



**SCATS**  
*Move Smarter*

# The Evolution of Traffic Signal Operations

David Ballm, Operations, TfNSW



# Sydney - a Growing City



# Operations division - Transport for NSW

---

**Transport for New South Wales** leads the development of safe, integrated and efficient transport systems for the people of NSW.

This includes transport planning, strategy, policy, procurement and other non-service delivery functions across all modes of transport - roads, rail, ferries, light rail, buses and taxis. We work hand-in-hand with our operating agencies, private operators and industry partners to deliver customer-focused services and projects - making NSW a better place to live, work and visit.

## **NSW Minister for Transport's Priorities**

1. Restoring reliability and increasing patronage
2. Respecting and re-engaging our workforce
3. City shaping and precinct making
4. An integrated public transport system
5. Focus on local manufacturing and jobs

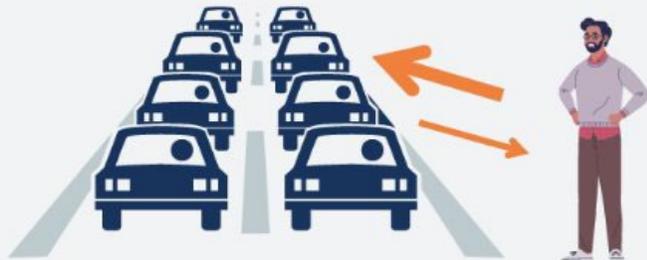
## **David Ballm**

As Director of Network Operations, I manage the team that develops the operational plans and programming for approximately 4,600 traffic signals across NSW.

