



scats

*Move Smarter*

iMove Conference

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# op·ti·misa·tion

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NOUN

the action of making the best or most effective use of a situation or resource





























# Sitrep

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- 8.2 million residents in NSW
- The **vision** for **TfNSW** is to deliver a transport system to help make NSW the most liveable state in the world, an economic powerhouse filled with vibrant, sustainable communities where citizens have choice and opportunity.
- Delivering the largest transport infrastructure program Australia has ever seen
- **\$76.7 billion** of investment over four years
- Game-changing projects like Sydney Metro, light rail, motorways and road upgrades

# Technology Layers to deliver Future Technology Roadmap

Mapping of current programs initiatives against the Technology toolkit.

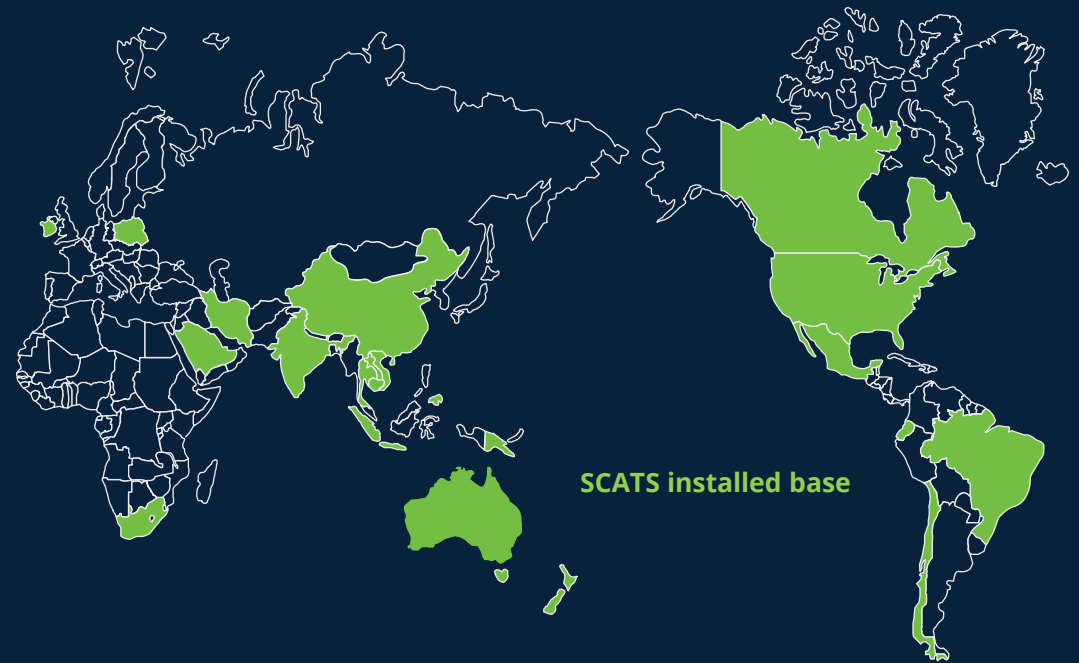
<b>Personalised Journeys</b>	 Personalised notifications	 Transport Bot Virtual Assistant	 Mobility as a Service		
<b>Connected Journeys</b>	 Contactless Transport Payments	 Redesigned Opal Travel App	 Transport Connected Bus	 Accessible and richer customer information	
<b>Emerging Modes and Technologies</b>	 Connected and autonomous vehicle trials	 Zero Emissions Bus trials	 Electric Vehicle Charging Infrastructure	 Advanced Vehicle Testing Facility	 Quantum Computing
<b>Intelligent Systems</b>	 Intelligent Congestion Management	 Sydney Coordinated Adaptive Traffic System	 Predictive Decision Support for TMC	 Public Transport Priority and Modelisation	
<b>Real-Time Digital Twin</b>	 Operational Data Realtime Exchange (ODRE)	 Operator and Service Integration	 Open Data Hub		
<b>Intelligent Sensors (Smart Infrastructure)</b>	 Bluetooth and Wi-Fi Sensors	 CCTV and Edge devices	 Drones for monitoring and maintenance	 Next generation intersection control	 Vehicle telematics



# Sydney Co ordinated Adaptive Traffic System (SCATS)

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Sydney Coordinated Adaptive Traffic System (SCATS), which is part of Transport for NSW, is an intelligent, adaptive traffic control system installed in over 60,000 intersections across 200 cities and 30 countries worldwide. Founded in 1975, SCATS has over 47 years of proven impact on real world results.



