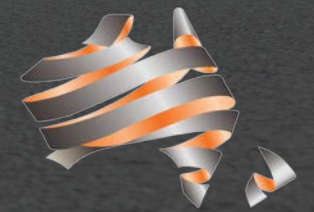




Current Practice and Developments in Concept of Operations across Road Agencies in Australia and New Zealand

21 November 2017



Austroads

Today's moderator



Eliz Esteban

Communications Officer
Austroads

P: +61 2 8265 3302

E: eesteban@austrroads.com.au



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

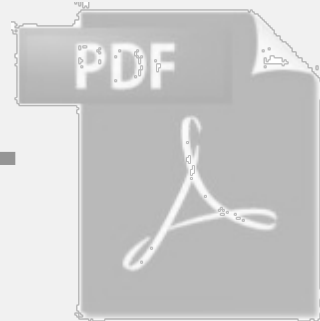


Webinar = 35 mins

Question time = 15 mins



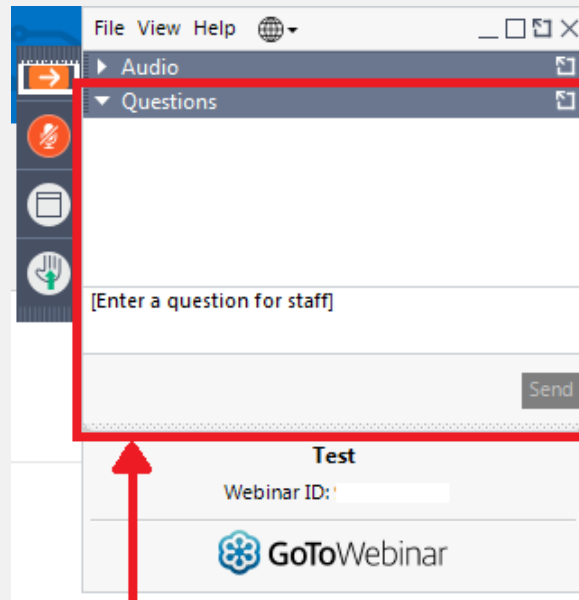
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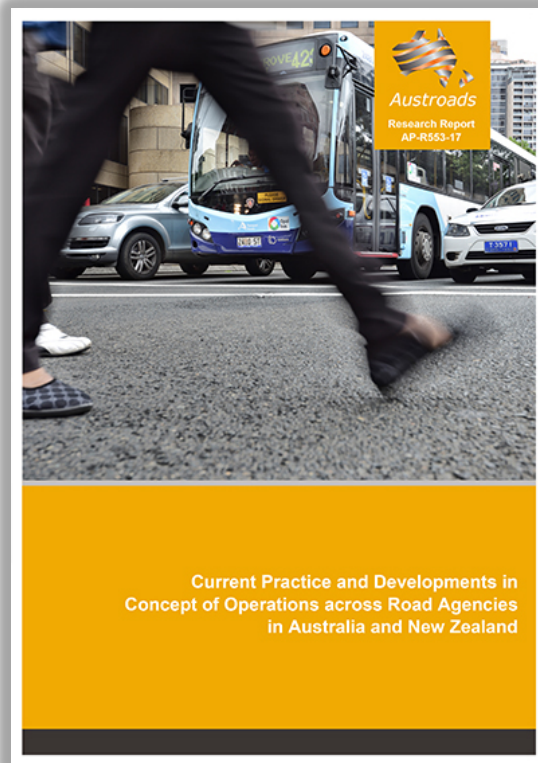


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Today's presenter



Mark Rowland

Associate

Transport & Cities Planning

Arup

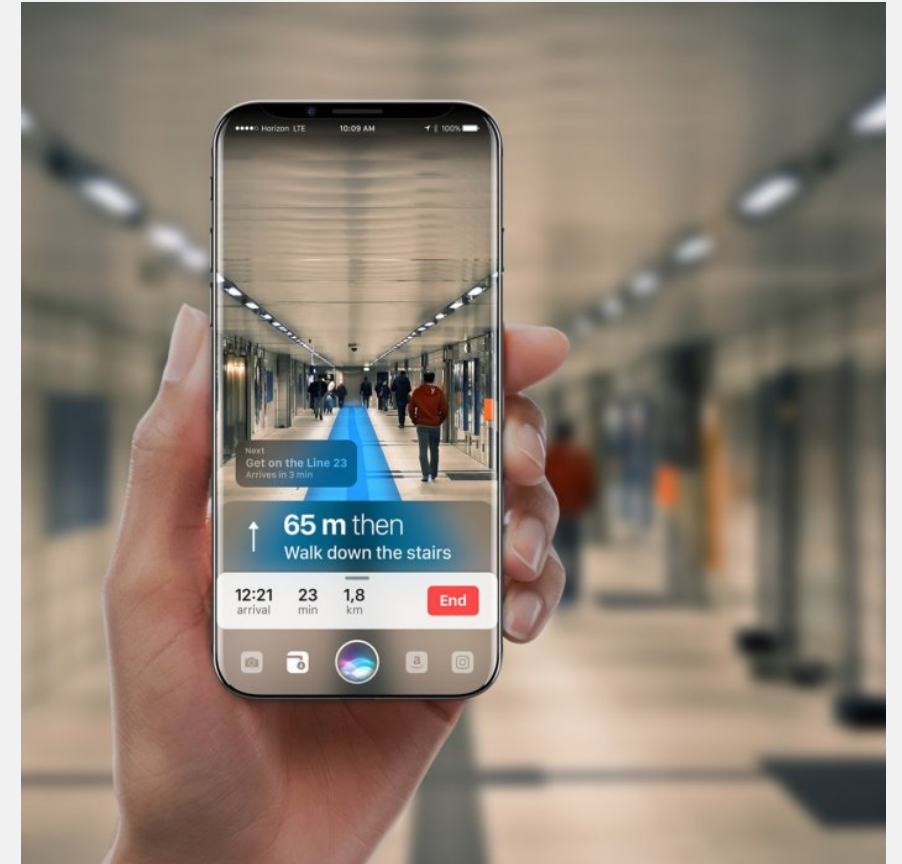
P: +61 3 9668 5500

E: mark.rowland@arup.com



Agenda

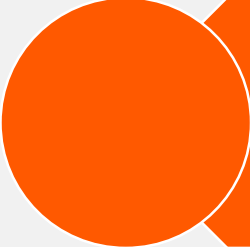
1. What is a Concept of Operations (ConOps)?
2. Network Operations Planning in Australasia
3. Key Issues and Gaps
4. Developing a Concept of Operations
5. Key Principles of a Concept of Operations
6. Conclusion
7. Q&A



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**





What is a Concept of Operations for Network Operations Planning?



What is a Concept of Operations for Network Operations?

See Section 1



- 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.



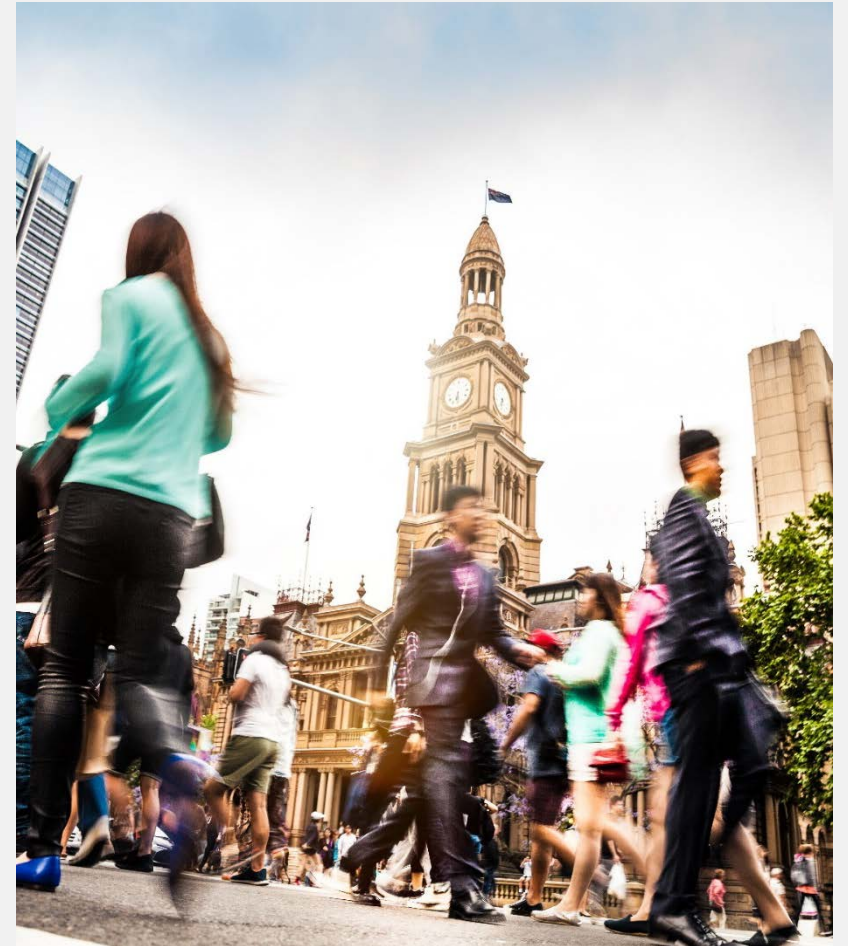
Network Operations Planning in Australasia



