

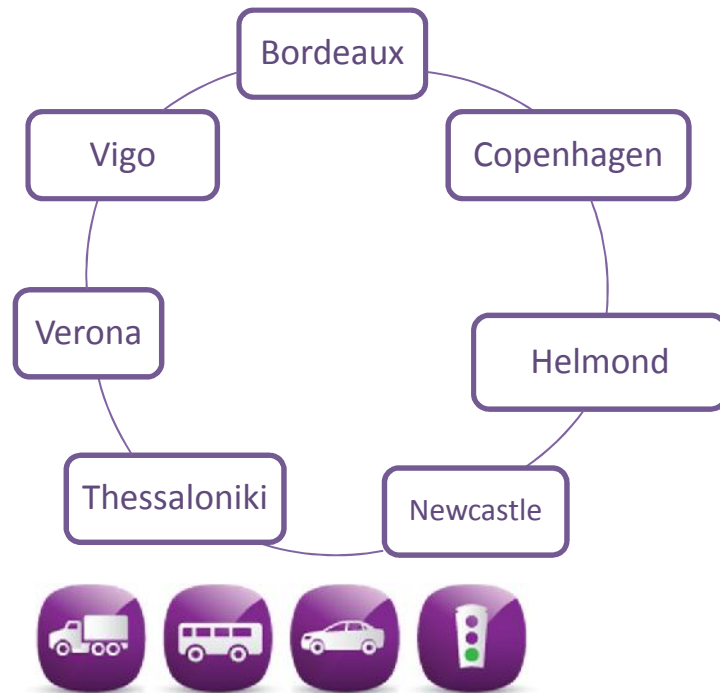
CODEC-CIMEC City Pool  
Workshop  
Cooperative ITS and Cities  
The Newcastle Experience

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North East Combined Authority  
UTMC Specialist

**Thursday 3 March 2015**

# Overview of Compass4D

- Cooperative Mobility Pilot on Safety and Sustainability Services for Deployment
- EU match Funded in 7 Cities in Europe
- Vehicle to Infrastructure (802.11P 5.9GHz)



# Current Use Cases/Services

- Road Hazard Warning (RHW)



- Red Light Violation Warning (RLVW)

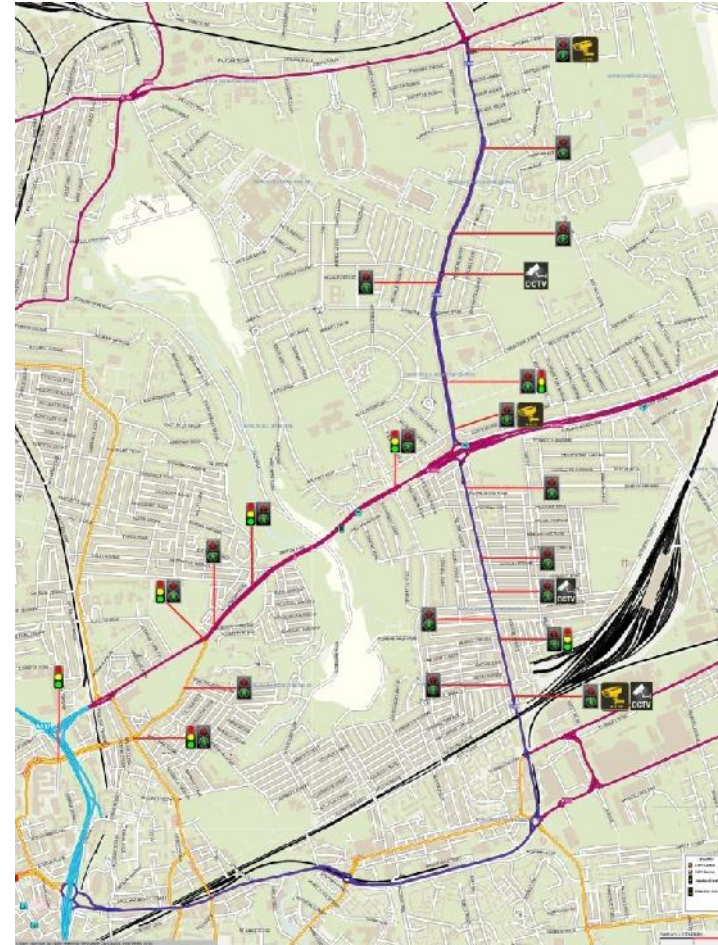


- Energy Efficient Intersection Service (EEIS)



# Newcastle Pilot Site

- 20 signalised controls:
  - Benton Road
  - Chillingham Road
  - Corner House to Civic Centre via Sandyford Road
- Giving Equipped Vehs
  - Idling support;
  - Speed advice;
  - Priority at signals.



