New Zealand Transport Outlook

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Presentation to the Transport Knowledge Hub Networking Event

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It will provide:

- a high-level view of the current state of the transport system
- commentary on emerging trends and influences (such as technology, demographics)
- 30-year projections of future transport demand, vehicle-kilometres travelled, fuel use and emissions
  - provide a consistent and accessible set of information, assumptions, and scenarios
- develop and continually improve Ministry and sector modelling capability
Similar to other government publications
Similar to other international examples
How Transport Outlook’s Models Fill a Need

► Almost all policy analysis requires projecting the future, such as:
  ► travel demand and traffic volumes
  ► fuel use/emissions
  ► public health and safety

► Models can bring consistency and rigour to these projections

► However, in order to provide maximum value, the models should be consistent and continually improved

► Outlook’s modelling effort is therefore very much a means to a broader end: developing an ongoing in-house modelling capability at MoT
► **Current State** document Released 29 June 2017

► Available at: [www.transport.govt.nz/transportoutlook](http://www.transport.govt.nz/transportoutlook)

► **Future State** document to be released later this year
Different products for different audiences

Products

- Digital Dashboard
- Summary brochures
- Transport Outlook: Current State
- Transport Outlook: Future State
- Technical Appendices
- Road, Rail, Aviation etc
- Data, models etc
- All publicly available

Audience
Outlook’s Set of Interlinked, System-Level Models

Aviation Sector
- Regional Air Travel
- International Air Travel
  - Aircraft KM Travelled/Emissions
  - Leg-Based Departures

Local Travel Sector
- Household Travel (all modes)
  - VKT/Vehicle Numbers
  - Health Outcomes
  - Road Fleet/Fuel/Emissions

Freight Sector
- Freight Flows (road/rail/ship)
  - Freight Tonne-KM by Region
  - Rail/Shipping Fuel/Emissions
The Base Scenario

 ► The Base Scenario portrays where demography and economic growth alone is likely to take us, assuming no changes in either technology or consumer behaviour
   ► *Does not take into account planned infrastructure investments*
   ► *Exception: Public transport in Auckland is based on Auckland Transport projections incorporating the City Rail Link and other planned public transport enhancements in Auckland*
   ► In this sense it is a very ‘business as usual’ scenario
   ► *Not a mid-point of the four alternative scenarios*
### Base Scenario – Change in Local Trips Per Capita by Mode

**Before Shift to Vehicle Share**

<table>
<thead>
<tr>
<th>Mode</th>
<th>2012/13</th>
<th>2042/43</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light vehicle driver</td>
<td>697</td>
<td>704</td>
</tr>
<tr>
<td>Light vehicle passenger</td>
<td>341</td>
<td>292</td>
</tr>
<tr>
<td>Pedestrian</td>
<td>222</td>
<td>211</td>
</tr>
<tr>
<td>Bus</td>
<td>30</td>
<td>42</td>
</tr>
<tr>
<td>Cyclist</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Train</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Taxi</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Ferry</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,321</strong></td>
<td><strong>1,285</strong></td>
</tr>
</tbody>
</table>
Base Scenario – Projected Number of Trips (All Modes)

- **Projected Number of Trips (All Modes)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2012/13</th>
<th>2017/18</th>
<th>2022/23</th>
<th>2027/28</th>
<th>2032/33</th>
<th>2037/38</th>
<th>2042/43</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private vehicle driver</td>
<td>4,000</td>
<td>4,500</td>
<td>5,000</td>
<td>5,500</td>
<td>6,000</td>
<td>6,500</td>
<td>7,000</td>
</tr>
<tr>
<td>Private vehicle passenger</td>
<td>3,000</td>
<td>3,500</td>
<td>4,000</td>
<td>4,500</td>
<td>5,000</td>
<td>5,500</td>
<td>6,000</td>
</tr>
<tr>
<td>Vehicle share/taxi</td>
<td>2,000</td>
<td>2,500</td>
<td>3,000</td>
<td>3,500</td>
<td>4,000</td>
<td>4,500</td>
<td>5,000</td>
</tr>
<tr>
<td>Active modes</td>
<td>1,000</td>
<td>1,500</td>
<td>2,000</td>
<td>2,500</td>
<td>3,000</td>
<td>3,500</td>
<td>4,000</td>
</tr>
<tr>
<td>Public transport</td>
<td>7,000</td>
<td>7,500</td>
<td>8,000</td>
<td>8,500</td>
<td>9,000</td>
<td>9,500</td>
<td>10,000</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Base Scenario – Percent Change in Population and Trips by Region 2012/13->2042/43

* Based on Statistics New Zealand Medium Projection 2013(base) update
Five Scenarios: Base Case + Four Alternatives

Moderate Technological Progress/
Economic Growth/Population Growth

“Staying Close to the Action”
scenario: Live in Transit-
Friendly/Dense Big Cities

Face-to-Face Interaction
Highly Valued

“Golden Triangle”
scenario: Live in Suburban/Sprawling
Big Cities

Rapid Technological Progress/Economic
Growth/Population Growth

“Metro Connected”
scenario: Live in Big and Smaller Cities

Digital Communications
Can Substitute for Transport

“@Home in Town and Country”
scenario: Live and Work Anywhere You Please
Comparison of Projected 2042/43 Distance Travelled by Mode in New Zealand

- Other
- Public transport
- Active modes
- Vehicle share/taxi
- Private vehicle passenger
- Private vehicle driver

New Zealand Population
Comparison of Projected 2042/43 Distance Travelled by Mode in the Auckland Region

- Current (2012/13)
- Base case
- Staying close to the Action
- Metro connected
- Golden triangle
- @home in Town and Country

Distance (million km)
- 0
- 5,000
- 10,000
- 15,000
- 20,000
- 25,000
- 30,000

Population (millions)
- 0.00
- 0.50
- 1.00
- 1.50
- 2.00
- 2.50
- 3.00

- Other
- Public Transport
- Active Modes
- Vehicle Share/Taxi
- Private Vehicle Passenger
- Private Vehicle Driver
- Auckland Population
Comparison of New Zealand Vehicle Kilometres Travelled Across Scenarios

- Golden Triangle
- @Home in Town and Country
- Base
- Metro Connected
- Staying Close
Comparison of Auckland Region Vehicle Kilometres Travelled Across Scenarios

Golden Triangle
@Home in Town and Country
Base
Metro Connected
Staying Close
The project does not end with publication of *Future State* document:

- “Start of a conversation” – begin stakeholder consultation process
- Closer cooperation with NZTA and their Long-Term Strategic Vision
- Continually improve the models
- Produce updated and improved editions of the Outlook publications