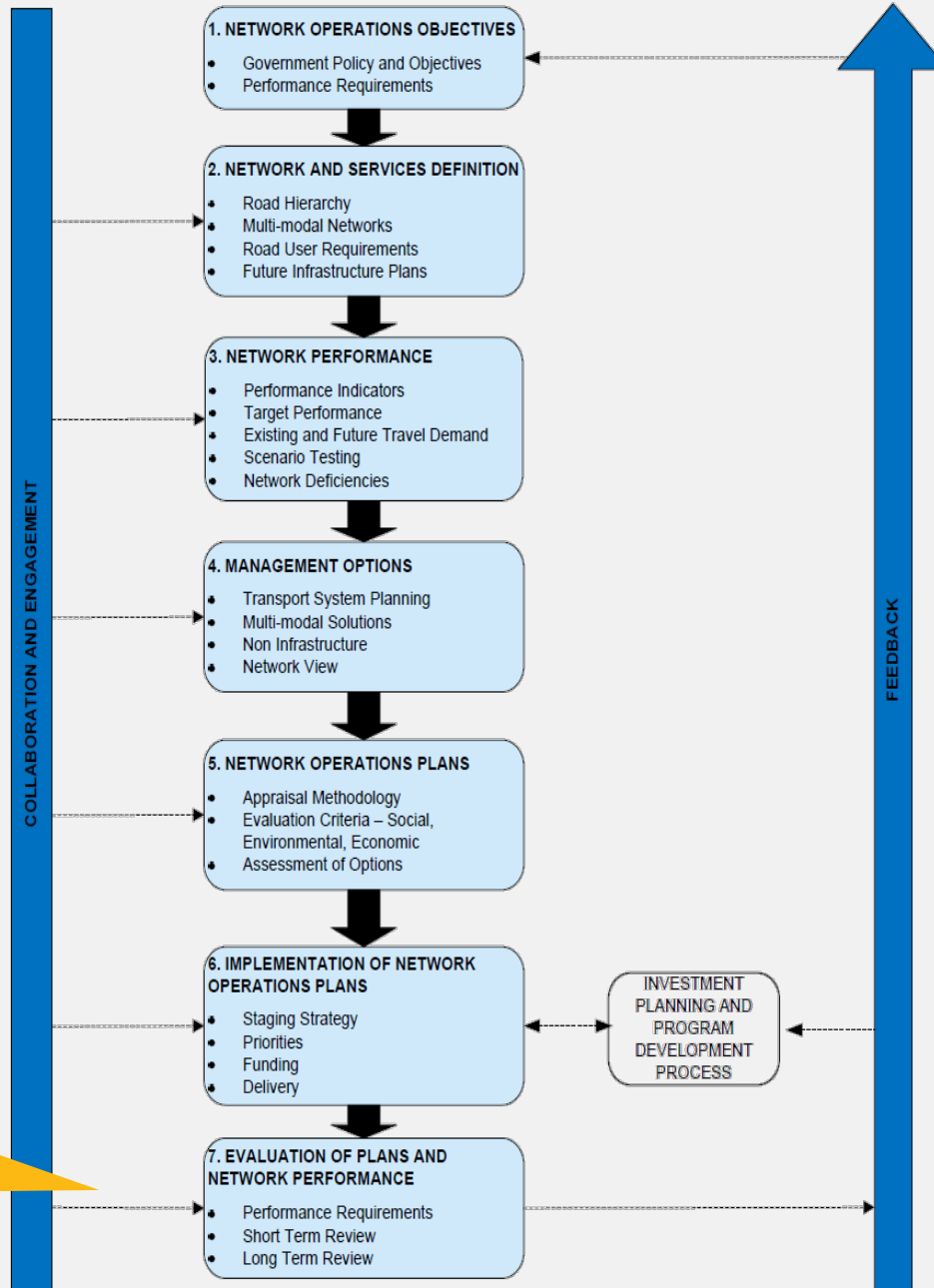
Background to Study

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

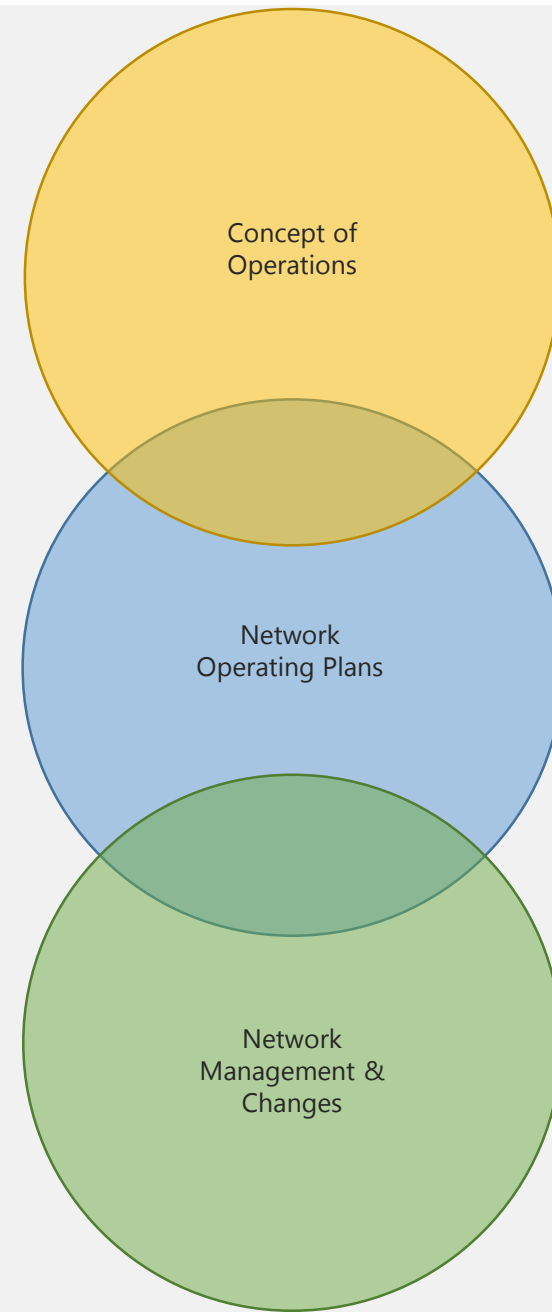
- Perceived disconnect between strategic and operations
- Low visibility of process & challenges for stakeholders
- A need to bridge the gap between people and processes
- Low number of Network Operations Plans Implemented & Monitored



Network Operations Planning Framework (2009)



See Section 1.4

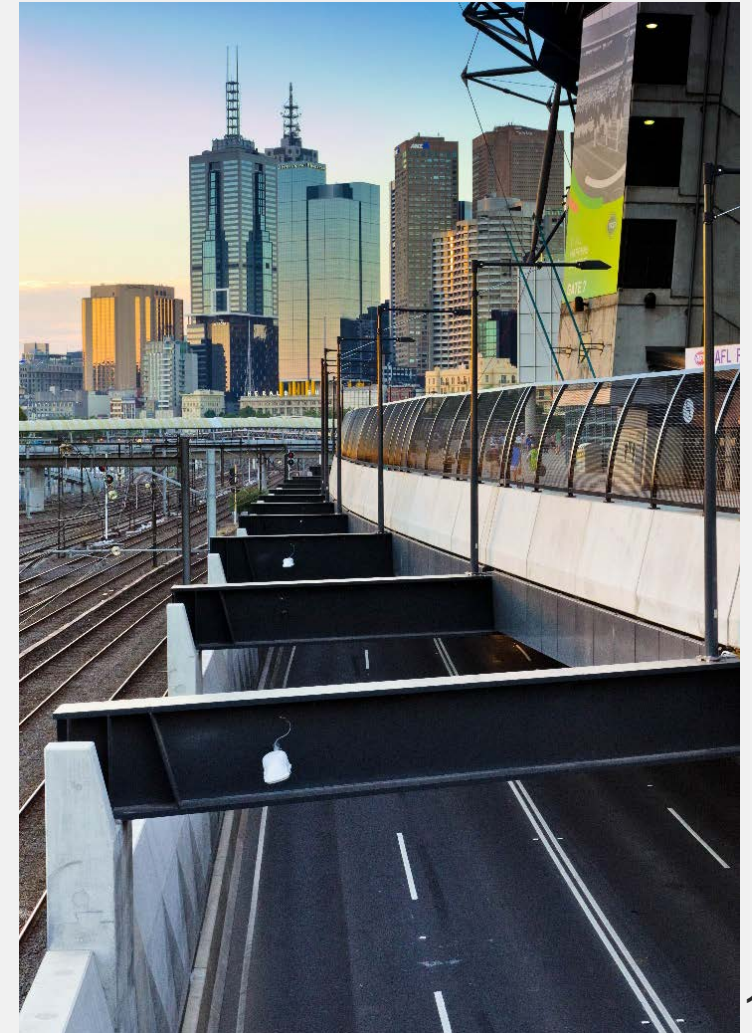


Network Operations Planning Context

See Section 1.4



- Network Operations Planning Guidance: The *Austroads Guide to Traffic Management Part 4: Network Management*.
- 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



