



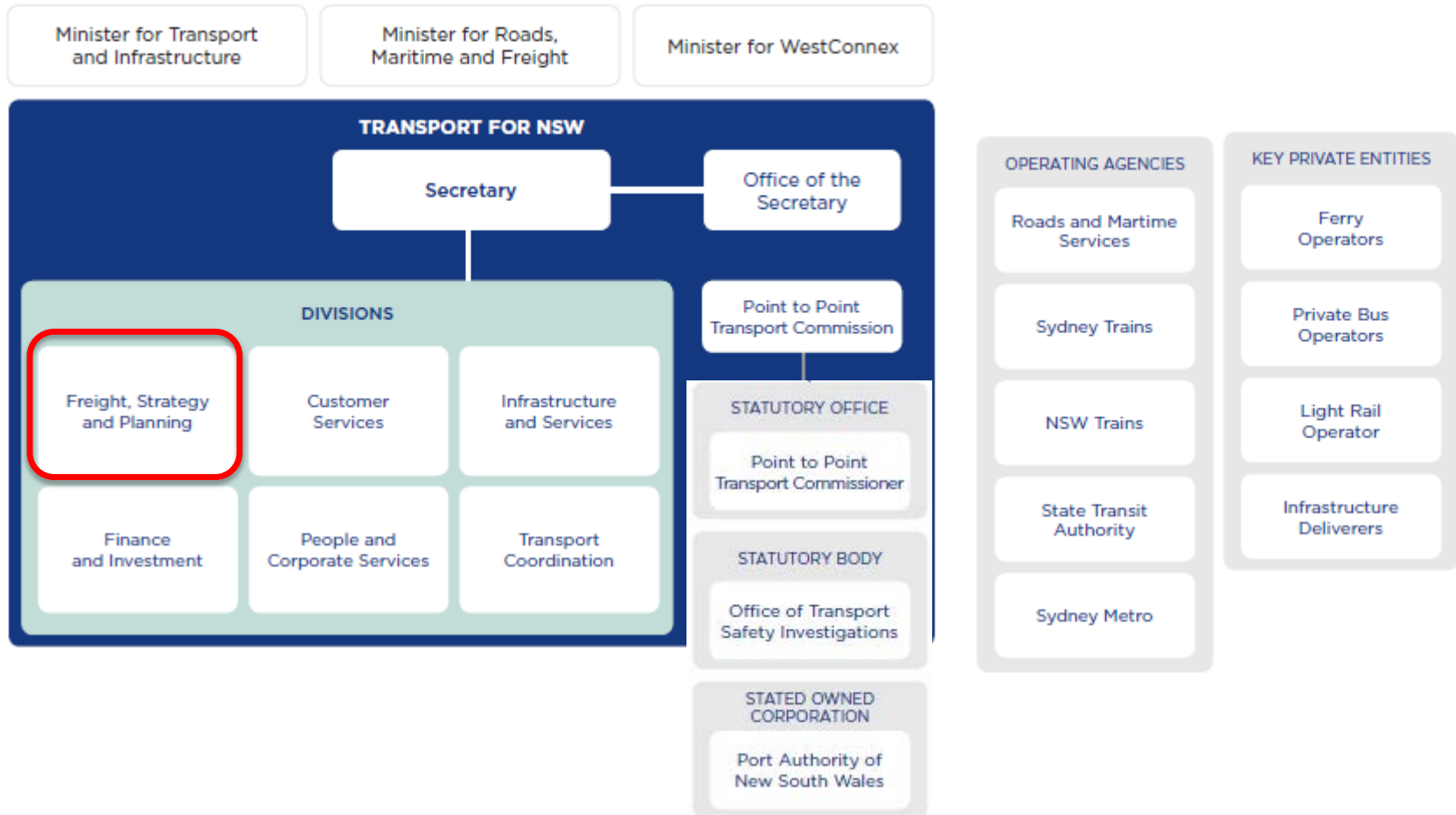
# Transport for NSW Research Hub

# Today's presentation

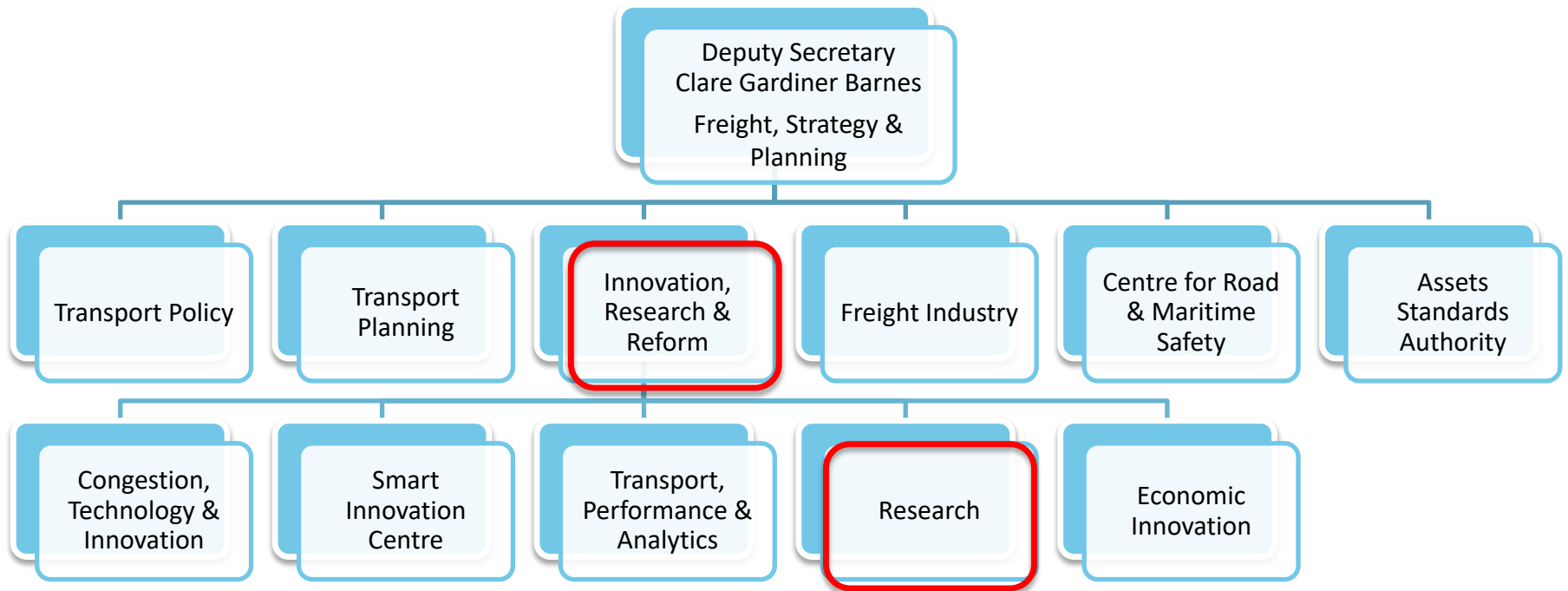
- *Provide an overview of TfNSW new Research Unit & its alignment with Future Transport 2056*
- *Explain our approach to collaboration*
- *What we've learned along the way*

# Transport for NSW

*Our purpose: To make New South Wales a better place to live, do business and visit, by managing and shaping the future of the whole transport system.*



# Research Unit



# Background - prior to new Research unit

- Substantial spending across agency on university engagements
- No transparency or visibility of work being conducted
- No clear guidelines for procuring academic research
- Lack of unified TfNSW strategic research directions

# Objectives – Research Unit

- Set Strategic Research Directions
- Build a cluster-wide research operating model
- Develop Business-led “Problem Statements”
- Develop Protocols & Guidelines for engagement

# Strategic Research Themes



**Future Mobility:** Managing a more integrated transport network



**Sustainability:** Delivering and managing a transport system that is economically, socially and environmentally sustainable



**Future Transport Workforce:** Evolution of skills and talents required for a Future Transport workforce



**Technological Drivers of Change:** Technological drivers of change underpinning TfNSW's core business



**Safety & Security:** Transportation safety and security development and deployment



**Valuing Wider Benefits:** Identifying and quantifying transport benefits



**Successful Places:** Transport's role in shaping and activating places and precincts

# Future Transport 2056

## Underpins our themes



Maintain consistently high customer satisfaction



Delivery of transport initiatives that improve liveability of places



Efficient connectivity for passengers and freight



Towards zero trauma on a reliable network



Whole of journey accessibility for customers wherever they live and regardless of age or ability or personal circumstances

