Investing for Sustainable Transport

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Acknowledgements

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- From budget – NZ-European Union ‘FRIENZ ‘ n-European research collaboration
- Partner in Europe: Wuppertal Institute, Berlin
- Grant leader A/Prof Ralph Chapman, VUW
Outline

- Emission reduction goals for transport
- Emission trends
- Economic evaluation frameworks
- Investment trends
- Active transport
- Summary
Central government & emission reductions from transport

- Set goals and strategic direction
- Define business case and economic evaluation frameworks
  - Increasing emphasis on side effects and co-benefits of particular transport modes
- Investor – to varying degrees
EU reduction goals for transport sector

Percent of 1990 Emissions

EU long-term target

EU reduction Target
Emission reduction progress

- Ireland
- New Zealand
- Australia
- United Kingdom
- EU long-term target
- EU reduction Target
% of emissions from transport

- New Zealand
- United Kingdom
- Ireland
- Australia
Emissions per capita

Tonnes per capita


Ireland  New Zealand  United Kingdom  Australia
# Cycling benefit values

<table>
<thead>
<tr>
<th>Country</th>
<th>Mortality Reduction</th>
<th>Morbidity Reduction</th>
<th>Health Care Cost Saving</th>
<th>Absenteeism Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>$1.30 per km</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Australia (QLD)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Ireland</td>
<td>Reduce by 22%</td>
<td>n/a</td>
<td>n/a</td>
<td>Reduce by 6%</td>
</tr>
<tr>
<td>UK (England)</td>
<td>Reduce by 22%</td>
<td>n/a</td>
<td>n/a</td>
<td>Reduce by 6%</td>
</tr>
</tbody>
</table>
Primary transport objectives

New Zealand
- Economic Growth
  - Safety
    - Economic Efficiency

United Kingdom
- Economic Growth
  - Service Quality
    - Safety
    - Environment

Ireland
- Economic Efficiency
  - Environment
    - Service Quality

Australia (QLD)
- Service Quality
  - Economic Efficiency
    - Environment
## Transport objectives - roads

<table>
<thead>
<tr>
<th>Country</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>• Direct funding towards priority initiatives, particularly the Roads of National Significance.</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>• Tackle longstanding problems on road network.</td>
</tr>
<tr>
<td></td>
<td>• Maintain and renew the strategic road network.</td>
</tr>
<tr>
<td>Ireland</td>
<td>• Car commuting to reduce from 65% to 45% by 2020.</td>
</tr>
<tr>
<td></td>
<td>• Total kilometres travelled by car not to increase significantly.</td>
</tr>
<tr>
<td>Australia (QLD)</td>
<td>• Meet 'towards zero deaths on Queensland's Roads' targets.</td>
</tr>
<tr>
<td></td>
<td>• Develop inland freight corridor and move freight from road to rail.</td>
</tr>
</tbody>
</table>
National capital spending on road transport (USD per capita)
% of capital expenditure on sustainable modes
## Transport objectives - Active

<table>
<thead>
<tr>
<th>Country</th>
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</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>• Increased safe cycling through improvement of cycle networks.</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>• Double the number of journeys made by bicycle by 2025.</td>
</tr>
<tr>
<td></td>
<td>• Reduce rate of cyclists killed or seriously injured</td>
</tr>
<tr>
<td></td>
<td>• Reverse the decline in walking per person</td>
</tr>
<tr>
<td>Ireland</td>
<td>• Cycling commuting to more than quadruple.</td>
</tr>
<tr>
<td></td>
<td>• Cycling to increase from 2% to 10% of all trips by 2020.</td>
</tr>
<tr>
<td>Australia (QLD)</td>
<td>• Cycling’s share of commute trips doubles by 2021 and triples by 2031.</td>
</tr>
<tr>
<td></td>
<td>• Improve the accessibility of active transport.</td>
</tr>
</tbody>
</table>
Active transport - % of spending

- United Kingdom
- New Zealand
- Ireland

Year: 2007 to 2021
UK – cycling mode share & goals

- Cycling Mode Share
- Goal - 1996 National Cycling Strategy
- Goal - 2017 Cycling Strategy
- Goal - Transport 10 Year Plan 2000
## Transport objectives – PT

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<tr>
<th>Country</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Zealand</strong></td>
<td>• Increased provision of public transport to increase productivity, if justified by demand.</td>
</tr>
</tbody>
</table>
| **United Kingdom** | • Improve access to public transport.  
                      • Improve journeys so that they are simpler, faster, cheaper, and more reliable. |
| **Ireland**        | • Public transport commuters to increase by 230,000 by 2020.                 |
| **Australia (QLD)**| • Improve the accessibility of public transport.  
                      • Improve access to real-time transport information. |
Summary

- Transport emissions are a significant challenge for developing countries
- Transport objectives vary widely
- In case study countries, AT investment has increased but remains relatively low
- NZ is an outlier – high roading investment
- UK offers useful case study for transition towards sustainable modes
  - Goals can be difficult to achieve
Thanks.

Questions?