Author (Year)	Title	Jurisdiction
Wall (2007)	Network operation planning - a new approach to managing congestion	Victoria
Government and Roads and Traffic Authority (2008)	Network and Corridor Planning Practice Notes	New South Wales
Austroroads (2009)	Network Operations Planning Framework	Australia and New Zealand
Austroroads (2010)	Guidelines for Selecting Techniques for the Modelling of Network Operations	Australia and New Zealand
VicRoads (2011)	SmartRoads Guidelines Version 1.17	Victoria
Austroroads (2013)	The Application of Network Operations Planning Framework to Assist with Congestion Management and Integrated Land Use and Transport	Australia and New Zealand
Austroroads (2015b)	Development of the Accessibility-Based Network Operations Planning Framework	Australia and New Zealand
Austroroads (2015c)	Level of Service Metrics (for Network Operations Planning)	Australia and New Zealand

See Appendix A

Network Operation Plans in Australasia



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

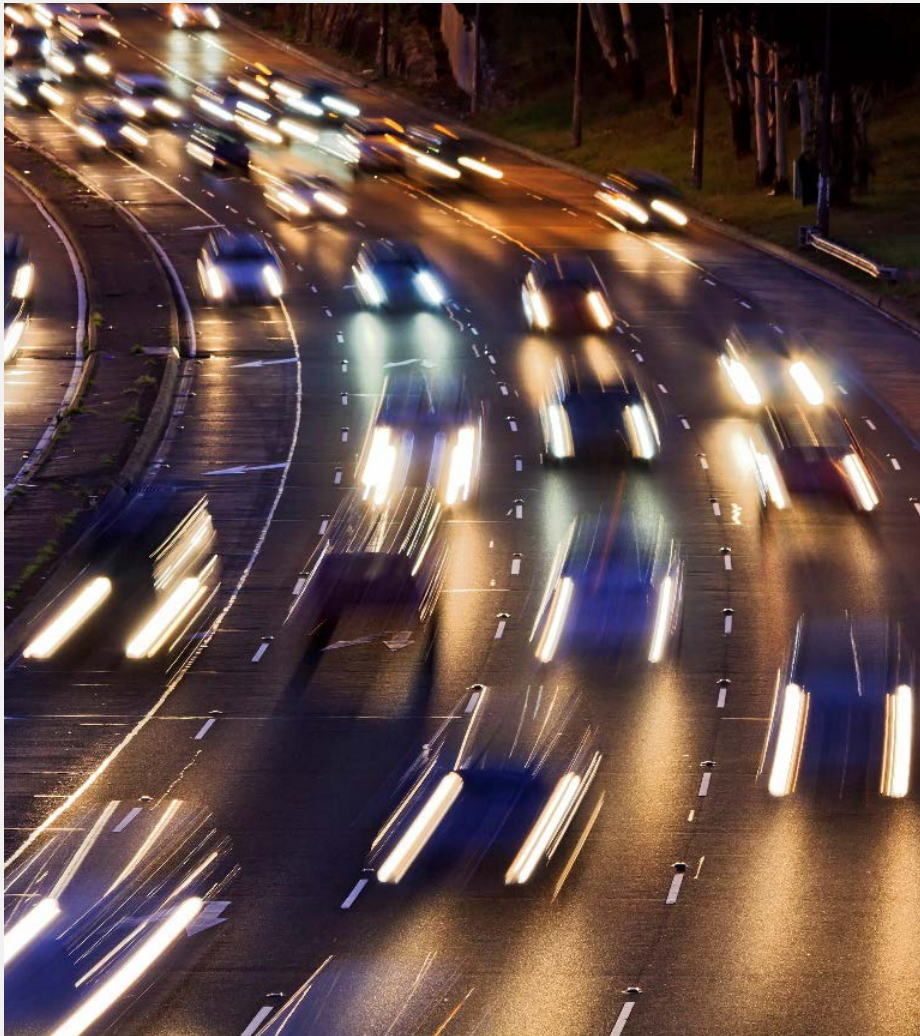
See Appendix A



Key Issues and Gaps

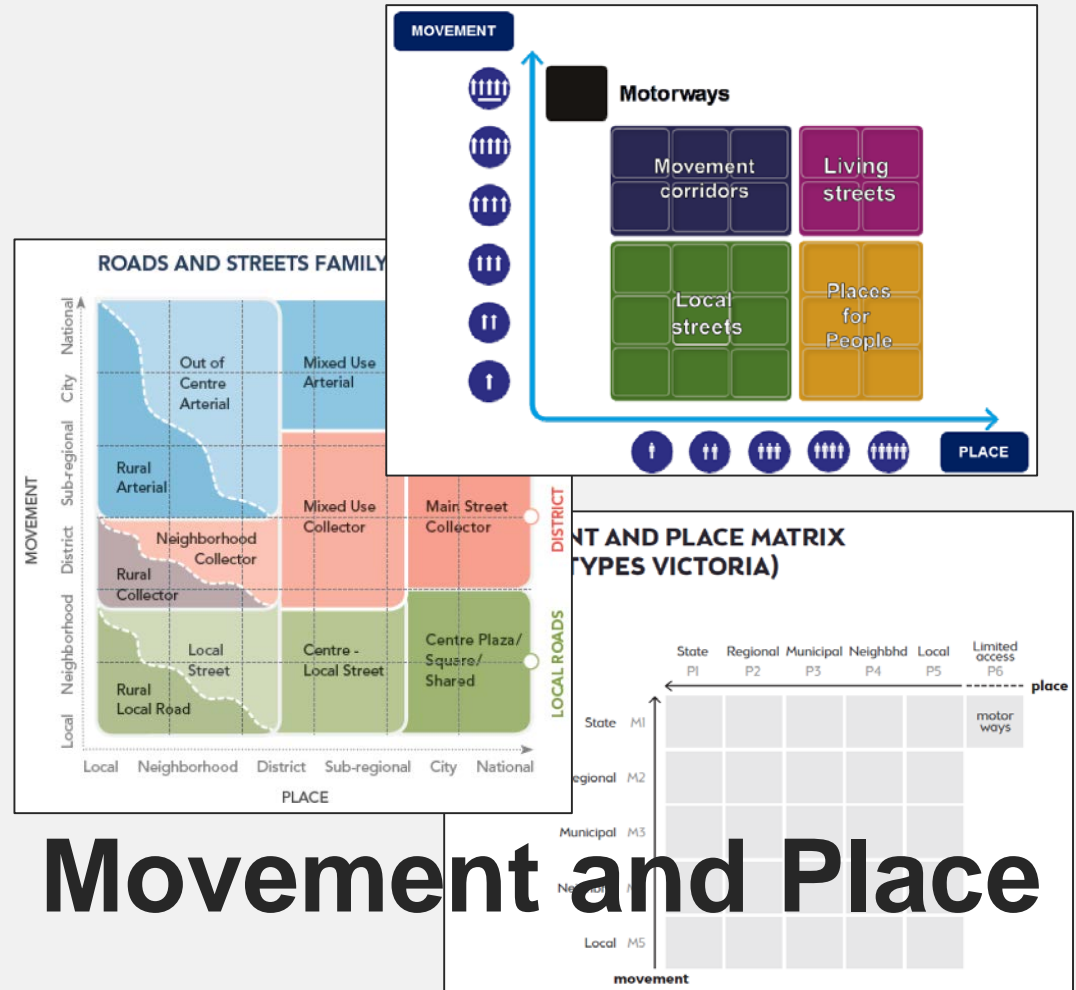
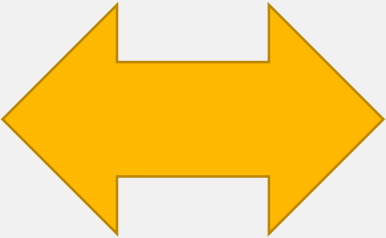
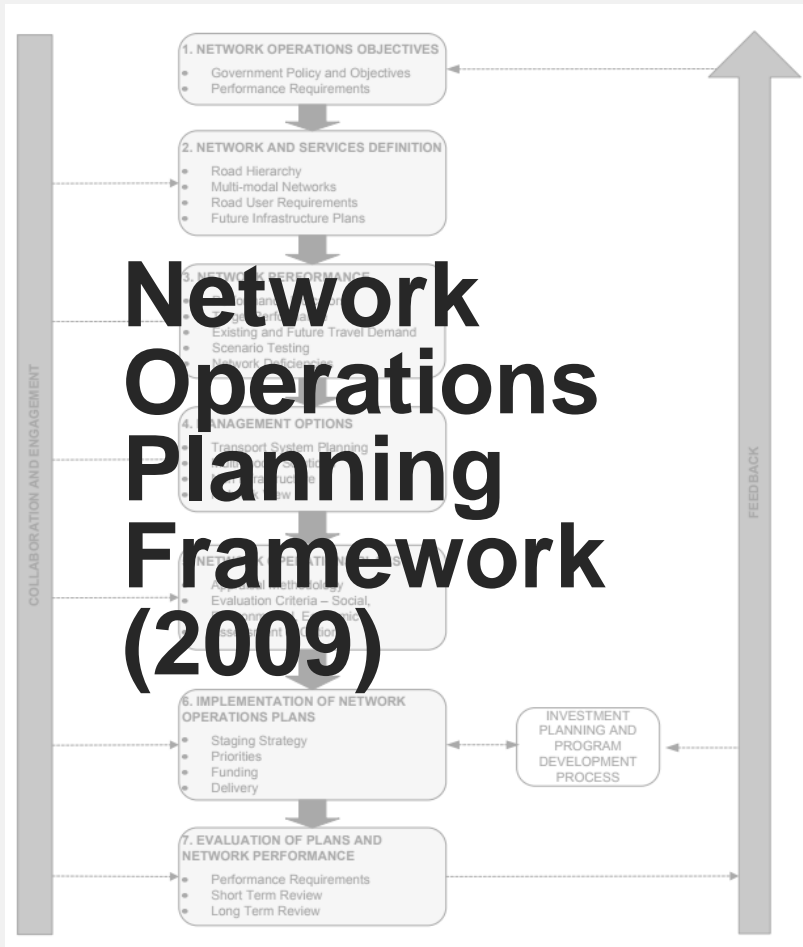


