



# Bus Booster and Advanced Detection Technology

**Presented by:**

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# WHY?

- Auckland is rapidly growing and the transport network is highly constrained
- We need to make the best use of our existing network to improve the movement of people and goods
- Signalised intersections are one of the main constraints on our network, and this is where technology can help
- Using technology, we've targeted two key areas:
  - 1) Bus Booster
  - 2) Advanced Detection Technology



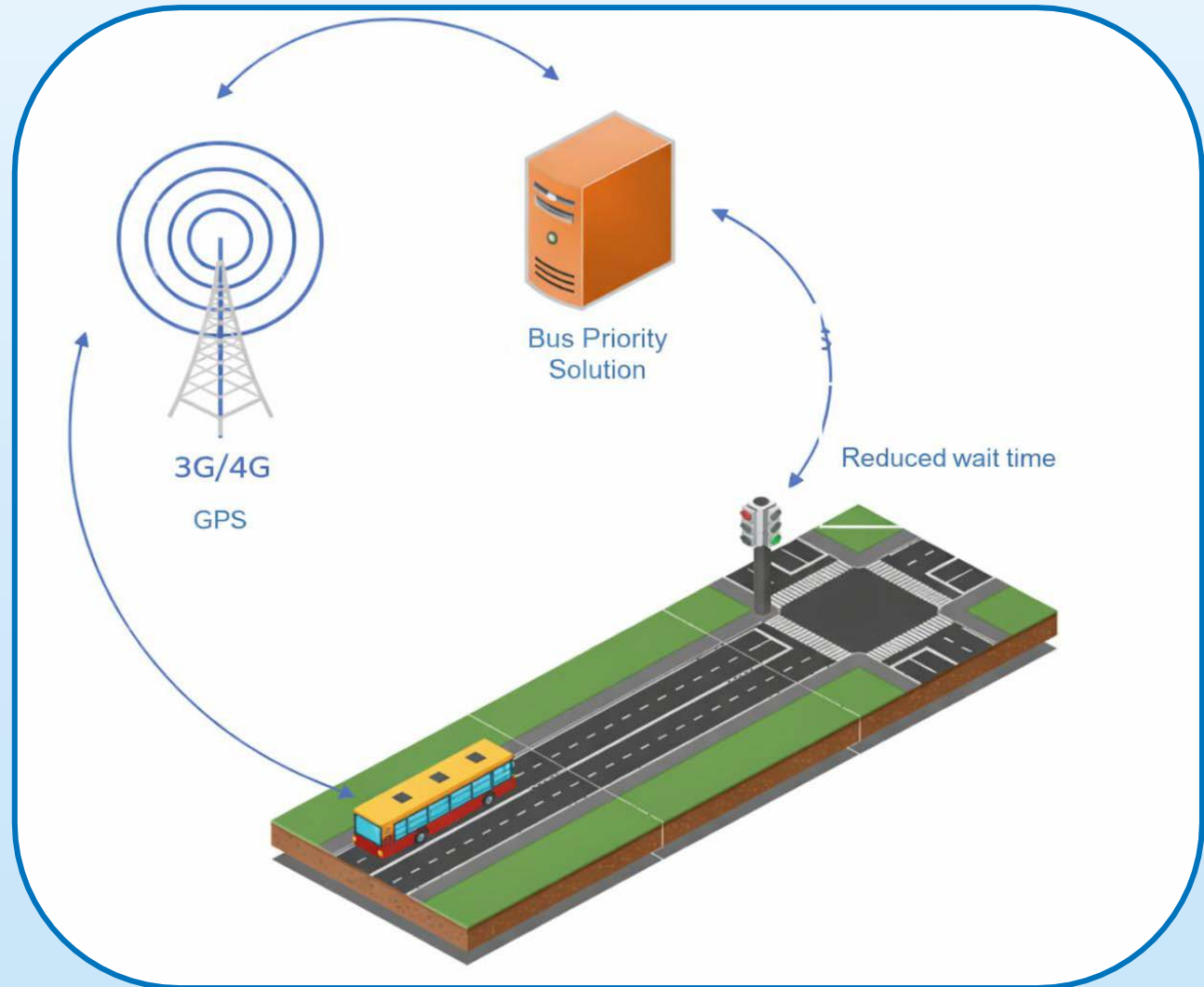


# Bus Booster



# What is Bus Booster?

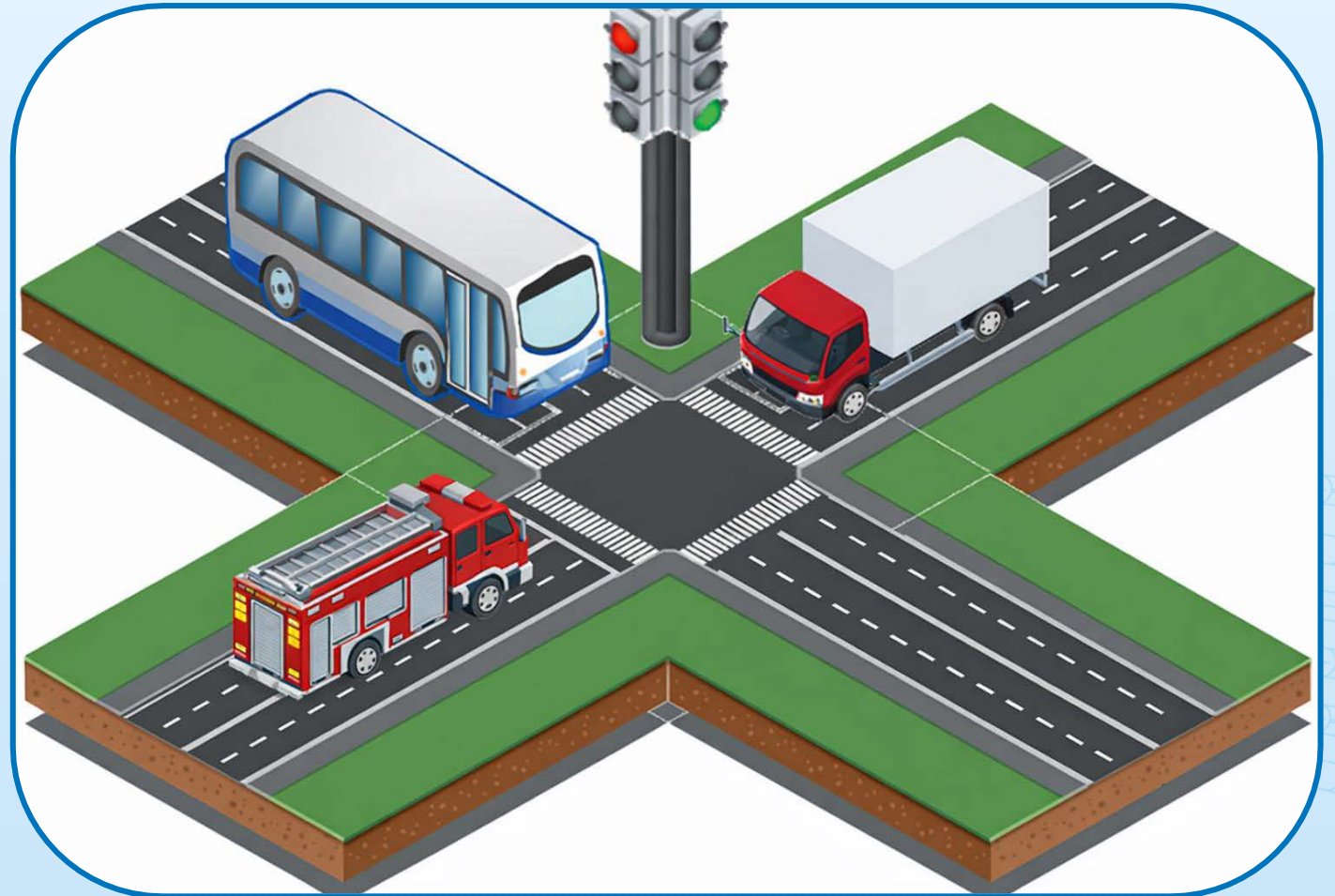
- Prioritises buses at signalised intersections and helps improve journey time
- Uses onboard GPS to request priority
- The technology is completely off-road and doesn't require any hardware.
- With this technology, buses wait less at intersections and get more green time
- Initial assessment have shown up to a **49% reduction** in bus travel time at some signalised intersections



# Adaptable usage

What next?...

