Clean Air Summit

Future Transport Strategy

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Future Transport
Change is occurring rapidly and moving us in unexpected directions. Future Transport is an opportunity to shape that change for the best possible outcomes.
Future Transport
Growth in vehicle use with population and economic growth

Projected GMR Vehicle Kilometres Travelled (VKT)
2016 - 2036 by Vehicle Type

VKT millions

Source: Air Emissions Inventory for the Greater Metropolitan Region in New South Wales 2005 Calendar Year On-Road Mobile Emissions: Results, EPA 2012
Future Transport

PM$^{10}$ emissions trajectory

- All Vehicles Non-Exhaust PM
- Other Vehicles Exhaust
- Heavy Commercial Vehicle
- Light Commercial Vehicle
- Passenger Vehicle Diesel
- Passenger Vehicle Petrol
Health costs of vehicular pollution

- 240 NSW deaths
- 3,300 years off people’s lives

- NSW Road Toll = 300-400pa
A suite of possible responses include:

- Cleaner fuel/emissions standards (Euro 6)
- Electrification of fleet
- Encourage public transport use
- Land use and technology to reduce the need for motorised travel
Future Transport

Our vision is for a modern, innovative transport system for the 21st century and beyond that delivers six outcomes:

1. Customer Focus
   Technology and big data will make every customer interaction responsive and personal. Customer outcomes will shape services.

2. Successful Places
   A new localism will emerge, with strong centres driving growth in their economic and social catchments, supported by local accessibility and efficient links to Sydney.

3. A Growing Economy
   A strong, productive and diverse economy, defined by close (even virtual) links between workers and jobs, and adaptable supply chains from regions to cities and global markets.

4. Safety & Performance
   The future network will provide every customer with safe and secure travel across a high performing network.

5. Accessible Services
   Seamless mobility will enable the economic and social participation of every person in the state, no exceptions.

6. Sustainability
   The decisions we make today will build a transport system that withstands economic and climatic stresses and supports growth and the wellbeing of citizens.
OUR SUSTAINABLE FUTURE METROPOLIS
Ensuring our competitiveness and liveability through introducing sustainable policies

Sydney increasing population and the need for more sustainable travel

- Global City Car Mode Share (based on a basket of 11 comparator international cities)
- Major City Non-Car Mode Share
- Sydney Future Population
- Car mode share over time

<table>
<thead>
<tr>
<th>Time</th>
<th>Total trips</th>
<th>Additional car trips</th>
<th>4 billion</th>
<th>6 billion</th>
<th>9.5 billion</th>
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</thead>
<tbody>
<tr>
<td>2016 (5m)</td>
<td></td>
<td></td>
<td></td>
<td>31%</td>
<td>69%</td>
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<tr>
<td>2036 (6.5m)</td>
<td></td>
<td></td>
<td></td>
<td>69%</td>
<td></td>
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<tr>
<td>2056 (8m)</td>
<td></td>
<td></td>
<td></td>
<td>43%</td>
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</tbody>
</table>

Clockwise Increasing population international cities

*based on additional motorway project capacity of 1 million trips per day
Three cities
Refocusing how Sydney will develop

• Another “Adelaide in Sydney”
• Western Sydney Airport
• Growth and densification
Our Development Cycle
Learnings from Western Europe

Stage 1: 'Vehicle' focus
- Rapid growth in Car ownership. Strong support for new roads and parking provision – both among wealthy/powerful early owners and aspiring owners; also seen as a positive sign of a developing economy/society. Lack of investment in public transport, walking and cycling.

Stage 2: 'Personal movement' focus
- Consequences of car-based movement becoming apparent: high pollution, accidents, congestion; poor quality street environment. Begin to switch focus to improving (rail-based) public transport, in particular.

Stage 3: 'Activity/Quality of life' focus
- Now main emphasis on efficient and sustainable modes (rail, bus, walking and cycling), and high quality public realm. Space reallocated from car traffic to other modes and street activities; some intrusive road infrastructure removed, or put underground. Car use – and sometimes car ownership – start to decline.

Source: Jones 2013, 2016

Adapted from: CREATE (Congestion Reduction in Europe: Advancing Transport Efficiency) 2016
OUR DEVELOPMENT OPPORTUNITY
Getting ‘ahead of the curve’ in developing Sydney

Stage 1: ‘Vehicle’ focus

Stage 2: ‘Personal movement’ focus
Stage 2 - Future Transport based on Personal movement
Provide roads and actively shape land use around key corridors of growth and future mass transit to support centres and the Western City

Stage 3 - Future Transport based on Activity/Quality of life
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Provide better mass transit and road network connectivity focused on future growth and reshaping the Central City and its centres to enhance liveability

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POTENTIAL EVOLUTION OF ROAD NETWORK
A better transport system that is safer, cleaner, efficient with better places

Future Sydney – the road transport system – safer, more efficient and reliable movement and place making outcomes

OUTCOMES

The Vehicle Focus Era
Private vehicle movement emphasis

Personal Movement Era
Road space allocation to prioritise the efficient movement of people and goods

Quality of Life Era
Utilise technology focusing on enabling freight, public transport and land use outcomes

Future of Mobility Era
Travel as a service – with optimum movement and place outcome enabled by policy, regulation and technology

Movement efficiency | Quality of place | Safety and security | Environment
Future Transport Tools

Technology has the potential to significantly enhance the future of mobility in NSW and create an interconnected, customer-friendly, low cost network.

**Future Transport Strategy Scenario:**

Interconnected, customer-friendly, and low cost mobility

- **CAVs:** Connected and Automated vehicles (CAVs) can be a low cost, convenient mode for passengers.
- **Future bus / rail / ferry:** Trunk bus and rail services are automated. Feeder bus services are replaced by on-demand.
- **Assisted mobility:** Assisted Mobility Devices and active transport options are widely available.
- **Automated freight:** Automated drones and robots complete the last mile freight task.
- **Alternative fuels:** Electric vehicles make up the vast majority of fleet (private cars, buses, trains and trucks).
- **MaaS:** MaaS platforms are widespread and cover the entire transport task.

**Future Transport Tools:**

- **Significant investment in rail, metro and trunk bus routes are the foundation of ‘30 minute cities’**
- **Frictionless transitions between modes**
- **Improved amenity due to EV fleet creating more ‘places’ around transport corridors and hubs**
- **CAVs**
- **P2P CAV transport links to mass transport**
- **Last mile freight primarily via drone / robot**
- **Alternative fuels**
- **AMD is the preferred FM / LM mode**

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Timeline

FUTURE TRANSPORT TIMELINE

Community and stakeholder engagement
MAY - JUNE 2017

Release of draft Future Transport Strategy
LATE 2017

Invite feedback from community and stakeholders on draft Future Transport Strategy

Finalise Future Transport Strategy
EARLY 2018
Your feedback

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