Key Issues Identified



- 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



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

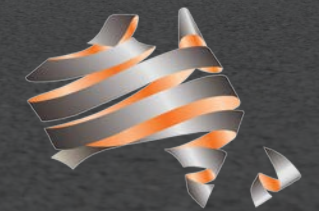
See Section 2



- 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



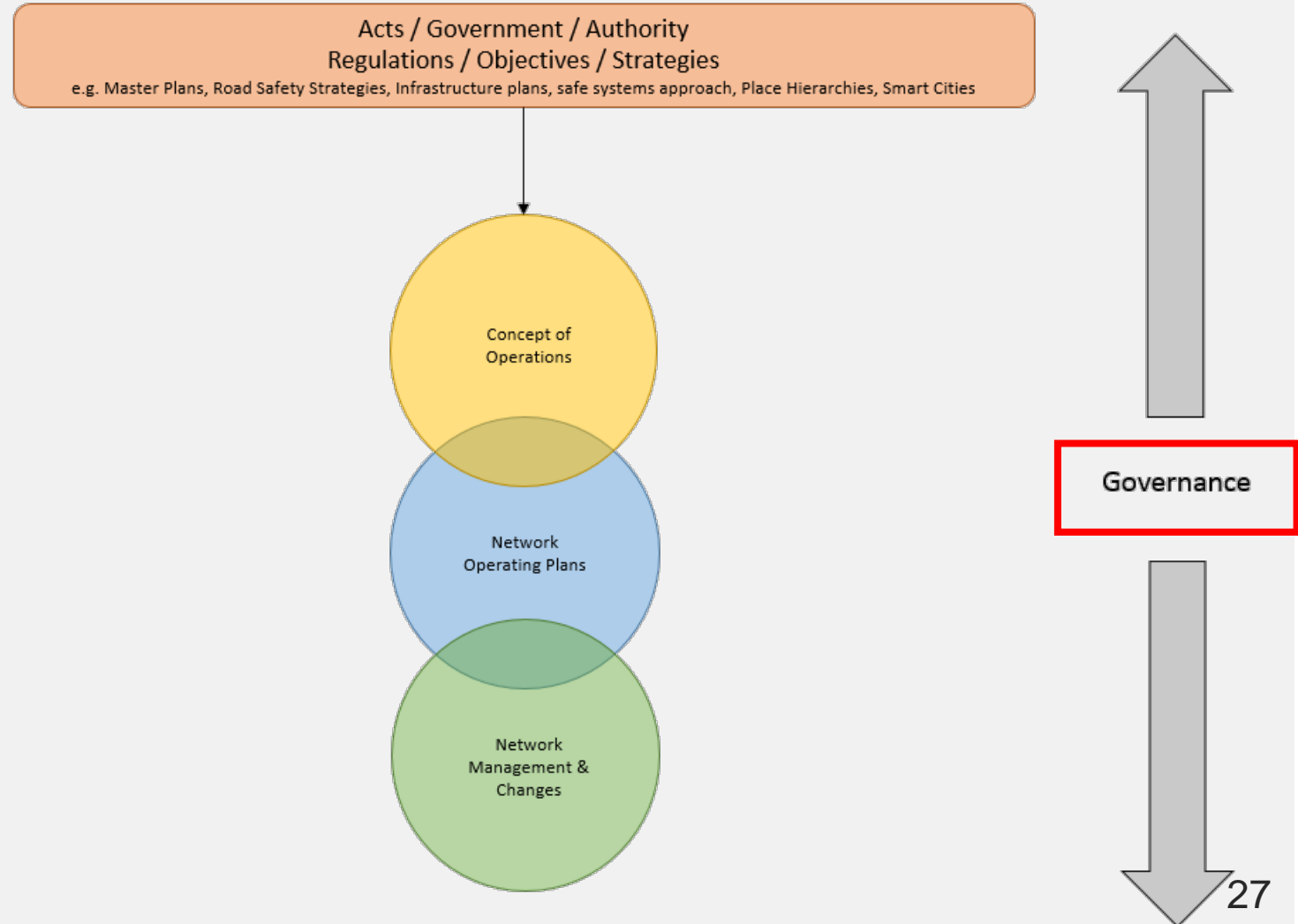
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1. Governance

See Section 2.2



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

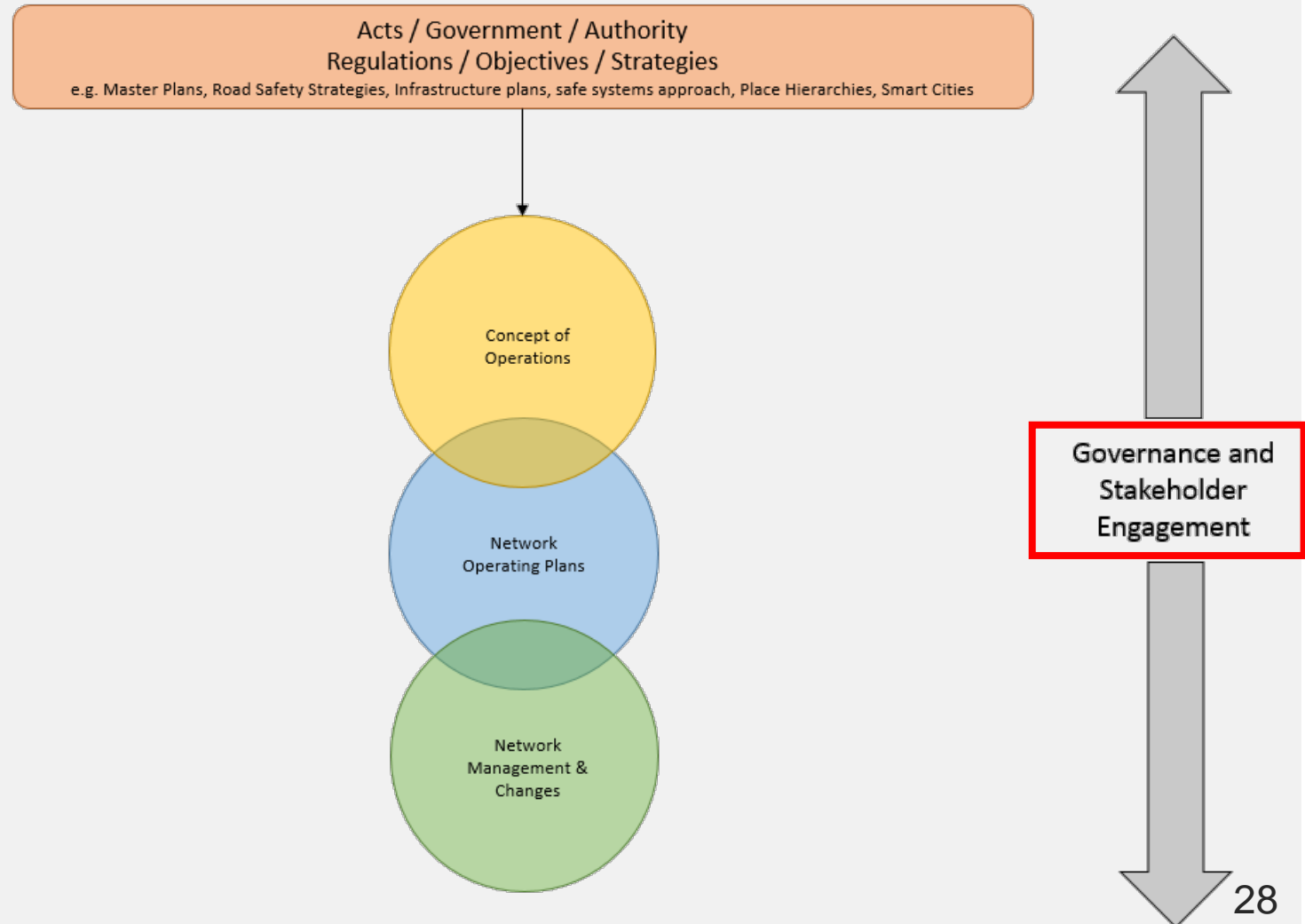


2. Stakeholder Engagement

See Section 2.3



- Realism & Buy-in to process
- Understanding of challenges & constraints
- Developed equally from the bottom-up
- Connects strategic planning and day-to-day operations