# Priority at Lights

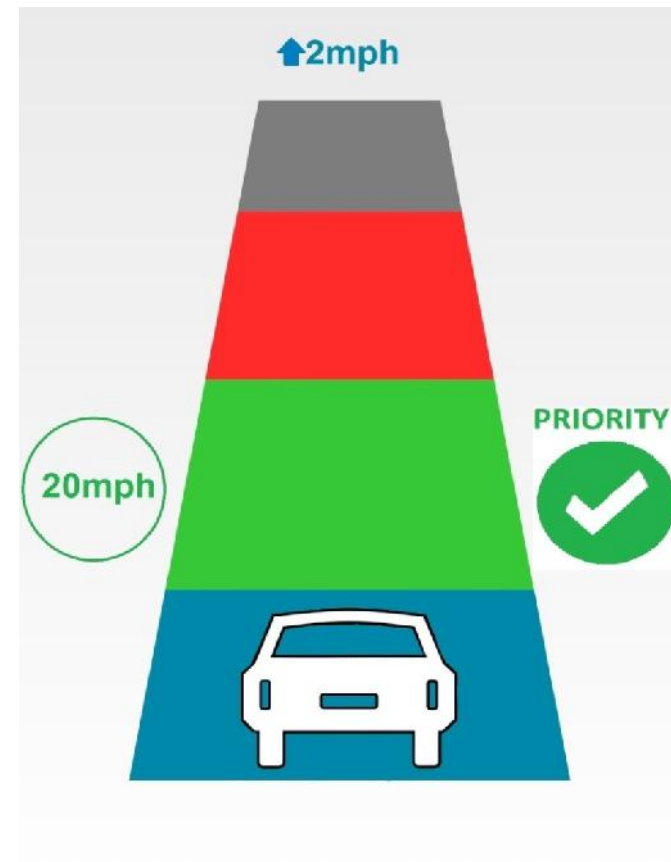
- Approaching Lights on Green: The Green time will be extended to allow vehicle to pass through (if possible).
- Approaching Lights on Red: The Green phase will be requested, remaining green phases (other approaches to the junction) will run for their minimum safe times.





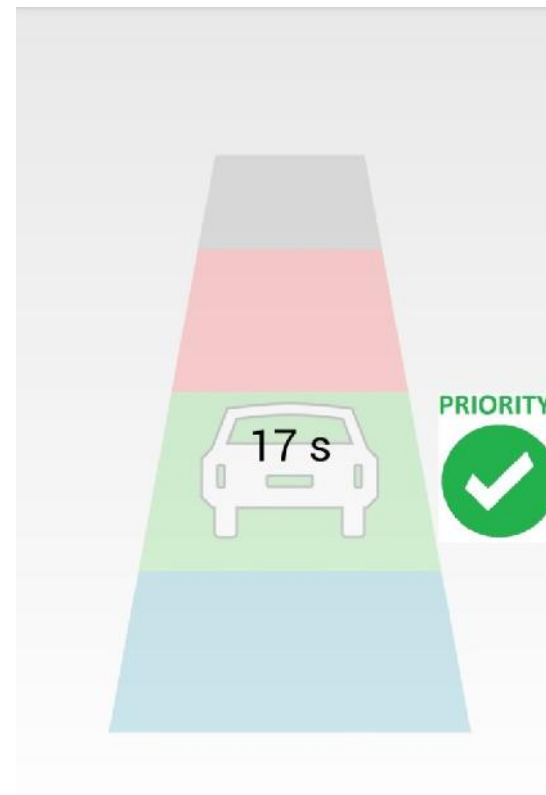
# Speed Advice

- Optimum speed to ensure passage through the signals on green.
- Confirmation that priority has been requested