- We are using the same technology to prioritise:
  - Freight
  - Fire and Emergency NZ (FENZ)
- Initial trials have been successful
- Reduces delays for freight and improves response time for FENZ vehicles



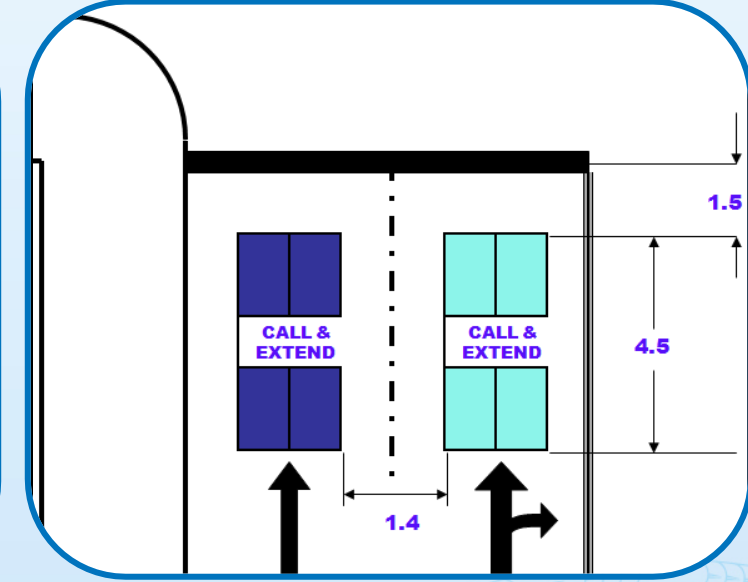
# Advanced Detection Technology



# Traffic Signal

How does it work?

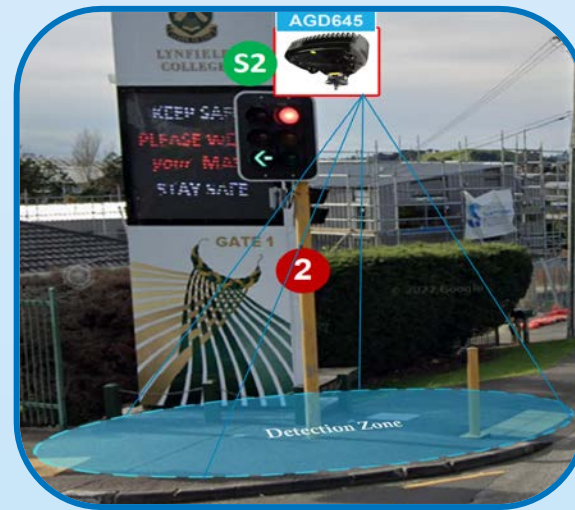
- Traffic signals are managed by SCATS
- SCATS uses real time data from induction loops and push button to adjust traffic light timings
- These traditional detectors provide only limited information to the system
- Using technology, we can get more out of our traffic signal and help SCATS do an even better job



# Advanced Detection

How does it work?