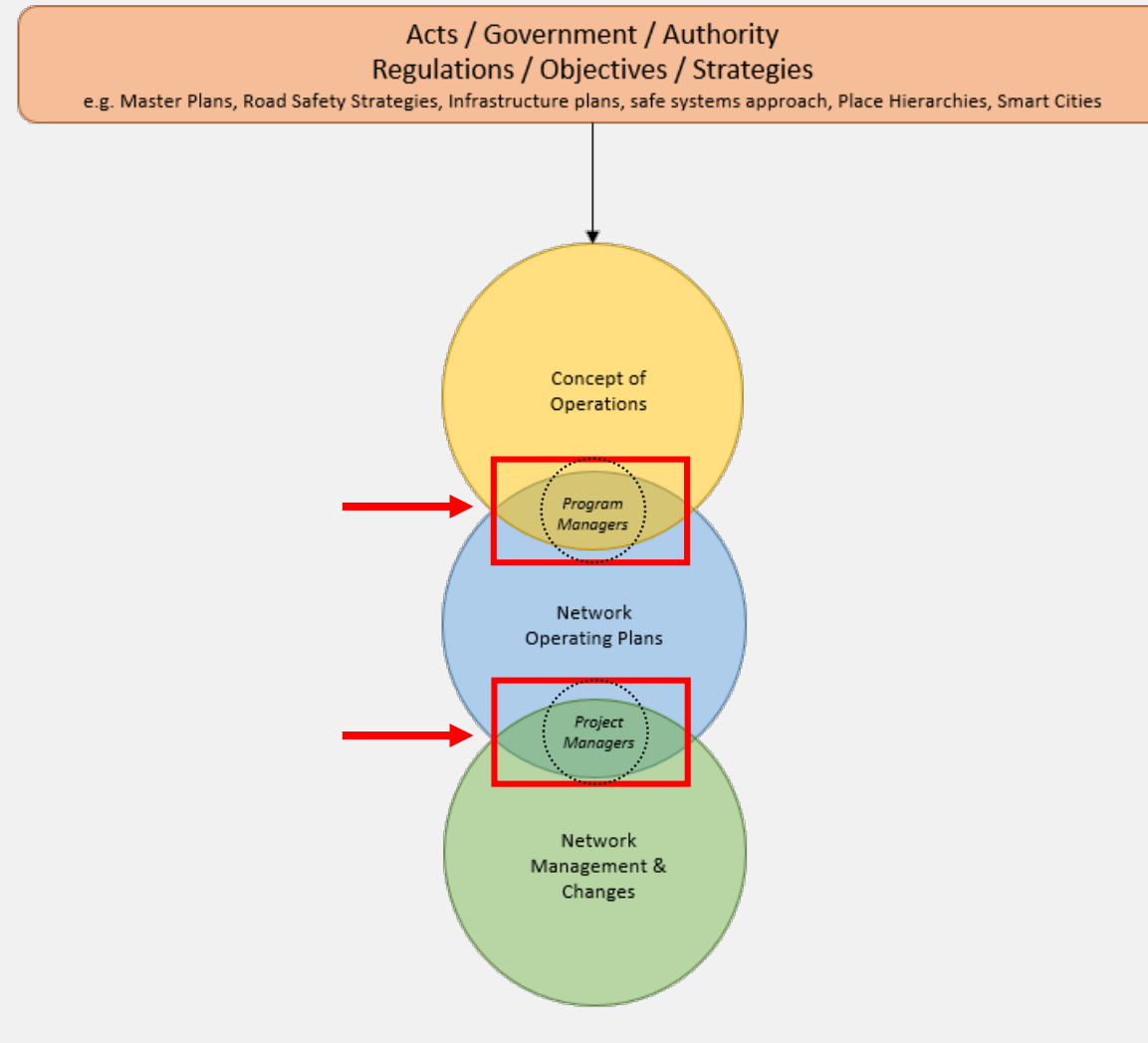


3. Accountability, Roles and Responsibilities

See Section 2.4



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



3. Accountability, Roles and Responsibilities

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:

'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)?'

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

"Who coordinates the removal of parking at the intersection?"
'Who monitors the result and reports back?'

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

'Clearly articulate the persons who are responsible for each of the above?'

If so:

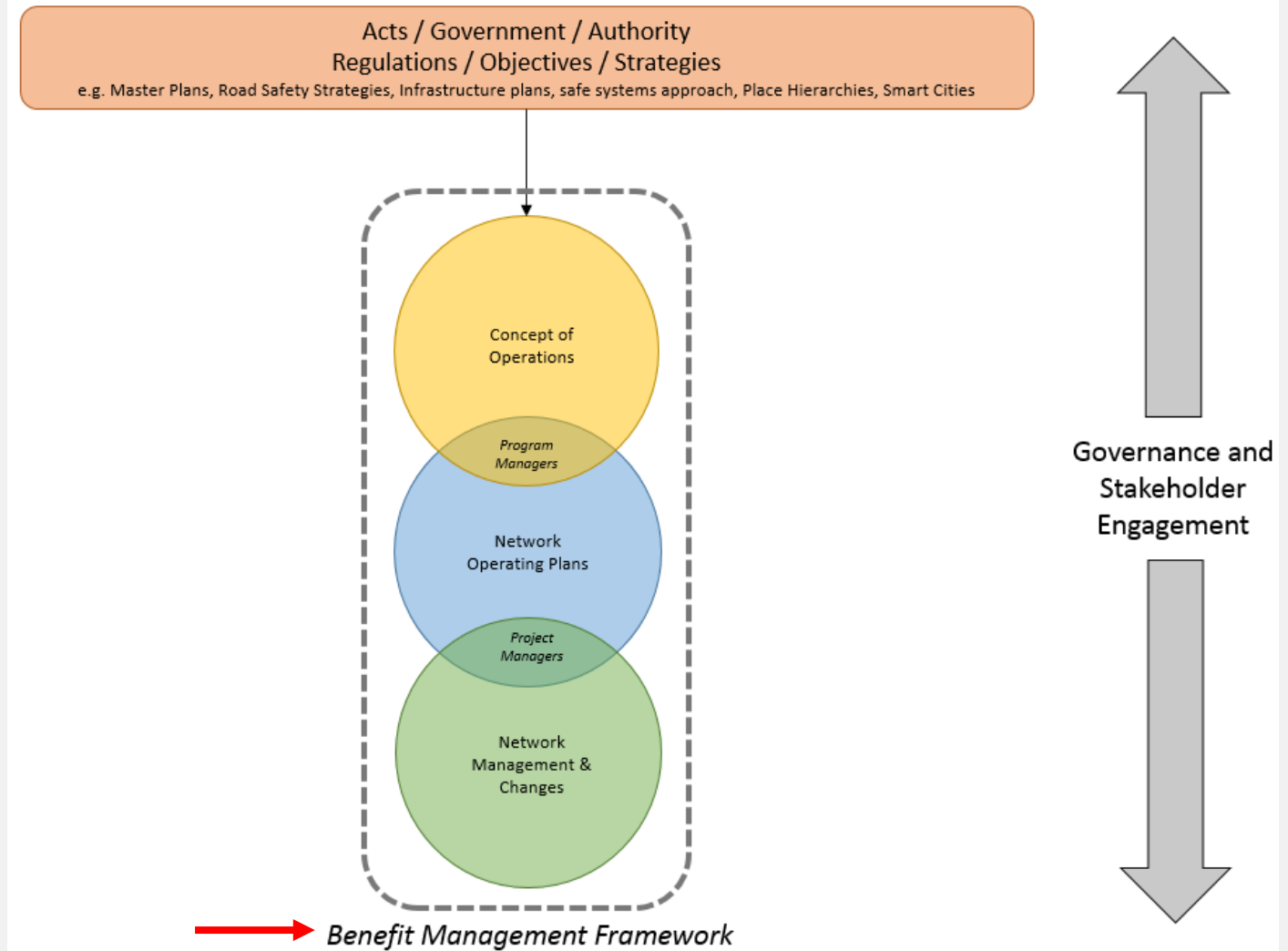
'How quickly could they provide the top 20 public transport operating gaps and the people actioning them?'