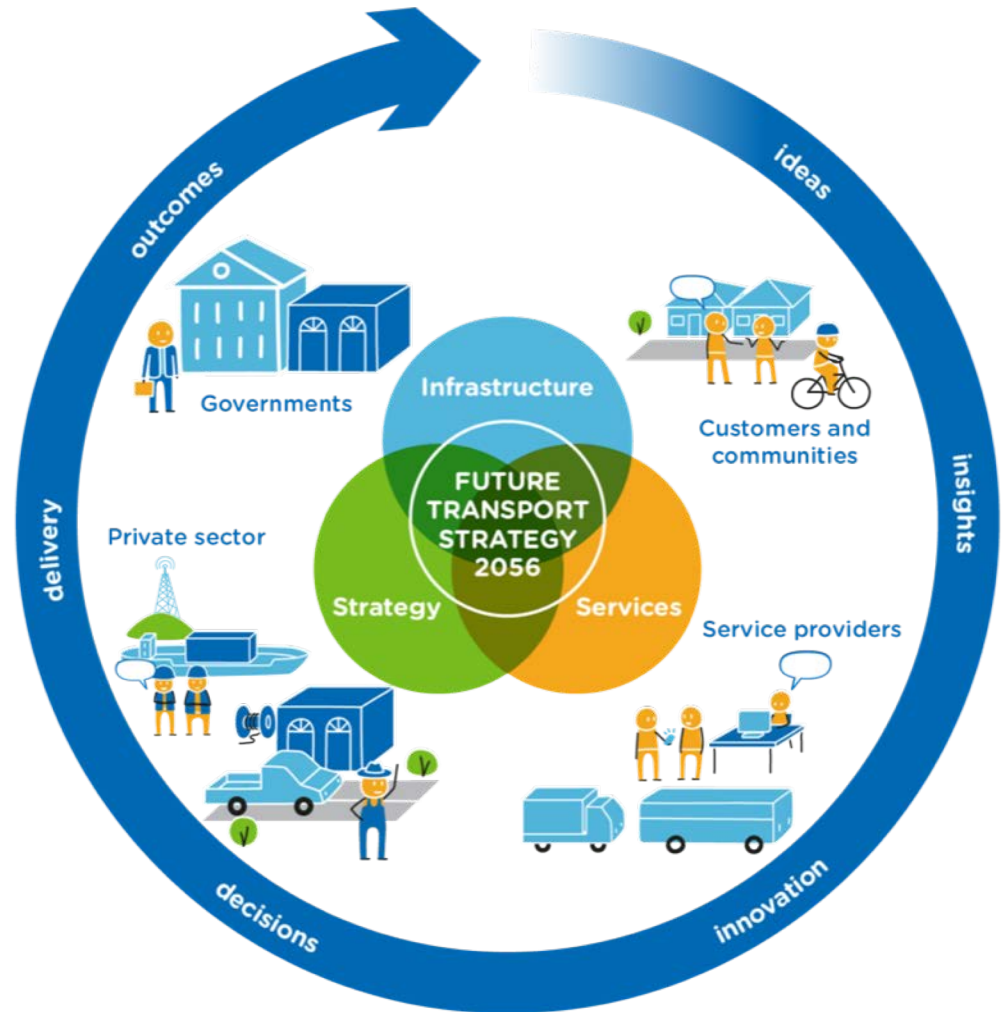


Improved financial sustainability  
Contribution to net zero emissions



# Future Transport 2056


Problem solving  
through  
Co- design  
&  
Collaboration



# Research Hub - online



Transport  
for NSW

[About us](#) [Projects](#) [Operations](#) [Industry](#) [Data and research](#) [News and events](#) 

## Strategic research directions

Seven strategic research directions form the basis for engagement with our research partners

## About the Research Hub

Our research model is driven by challenges facing Transport and strategic solutions to support Future Transport Strategy 2056

## Research Projects & Partners

Our research projects, partners, grants, student and staff research activities, outputs, resources and events

## Our problem statements and calls for research

Researchers are invited to collaborate with us to solve some of Transport's biggest challenges

## Levels of collaboration

Our problem statements reflect four levels of possible collaboration with research partners

## Templates and forms

Interested in collaborating with us? Download our templates and forms here



Transport for NSW  
**Research Hub**

Welcome to the Transport for New South Wales Research Hub. The Research Hub fosters collaboration and information sharing between TfNSW, the tertiary sector, industry and other government agencies that are interested in transport and related research. The Research Hub outlines TfNSW Strategic Research Directions, Problem Statements and how partners can engage with us to solve some of transport's biggest challenges.

[transport.nsw.gov.au/data-and-research/research-hub](https://transport.nsw.gov.au/data-and-research/research-hub)



Transport for NSW  
**Research Hub**

# Research Hub - storytelling

We invite researchers from around Australia to collaborate with us on these Problem Statements.



