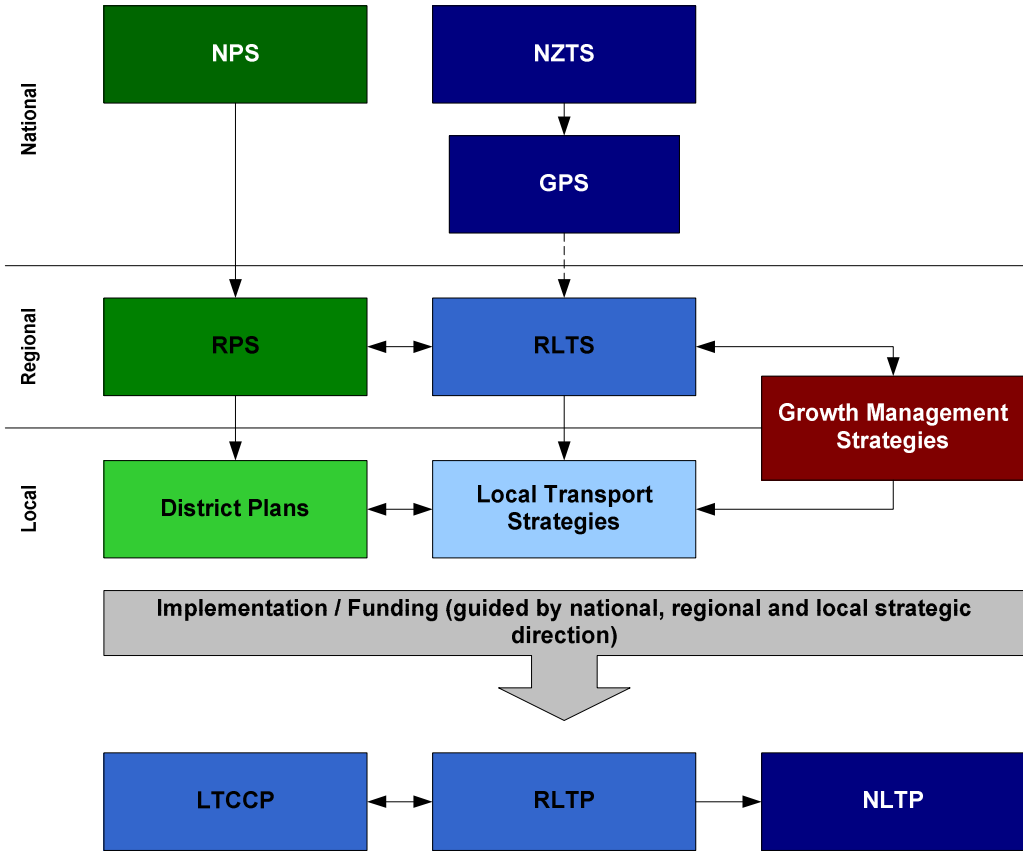
<http://www.landtransport.govt.nz/sustainable-transport/docs/transport-network-optimisation.pdf>

An integrated approach to land transport planning



Interaction between key land use and transport planning documents

Transport and Land Use: Interaction Between the Key Documents



Hierarchy of land transport strategies, policies and programmes