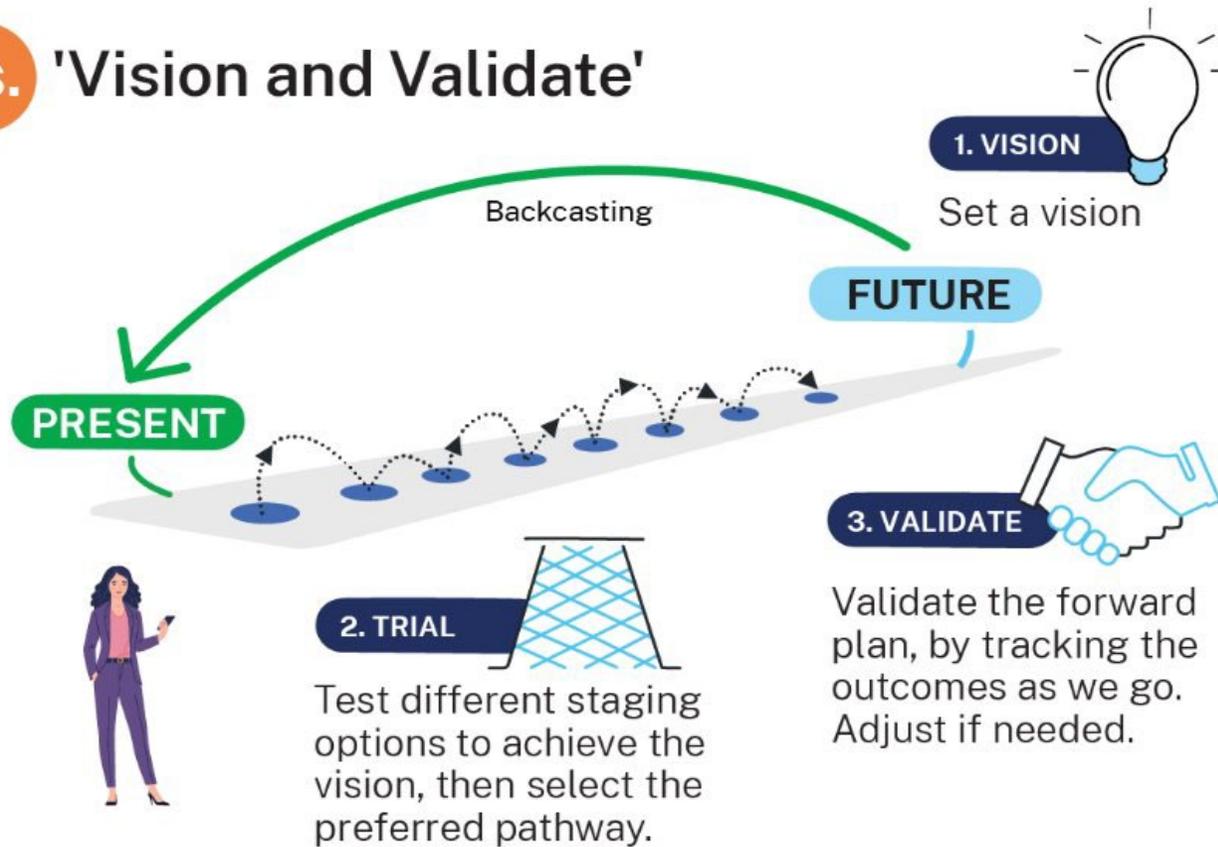
# Sydney - Changing the way we Grow

## 'Predict and Provide' vs. 'Vision and Validate'

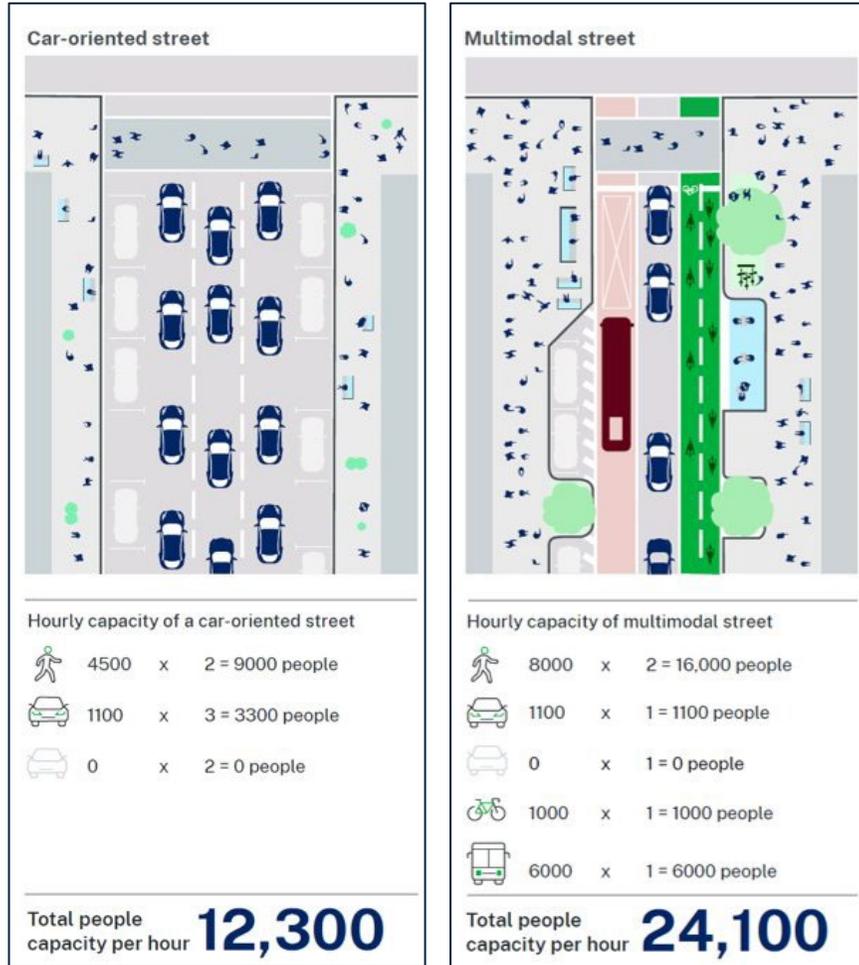
- 1 Predict the future based on past and present behaviours