Transport's research collaborations with UTS Capstone students



Safer by Design Bins: Transport collaborates with the University of Technology Sydney



Transport's collaboration with Jacaranda Flame Consulting



Transport investigates the impact of autonomous vehicles on driver behaviour and interactions

[transport.nsw.gov.au/data-and-research/research-hub](https://transport.nsw.gov.au/data-and-research/research-hub)

# Research Communities of Practice (RCoPs)

- Established seven RCoPs aligned to research themes
- Cluster-wide Participation
- Led by a senior executive as Chair
- Fluid agenda
- No hierarchy – safe space to engage in debate & discussion

# Our Engagement Model



# Four Levels of Engagement

- Quick Fire Research
- Undergraduate Final Year Research
- Postgraduate Research
- Major collaboration & funded research

# Our Problem Statements

Launched in June  
Across all themes



**Problem Statement**  
Exploring the design of interchanges with homelessness in mind



AP 18-04

## Problem Description



**Problem Statement**  
Beyond the bundy clock: improving workplace flexibility, engagement and productivity for frontline operational staff



FW 18-01

## Problem Description

Question	Response
<p><b>Description of the problem and purpose of the proposed research</b></p>	<p>Workplace flexibility is becoming increasingly important as individuals balance work with competing life priorities. Flexible working arrangements typically include changes to the hours, pattern and/or location of work (e.g. working from home, job-sharing, part-time hours, time in lieu, compressed working weeks, telecommuting and purchased leave). According to the Australian Federal Government, flexible working arrangements are associated with a range of benefits, including improved output, effectiveness, job satisfaction, team work and staff retention.</p> <p>In 2016, the NSW Government announced its commitment to <a href="#">flexible working arrangements for senior staff</a>. However, this flexibility is not readily available for</p>

arable cities, homeless people often congregate and/or as a form of shelter and security. The situation in is tend to congregate in and around a number of Central Station. In addition, many ride the last trains to na as a form of safe shelter.

erience, and prompts ad hoc strategies from transport 1 understanding of the options to deliver positive tomers and the homeless. Current practice is dominated ove the homeless along' or ignore their enduring of such interchanges are undertaken. Further, there is stile architecture and 'Crime Prevention Through ch doesn't favour the humane treatment of the

# Process for Responding to Problem Statements

**Problem Statement**  
How to prioritise the benefits of placemaking for the development of business cases

**Problem Description**

**Hypothesis & Variables**

Transport for NSW | 1300 2000 1 | # 6019 2019  
10 Lee Street, Chippendale NSW 2008 | PO Box 9010, Macquarie NSW 2108

Problem Statement  
(listed online)

**Response to Problem Statement**

**Title & Summary**

**Name and ref no. of Problem Statement**

**Title of proposed research project**

**Brief summary of the proposed research**

**Brief summary of some literature on the topic**

Transport for NSW | 1300 2000 1 | # 6019 2019  
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Response form  
(available online)





# Recent research projects

- Sydney Trains - Tackling Replacement Buses
- UTS Capstone Projects
- University of Sydney Jacaranda Projects
- Regional Flexible Transport Trial evaluations
- Impact of CAV's & EV's on transport models
- Parramatta Light Rail

# Example innovation projects

- **NSW Smart Innovation Centre** – trialling CAVs and preparing for automated passenger services
- **On Demand Transport** trials – 11 flexible demand-responsive services
- **Open Data Hub** – real-time data to apps with over 5 million downloads
- **Sydney Startup Hub** – incubating and accelerating digital solutions
- **OpalPay** – and contactless payments for a wider range of transport services



# Feedback on the Hub

## Director, Australian Technology Network of Universities

*Yes, the launch went very well, and I enjoyed learning about what TfNSW is planning to do with the Research Hub. It is a fantastic idea for collaboration and innovation...and I hope some other government departments do something similar.*

## Danny Broad – Chief Executive of ARA

- *Hub combines the research resources of institutions to generate greater heft behind the implementation of new and innovative ideas in the transport sector.*
- *Should help avoid unnecessary duplication and facilitate the coordination of research activities to drive a leading-edge approach to mobility.*
- *Is an exemplar for other states to follow that should be cross-pollinated across all jurisdictions*

## Chair – Tech Drivers of Change.

- *Working with the Research Hub was the best part of my time at Transport.*
- *It is a fantastic initiative and in my time working across about twenty different organisations, have not seen one so effectively set up, and with so much potential.*

## Student – Jacaranda Flame.

- *I learnt so much about Transport and it has made me realise I want to work in this agency. There are so many challenges and opportunities.*

# Perfect timing & win-win

- Both sectors being disrupted & transformed through technology & social changes.
- Universities
  - increased focus on engagement with government & industry
  - Increased focus on research impact
  - changing the way they teach students – job ready
- Students are our Future Transport Workforce

# Key learnings – it's in the C's

- Curious mindset
- Champions & co-workers
- Collaboration
- Cross-disciplinary & transdisciplinary
- Connection
- Curation
- Culture

...to solve transport's **Complex** problems



Transport for NSW  
**Research Hub**

# Research Hub

<https://www.transport.nsw.gov.au/data-and-research/research-hub>