- Uses overhead cameras to detect:
  - Vehicles queue length
  - Pedestrian and cyclist presence, occupancy & location
- Enables more adaptive and responsive operation
- Reduces manual intervention
- Up to a **74% reduction** in average delays for cyclists and up to **2 minutes** reduction in average delays for vehicles at individual intersections



# Programme Benefits

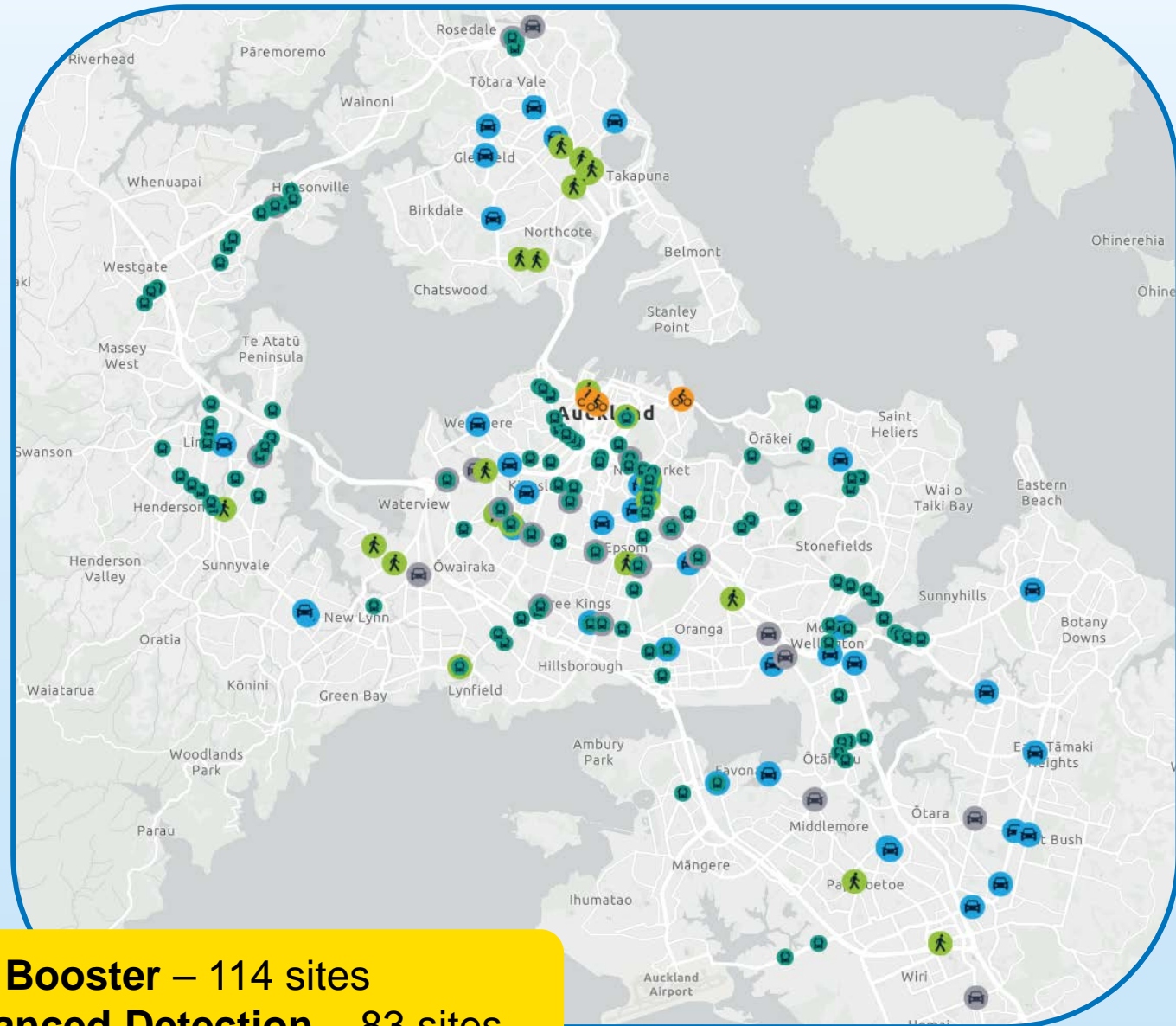
Forecasted benefit for next financial year 2026-2027

## Bus Booster

- Cost: **\$876k**
- Benefit: **\$6.5 million**
- BCR: **7.3**

## Advanced Detection

- Cost: **\$2.0 million**
- Benefit: **\$77.5 million**
- BCR: **38.2**



Thank you