4. Defining Success and Measuring Performance

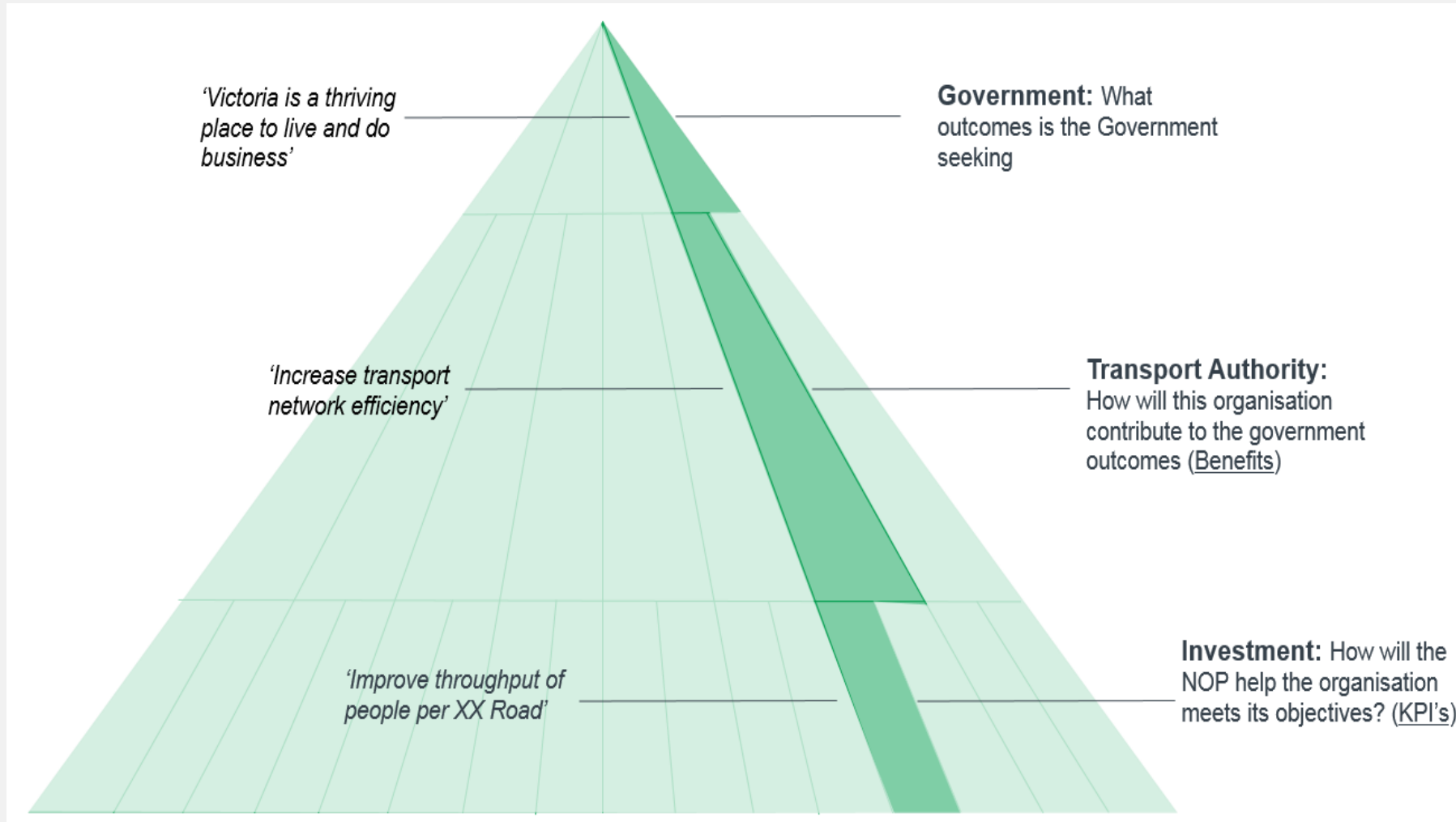
See Section 2.5



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



Benefits Hierarchy

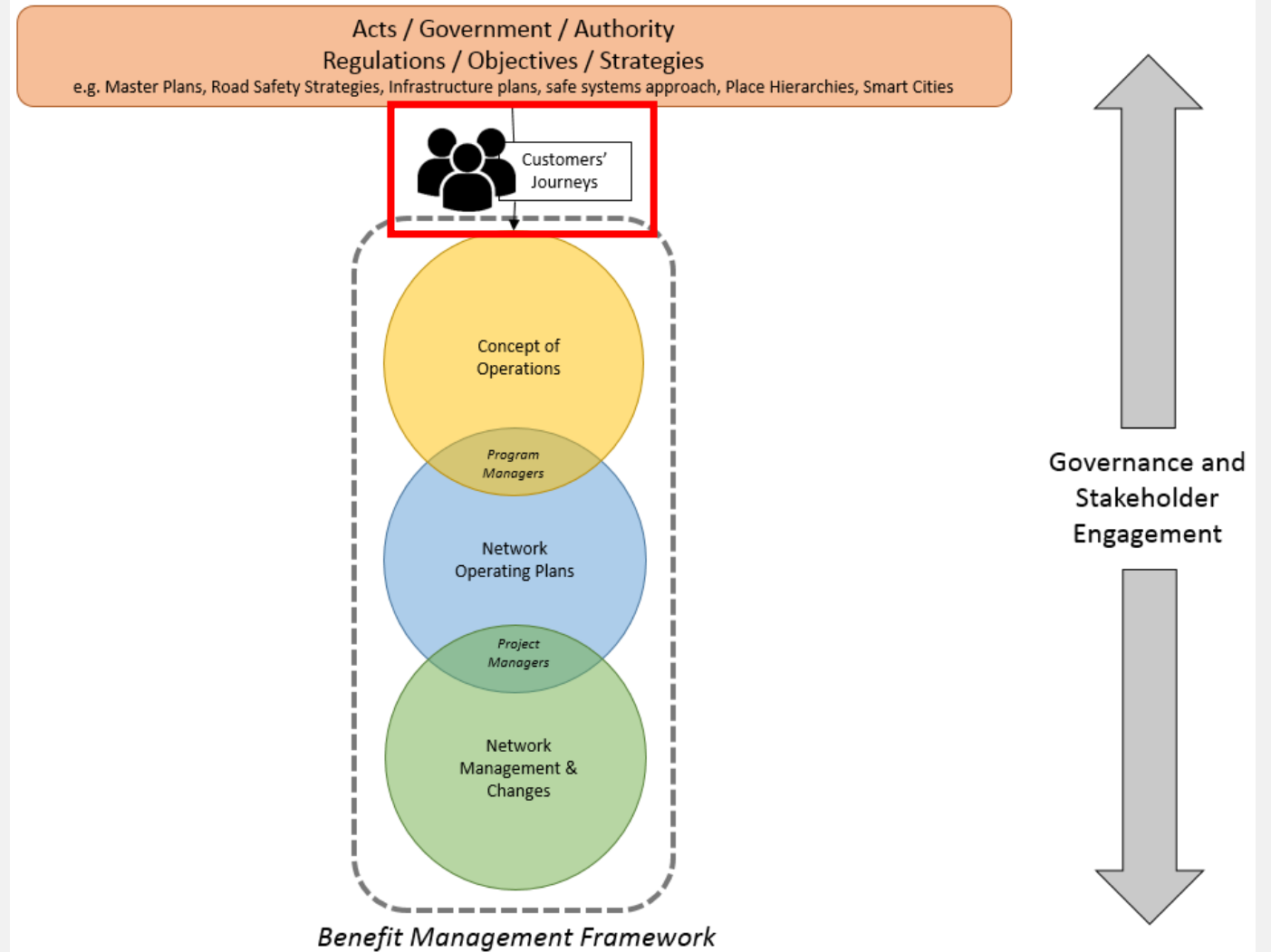


5. The Customer (Road User)

See Section 2.6



- 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*



Transport for NSW Road Planning Framework Excerpts


Walking

- Connectivity and flow (most valued at 28%)
- Pedestrian safety and personal security (most valued at 28%)
- 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%)



Source: Transport for NSW Customer Value Propositions 'Needs Sets' 2012-13.

Customer Understanding

PRINCIPLE 3 Provide roads that meet our customers' movement and place needs.