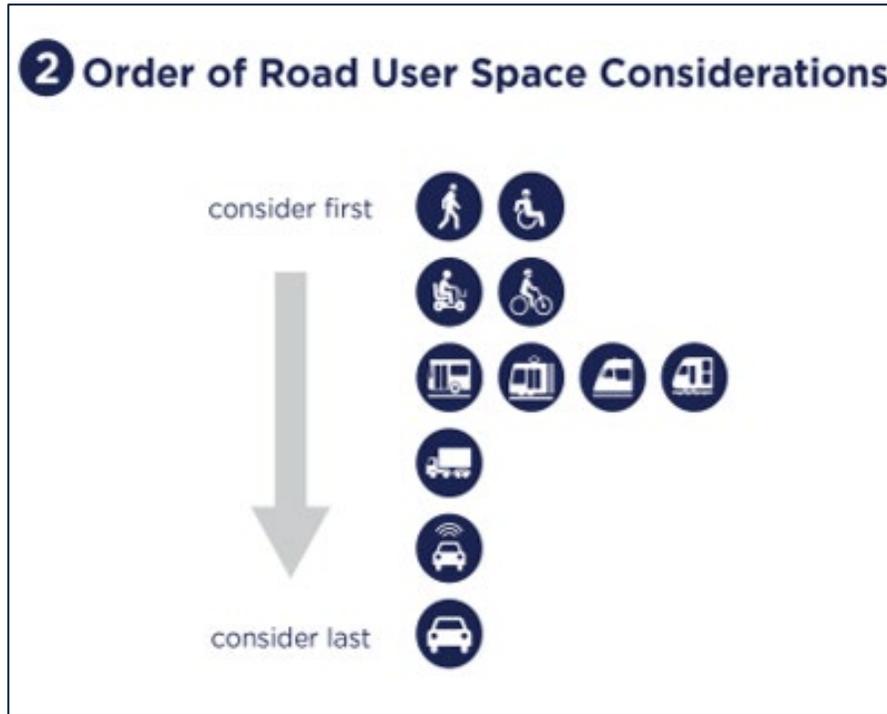
- 2 React with short term solutions, not integrated



# Space Reallocation



Transport for NSW aims to allocate **physical and temporal** road user space safely and equitably to support the movement of people and goods together with place objectives.



# Space Reallocation - A Live Example

## Outcomes to be avoided

- Adverse impacts on road safety
- Discriminatory barriers to access
- Loss of allocation of space for walking, cycling
- Loss of trees, green space and other amenities
- An overall increase in general traffic lanes for private motorised vehicles

## Trade-offs

- Alternative provision of trees and green space
- Re-routing of public transport services
- Local access for freight in the precinct
- Alternative freight corridors
- Road safety audit for physical changes
- Justify and cater for residual parking demand
- Mode shift (i.e. Bus priority vs private vehicle)

