Today’s moderator

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About Austroads

The peak organisation of Australasian road transport and traffic agencies

• Roads and Maritime Services New South Wales
• Roads Corporation Victoria
• Department of Transport and Main Roads Queensland
• Main Roads Western Australia
• Department of Planning, Transport and Infrastructure South Australia
• Department of State Growth Tasmania
• Department of Transport Northern Territory
• Transport Canberra and City Services Directorate, Australian Capital Territory
• Commonwealth Department of Infrastructure and Regional Development
• Australian Local Government Association
• New Zealand Transport Agency
Housekeeping

Webinar = 35 mins
Question time = 15 mins
Please type your questions here
Today’s presenter

Mark Rowland
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Agenda

1. What is a Concept of Operations (ConOps)?
3. Key Issues and Gaps
4. Developing a Concept of Operations
5. Key Principles of a Concept of Operations
6. Conclusion
7. Q&A
Introduction to team

Project Team

Austroads Project
Manage
Iain McAuley

Arup
Mark Rowland
Will McGill
Paul Carter

Monash University
Alexa Del Bosc
Geoff Rose

Review Team

Austroads
Project Working Group

Austroads
Traffic Management
Working Group

Stakeholders-
Road and Traffic
Authorities

Austroads Network
Taskforce

Austroads Board
The Project Team

Austroads Project Working Group

- Medhi Langroudi, MR WA
- Kun Zhang, DPTI
- Keith Weegberg, VicRoads
- Aftab Abro, DIPL
- Kelvin Marrett, DTMR
- Wayne Wilson, RMS
- Robyn Hawkins, TCCS ACT
- Martin Blake, DSG
- Iain McAuley, NZTA
What is a Concept of Operations for Network Operations Planning?
What is a Concept of Operations for Network Operations?

• Describes, in easily understood language:

  ‘the characteristics & processes of each part of the network operations planning from the perspective of those people involved’

• This is a Concept of Operations for the Road System rather than for the Systems that operate the Road Network.
Network Operations Planning in Australasia
Background to Study

Network Operating Planning has come a long way, however there is:

• Perceived disconnect between strategic and operations
• Low visibility of process & challenges for stakeholders
• A need to bridge the gap between people and processes
• Low number of Network Operations Plans Implemented & Monitored
See Section 1.4
Network Operations Planning Context

- Network Operating Plans (NOPs): planning identifying short-term operation strategies that improve the functioning of the road network.
- Network Management Plans & Signal Management Plans
## Key Resources: Network Operations Planning

<table>
<thead>
<tr>
<th>Author (Year)</th>
<th>Title</th>
<th>Jurisdiction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall (2007)</td>
<td>Network operation planning - a new approach to managing congestion</td>
<td>Victoria</td>
</tr>
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</table>

See Appendix A
## Network Operation Plans in Australasia

<table>
<thead>
<tr>
<th>NOP</th>
<th>Based on SmartRoads?</th>
<th>Year</th>
<th>State</th>
<th>Agency</th>
<th>Agency type</th>
<th>Breadth</th>
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<tbody>
<tr>
<td>Gold Coast Bike NOP</td>
<td>No</td>
<td>2008</td>
<td>QLD</td>
<td>Gold Coast City Council (2008)</td>
<td>Local municipality</td>
<td>Municipal network</td>
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<td>Ringwood Activity Area</td>
<td>Yes</td>
<td>2009</td>
<td>VIC</td>
<td>VicRoads (2009)</td>
<td>State road authority</td>
<td>Area</td>
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<tr>
<td>Nicholson St Tram 96</td>
<td>Yes</td>
<td>2011</td>
<td>VIC</td>
<td>VicRoads (2012)</td>
<td>State road authority</td>
<td>Corridor</td>
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<tr>
<td>Tauranga Urban Network Strategy</td>
<td>Yes</td>
<td>2011</td>
<td>NZ</td>
<td>NZTA, Tauranga City Council (2011)</td>
<td>National and local municipality</td>
<td>Municipal network</td>
</tr>
<tr>
<td>Perth Managed Fwys Pilot Project NOP</td>
<td>No</td>
<td>2012</td>
<td>WA</td>
<td>Main Roads Western Australia (2012)</td>
<td>State road authority</td>
<td>Regional freeway network</td>
</tr>
<tr>
<td>Perth Airport and Freight Access Project</td>
<td>No</td>
<td>2013</td>
<td>WA</td>
<td>Main Roads Western Australia (2013)</td>
<td>State road authority</td>
<td>Area</td>
</tr>
<tr>
<td>Christchurch Network Management Plan</td>
<td>Yes</td>
<td>2013</td>
<td>NZ</td>
<td>Environment Canterbury Regional Council, NZTA, Christchurch City Council (2013)</td>
<td>Regional council, national transport agency and local municipality</td>
<td>Municipal transport network</td>
</tr>
<tr>
<td>Wellington Network Operating Plan</td>
<td>Yes</td>
<td>2013</td>
<td>NZ</td>
<td>NZTA, Wellington Regional and City Councils (2013)</td>
<td>Regional council, national transport agency and local municipality</td>
<td>Municipal network</td>
</tr>
<tr>
<td>NOP for Perth CBD</td>
<td>No</td>
<td>2014</td>
<td>WA</td>
<td>Main Roads Western Australia (Espada, I., K. Boddington, F. Faber and J. Li 2014)</td>
<td>State road authority</td>
<td>CBD network</td>
</tr>
</tbody>
</table>

See Appendix A
Key Issues and Gaps
Key Issues Identified

- Governance
- Resourcing/training in Network Operations Planning
- Stakeholder engagement
- Multiple agencies and differing government make-ups
- Single focus on supply vs demand vs productivity
- Movement and Place?
Key Issues Identified