<p>Principle 3a</p> <p>Vibrant streets that balance the need to move people and goods, service business and support the life and vitality of places</p> 	<p>Principle 3b</p> <p>Movement corridors that respond to the natural environment or respect the urban form and natural environment surrounding the road</p> 	<p>Principle 3c</p> <p>Places for people with equitable access for all customers that contribute to communities and liveability</p> 
<p>Principle 3d</p> <p>Self-explaining roads where the look and feel of the road match with the intended function</p> 	<p>Principle 3e</p> <p>Local streets that provide access for local communities with lower speed environments that support residential amenity and the broader road network</p> 	<p>Principle 3f</p> <p>Movement corridors that provide for safe, efficient and reliable through movement and minimise conflict between customers in our centres and places</p> 

Road Planning Principles

Transport for NSW Road Planning Framework Excerpts

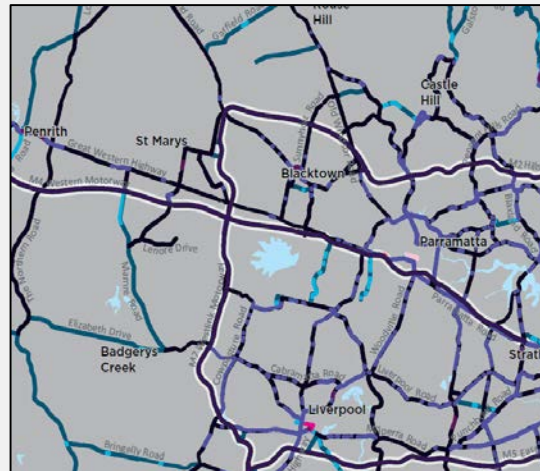


Road Planning Framework

Prioritising our customers' needs

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'.

increasing priority



*Movement and Place
Hierarchy example*

6. Integrated Transport, Land-use and Road Safety Planning

See Section 2.7



- Breaking down the traditional silos between land use and planning
- Achieving an integrated planning outcome
- Safe Systems Approach in network operations planning



Movement objective:
Decrease travel time



Place objective: Increase
(people) dwell time



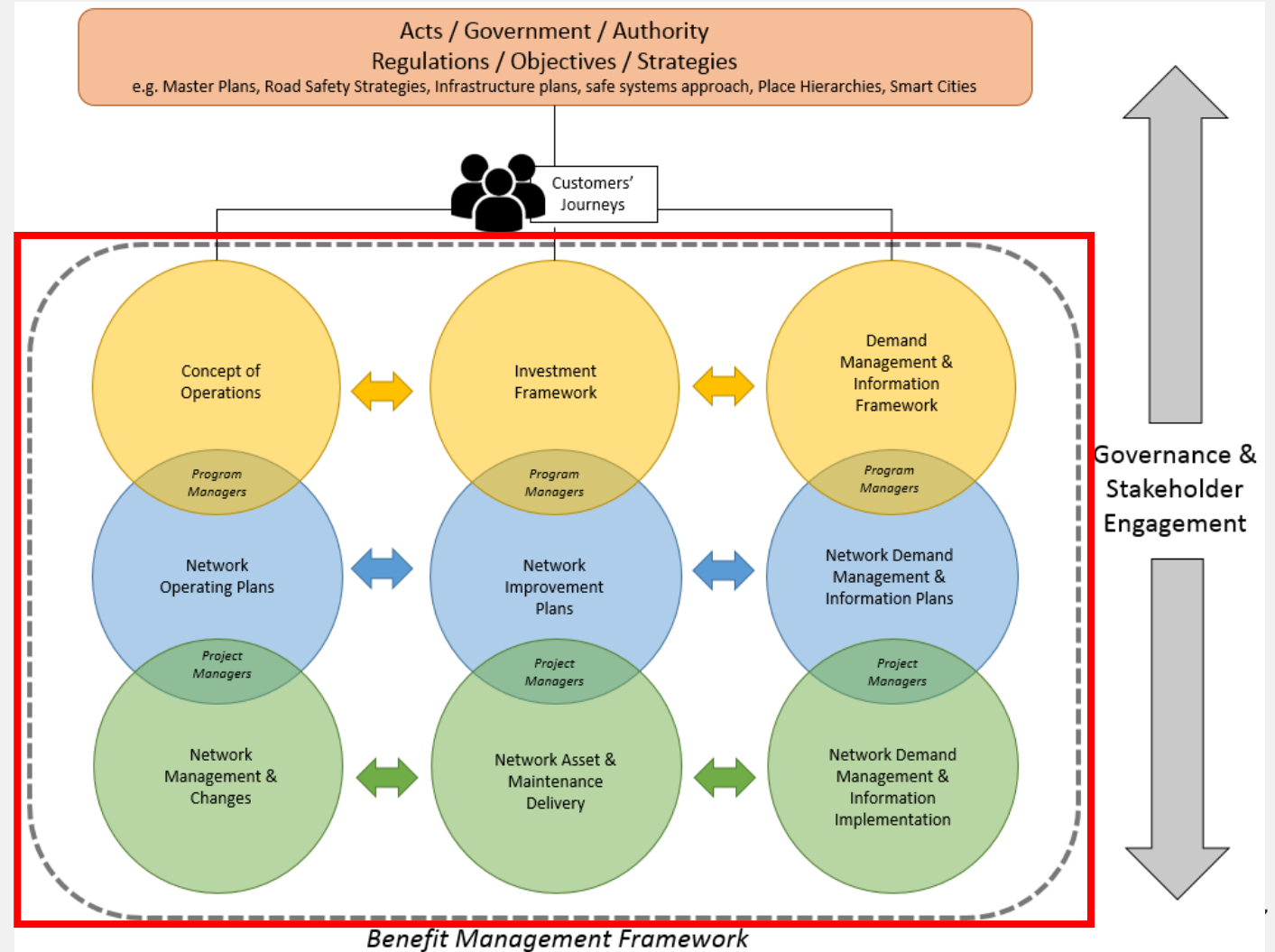
Safe Systems Approach

7. Integrated Management of the Transport System

See Section 2.8



- 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.