# Move Smarter

Policy responsive  
Optimise and prioritise road  
user movement

Emerging traffic control  
Connected and autonomous  
enabled

Multi-modal  
Supports new and emerging  
mobility modes

Data driven  
Data and information  
connected



Predictive and adaptable  
Responsive to network and  
environmental conditions

Connected networks  
Geographically integrated and  
flexible

Technology enabled  
Leverages new and emerging  
technology

Outcomes focussed  
Supporting sustainable,  
liveable  
and safe cities

Modular

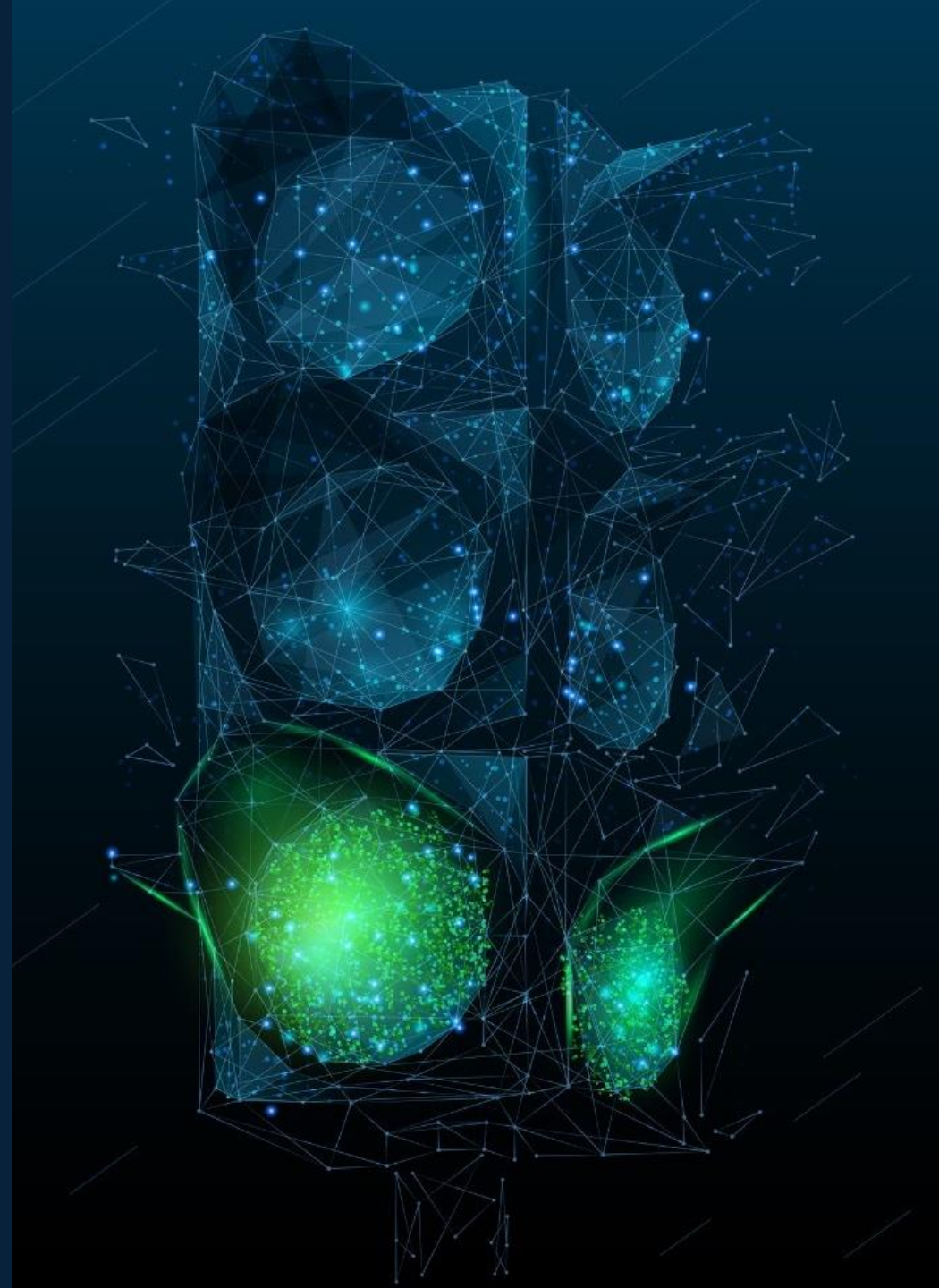
Easy to install,  
learn, and use

Resilient and  
scalable

Open and  
secure

Backed by user research  
and rapid innovation

Collaboration is Key



# City A Case Study: Balancing user needs

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**SCATS as Partner for priority services**

*Equitable, secure and a greener journey for all*





## Collaborative Context

20 working days stuck in traffic

Huge frustration

Lost productivity = \$2 billion a year (estimated) due to traffic congestion

Delays to bus services even on Bus Lane

Trial conducted

2 bus routes

4 different intersections.

Goal: influence the SCATS sequencing to assist getting the late running buses priority to back on schedule

Analyse congestion on the road network  
assign priority to designated vehicles based on defined criteria

configure rules to support recovery after priority is granted

Easy integration with SCATS Core technology

Intuitive user interface for efficient setup and management with highly configurable tailoring to local needs

Ability to predefine which vehicles get priority when multiple requests are received

Interactive map and tables for real time visibility of priority requests



## Outcome

SCATS provided benefits include:

30-50% reduction in stops

10-40% reduction in travel time

Reduced bus bunching

Improved bus capacity utilisation & customer wait times

continually improving customer experience

reliable & optimised service operation

Financial benefits of reduced revenue loss by Metro bus operators

Increased patronage and customer satisfaction

# City B Case Study: Dealing with disruptions

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**SCATS preferred in high density cities**

*Building resilient communities*



## Collaborative Context

High density city, 3 million increasingly mobile residents 1.5+ million car commuters, 2000+ intersection

Adaptive traffic management a high priority initiative by local government to reduce traffic congestion and delays

Lack of critical components

Highly specialized skill set required for staff to work with the system

Outdated communication channels with no available update

Dependence on in-pavement loops



Modern and non-intrusive detection technologies, transitioning beyond road-loops

Dynamic changes and real-time data provision to drive optimisation of intersections

Provision of transit signal priority functionality and emergency vehicle pre-emption

Ability to scale while integrating into other City ITS systems and existing safety and compliance requirements

Straight-forward installation with little customisation effort required



## Outcome

SCATS determined by City as best in market on basis of:

Most responsive and high-quality customer service

Timely and efficient incorporation of feedback

Easy to configure, self-diagnosing and intuitive functionality

Most significant reductions in travel times

User-friendly installation and systems, with only one week training for staff proficiency



**scats**

*Move Smarter*



**NSW**  
GOVERNMENT