Movement and Place
Key Issues - Movement & Place

Auckland

NSW

Victoria

London
Key Gaps Identified

• Safe Systems Approach
• Benchmarking and post-implementation
• Accounting for non-private vehicles
• Cohesion across all levels of government
• Lack of strategic guidance
• Availability of enablers software, GIS and data
Developing a Concept of Operations
ConOps High Level Properties

- Statement of the objectives of the road system
- Strategies, tactics, policies, and constraints affecting the road system
- Organisations, activities, and interactions among participants and stakeholders
- Clear statement of responsibilities
- Operational environment of the road system
- Processes for initiating, developing, and maintaining the road system.
Key Principles to Develop a Concept of Operations
1. Governance

- Good governance - structures, escalation and accountabilities
- Oversight and a clear line of sight
- Creating confidence in the operation of the Transport System

See Section 2.2
2. Stakeholder Engagement

- Realism & Buy-in to process
- Understanding of challenges & constraints
- Developed equally from the bottom-up
- Connects strategic planning and day-to-day operations
3. Accountability, Roles and Responsibilities

- Ownership of plans & problems.
- Accountability for issues & performance.
- Processes established for people to follow.
- Line of sight across authorities, departments and agencies

See Section 2.4
A recommended way to develop and refine a ConOps document is to work through operational scenarios, an example of one is provided below:

\begin{quote}
‘Who is responsible for investigating and monitoring public transport operating gaps?’
‘Who is responsible for investigating the causes of public transport gaps?’
‘Who will make site visits and monitor the site?’
‘Who is responsible for developing the solution(s)?’
\end{quote}

In the case it is determined that parking needs to be removed on the approach to an intersection to improve bus services:

\begin{quote}
‘Who coordinates the removal of parking at the intersection?’
‘Who monitors the result and reports back?’
\end{quote}

Could all practitioners involved in network operations planning in your jurisdiction:

\begin{quote}
‘Clearly articulate the persons who are responsible for each of the above?’
\end{quote}

If so:

\begin{quote}
‘How quickly could they provide the top 20 public transport operating gaps and the people actioning them?’
\end{quote}
4. Defining Success and Measuring Performance

- Provides a ‘line of sight’ from investment-level indicators to the benefits and outcomes.
- Each NOP should then have clear success criteria and measurements.

See Section 2.5
Benefits Hierarchy

Government: What outcomes is the Government seeking

Transport Authority: How will this organisation contribute to the government outcomes (Benefits)

Investment: How will the NOP help the organisation meets its objectives? (KPIs)

"Victoria is a thriving place to live and do business"

"Increase transport network efficiency"

"Improve throughput of people per XX Road"
5. The Customer (Road User)

• Outcomes for **end users** need to be considered and reflected throughout the document

• ‘**Our customers are at the centre of everything that we do**’ – Transport for NSW
Road Planning Principles

Transport for NSW
Road Planning Framework Excerpts

Customer Understanding

Walking
- Connectivity and flow (most valued at 29%)
- Pedestrian safety and personal security (most valued at 26%)
- Health and well-being (23%)
- Supporting facilities (21%)

Cycling
- Safe connectivity and flow (most valued at 51%)
- Safe behaviour (24%)
- Supporting facilities (15%)
- Health, well-being and knowledge (10%)

Transport for NSW
Road Planning
Framework Excerpts

Road Planning Framework

Prioritising our customers' needs
Increasing priority

The Road Planning Framework provides the basis for proactively managing the road network and encouraging customer travel on road types that best suit their chosen mode of travel, i.e. 'the right mode for right road'.

Movement and Place
Hierarchy example
6. Integrated Transport, Land-use and Road Safety Planning

• Breaking down the traditional silos between land use and planning
• Achieving an integrated planning outcome
• Safe Systems Approach in network operations planning
7. Integrated Management of the Transport System

• Productivity and efficiency of the existing road network
• Key role in informing where increased supply is needed and management of demand on the road network.

See Section 2.8

Act / Government / Authority
Regulations / Objectives / Strategies
- Master Plans, Road Safety Strategies, Infrastructure plans, safety systems approach, Place Hierarchies, Smart Cities

Benefit Management Framework
8. Enablers - People, Guidance, Tools and Technology

- Without the enablers, the process will never get beyond the theory
- The better integration of NOPs with technology the higher the success rate of implementing the plans – ‘Living Document’
Ministry for Transport
National policy direction
Connecting New Zealand

NZ Transport Agency
Strategic Road Network
Long Term Strategic View

National Land Transport Programme
Traffic Network Management
Operations, Management, Improvement, Demand Management, Road Safety

Auckland Council
Vision for Auckland, land use, spatial plans
The Auckland Plan

Auckland Transport
All other roads and transport networks
Statement of Intent, Integrated Transport Programme

AT Code of Practice
Traffic Network Management
Operations, Management, Improvement, Demand Management, Road Safety

Customers
Concept of Operations (ConOps)
All roads and transport networks in Auckland

Stakeholders
ConOps Users
e.g. Network Operation Plans

National Transport & Land Use Legislation

See Section 1.3.2
Conclusion
Conclusion

• Network operations planning is a core reason why road authorities exist

• A need to gain buy-in and involvement across the transport system

• It is fundamental that transport authorities have well planned and implemented processes in place to operate the road network

• Better integration with technology to create a ‘Living Document’
Questions?

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# Upcoming Austroads webinars

<table>
<thead>
<tr>
<th>Topic</th>
<th>Date</th>
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<tr>
<td>Strategic Review of the Guide to Traffic Management</td>
<td>7 December</td>
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<tr>
<td>Development of National Mass Assessment Procedures for Oversize Overmass Vehicles</td>
<td>12 December</td>
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Thank you for participating