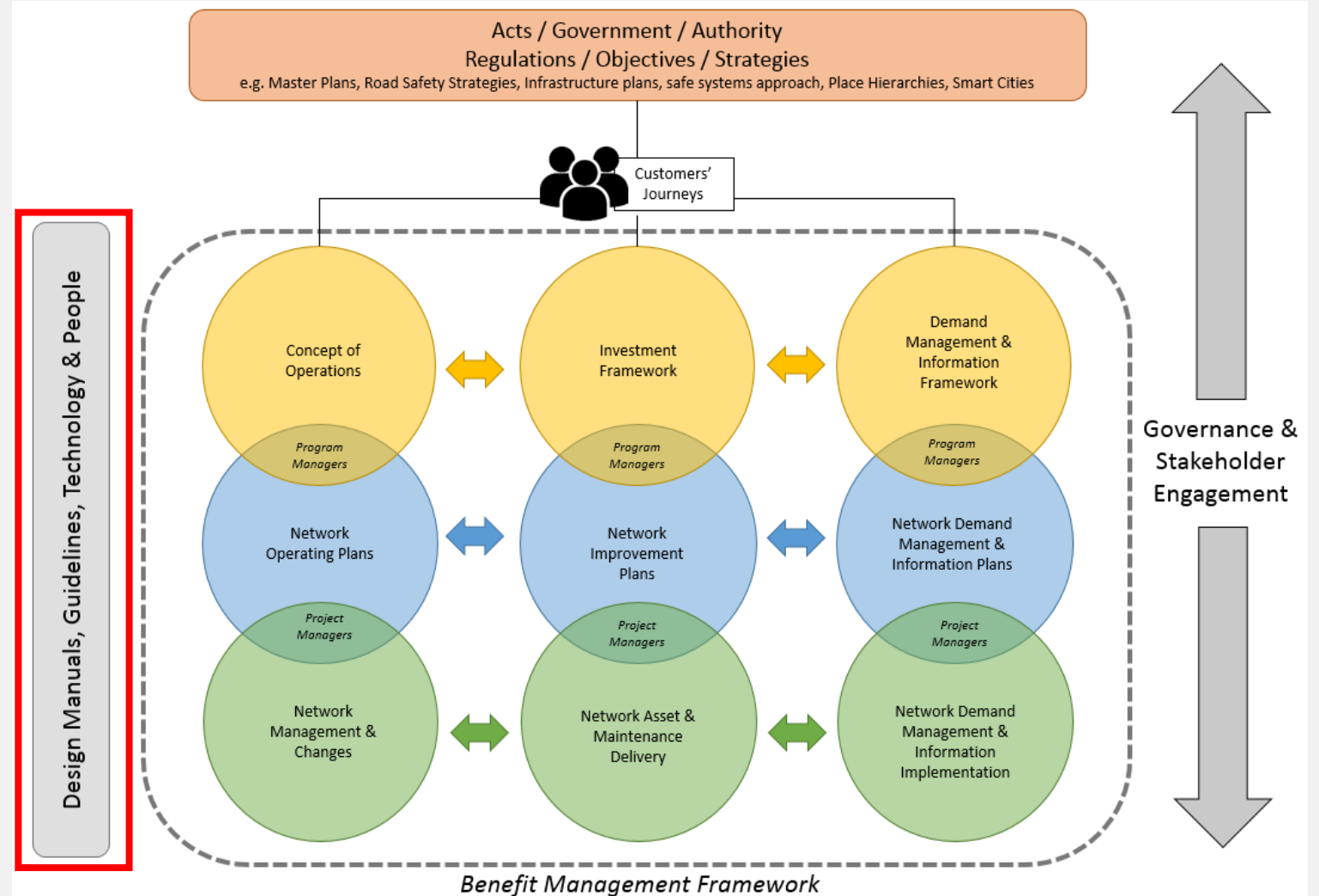


8. Enablers - People, Guidance, Tools and Technology

See Section 2.9



- 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’*

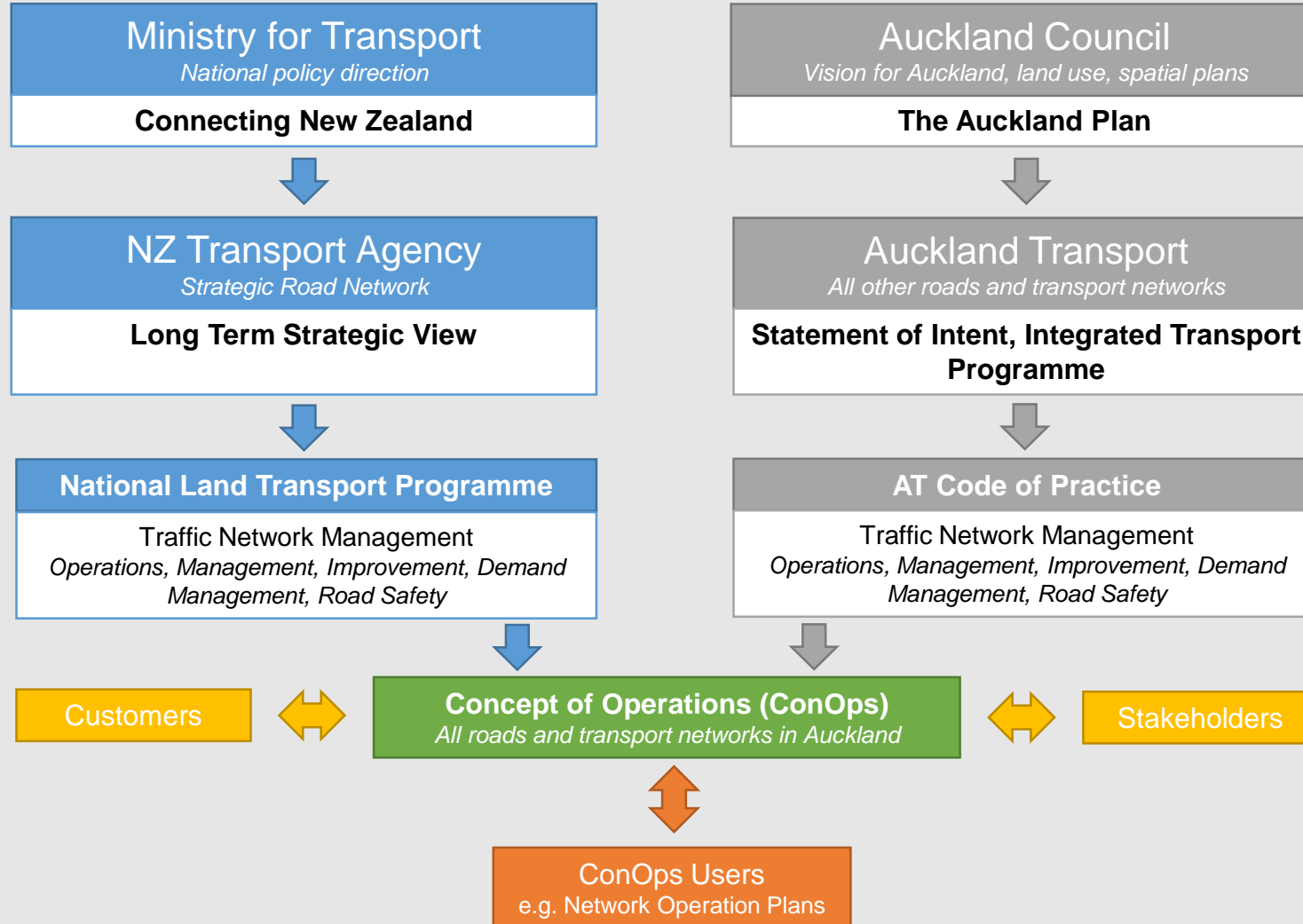


See Section
1.3.2

- National
- Regional / Local

National Transport & Land Use Legislation

Government Policy Statement on Land Transport (GPS), Land Transport Act (1998), Land Transport Management Act (2003), Public Transport Management Act (2008), Road User Charges Act (2012), Railways Act (2005), Local Government Act 2002, Local Council (Auckland) Act 2009, RMA 1991



- State Government
- Transport Authorities

Department of Economic Development, Jobs, Transport & Resources

Transport (Safety Schemes Compliance and Enforcement) Act 2014, Bus Services Act 1995, Transport (Compliance and Miscellaneous) Act 1983, Road Safety Act 1986, Road Management Act 2004, Major, Transport Projects Facilitation Act 2009, Local Government Act 1989, Transport Integration Act 2010



Transport for Victoria

Network Development Plan

All roads and transport networks in Victoria

Concept of Operations (ConOps)

All roads and transport networks in Victoria

VicRoads

Network Operation Plans & Traffic Management

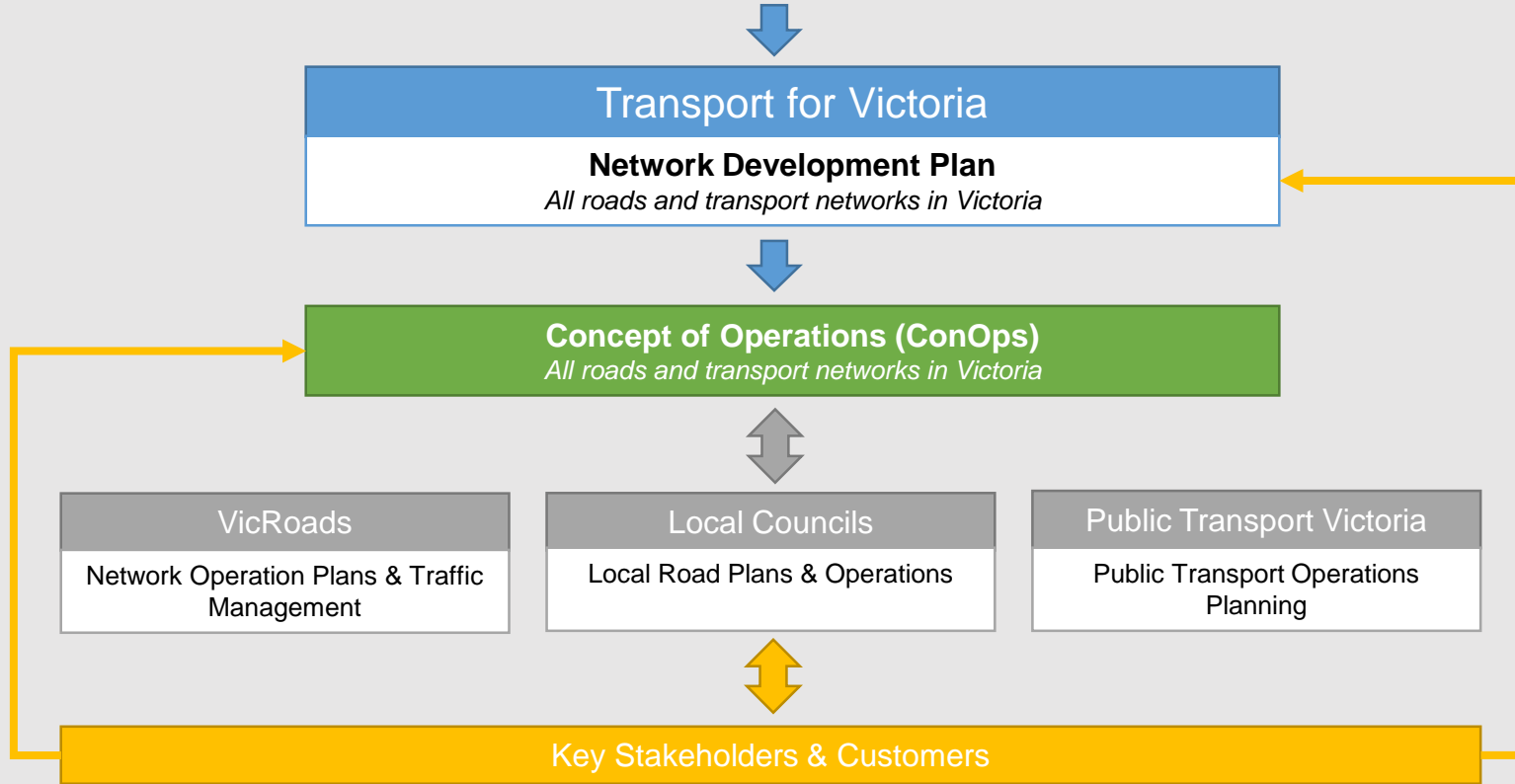
Local Councils

Local Road Plans & Operations

Public Transport Victoria

Public Transport Operations Planning

Key Stakeholders & Customers





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?

Mark Rowland

Associate

Transport & Cities Planning

Arup

P: +61 3 9668 5500

E: mark.rowland@arup.com



Upcoming Austroads webinars



Topic	Date
Guide to Traffic Management Part 3: Traffic Studies and Analysis	30 November
Strategic Review of the Guide to Traffic Management	7 December
Development of National Mass Assessment Procedures for Oversize Overmass Vehicles	12 December

Register at <http://www.austroads.com.au/event>

Thank you for participating