## Application example: Princes Hwy, St Peters

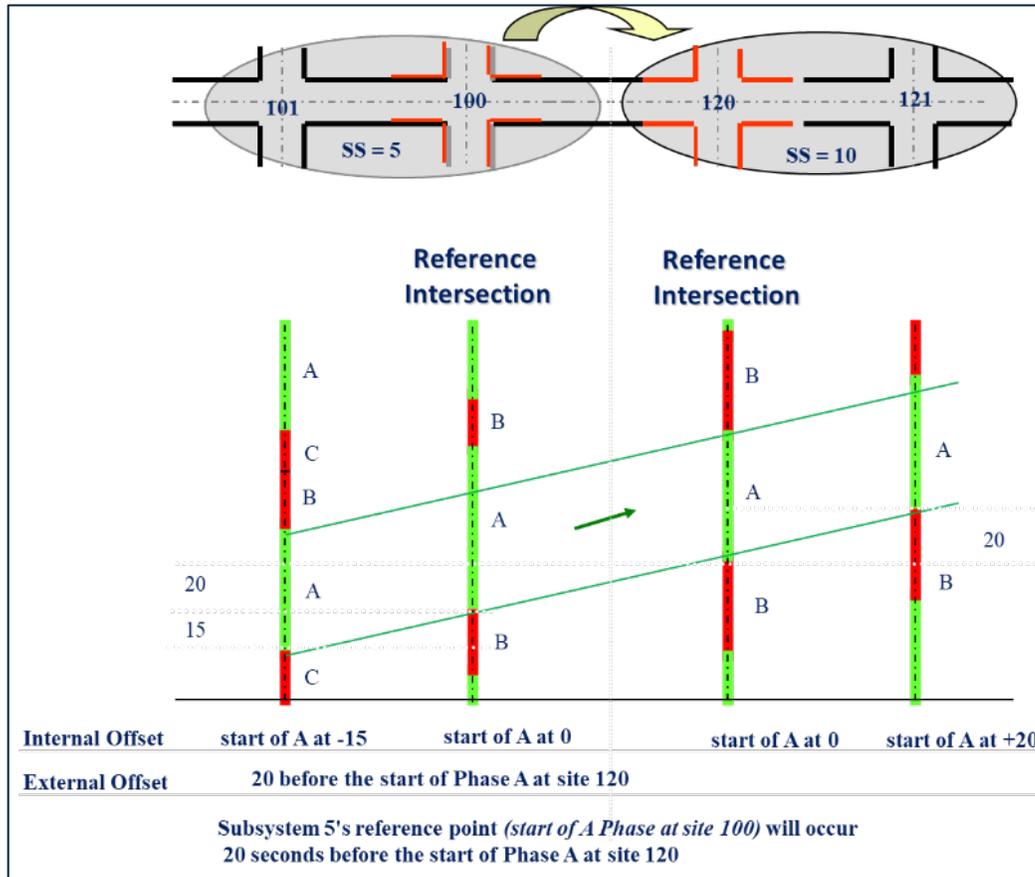


**Before:** 6 general traffic lanes, clearway and parking, 60km/hr speed limit



**After:** 4 general traffic lanes, dedicated cycleway, extended footpaths, pedestrian priority at intersections, 40km/hr speed limit

# Traffic Signal Operations



How do all these policies change the way in which we operate traffic signals?

Don't we still need to coordinate our subsystems and set offsets that allow for vehicle progression?

We are still doing all these things, but the new policy framework allows us to reconsider the standard way of doing things to facilitate greater levels of movement by more efficient modes or to meet place-based objectives.

SCATS is uniquely placed to allow you to do this across your road network, and with the upgrades planned for the future, this will only get easier.

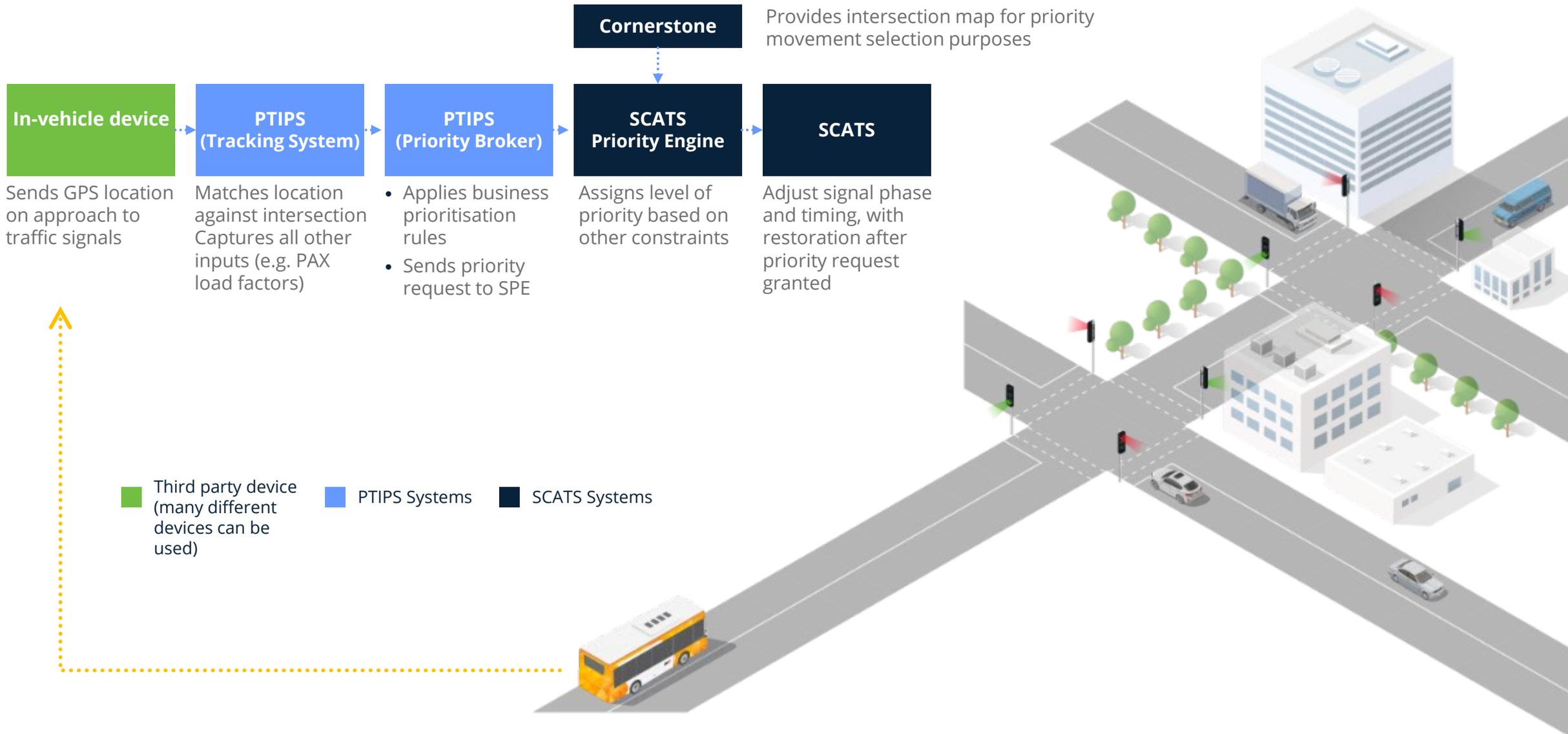
# Public Transport Priority - Trams

## Intersection Improvement

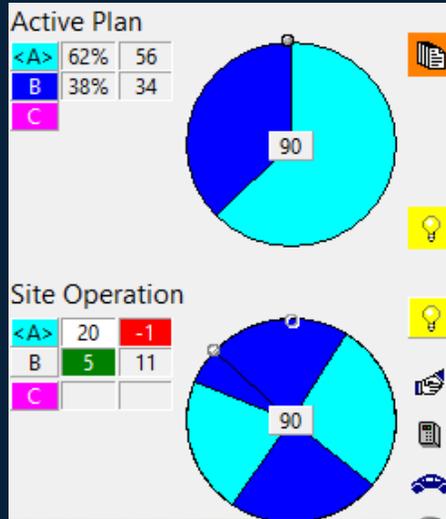
- Immediate review of all intersections for minor improvements – Low Hanging Fruit
  - Turn Bans
  - Better integration of Rail and TCS signals
  - More tram phases per cycle
- Non-Standard Traffic Signal Design
  - White Triangles
  - Permissive Tram phases by detection
- Tram Priority
  - Full Priority for Trams in almost all locations
- Route Optimisation
  - Pedestrianisation of George St
  - Signal Consolidation
  - Signal Removal



# Public Transport Priority - Buses



# Pedestrian Priority – Accepting Vehicle Delays, Placemaking



## Options & Benefits

- Lower cycle times reduce the wait time and delay for pedestrians.
- Double cycling.
- Delinking / Divorcing.
- Pedestrian Protection
- Walk for Green
- Auto Introduction of Pedestrian Phases.
- Countdown Timers.
- Reduced Jaywalking.
- Encourages vibrant town centres.

## Limitations

- Reduces vehicle green time, which may increase delays for drivers. In complex networks finding a balance is best achieved by trial and error.

---

# Q&A