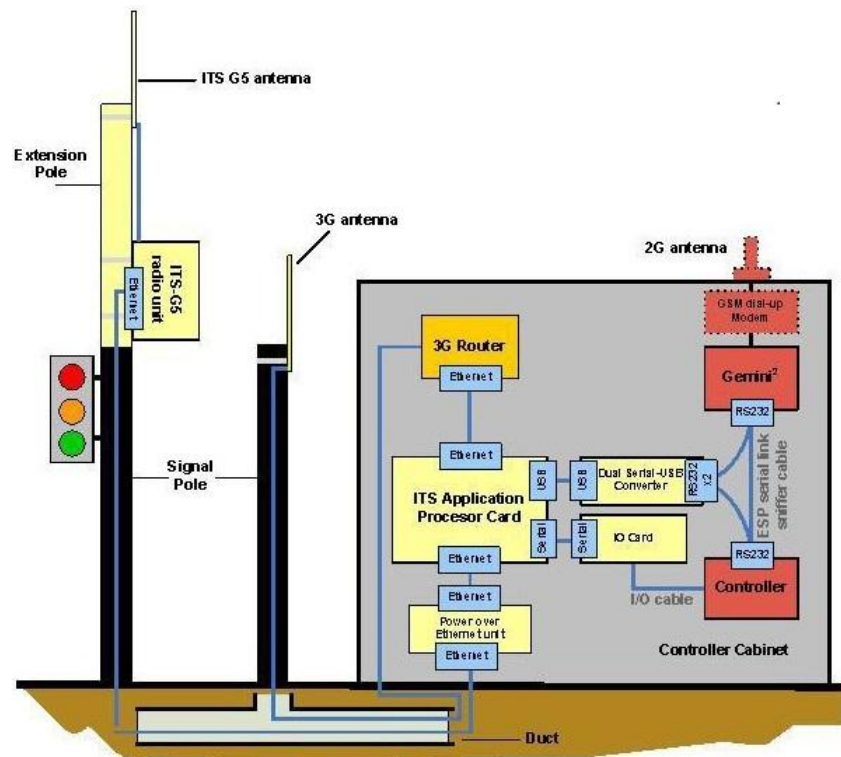
# Idling Support

- If time at Red is known, an estimate of time remaining at red will be given

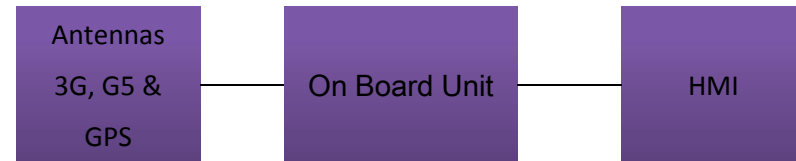


# System Architecture

## On Street

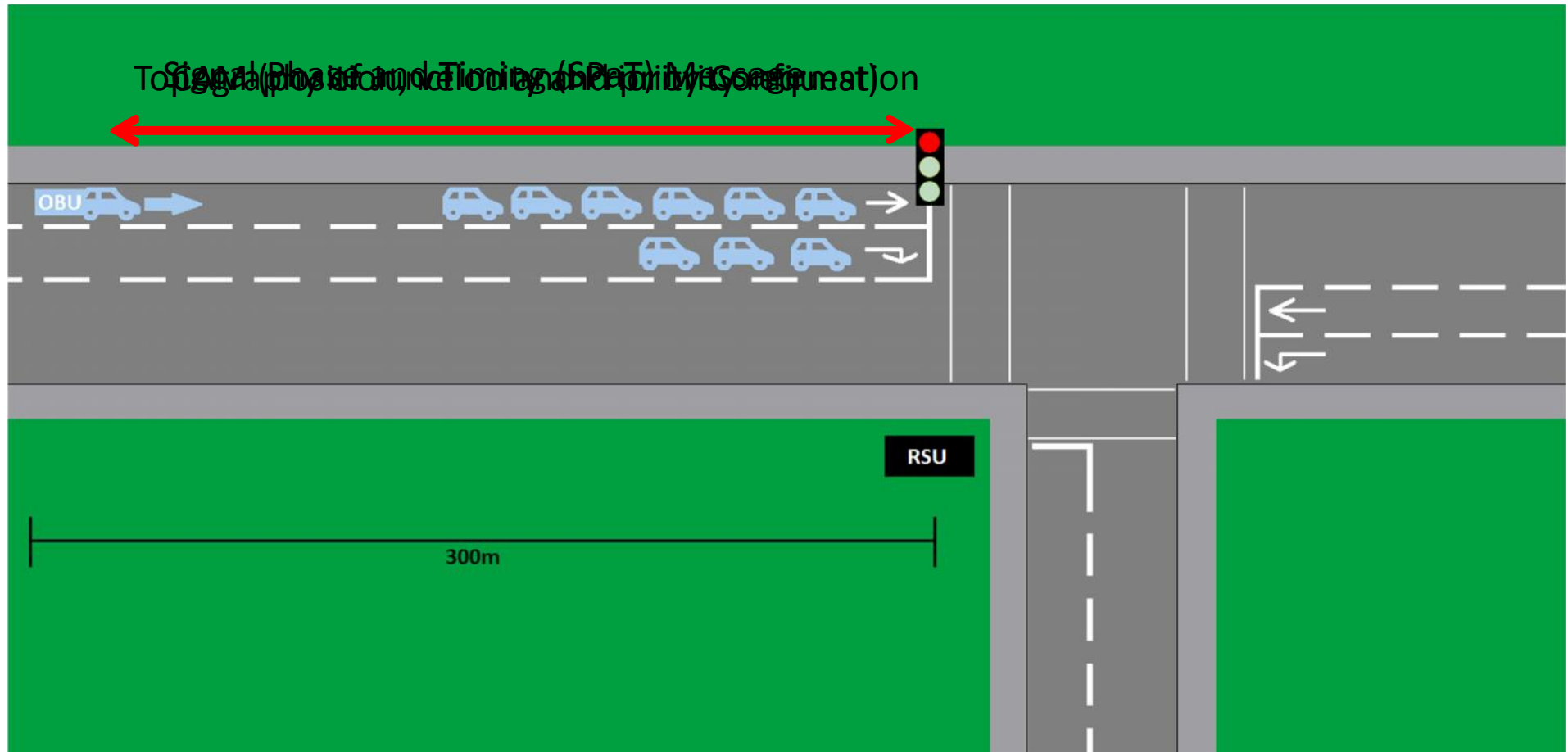


## In Vehicle



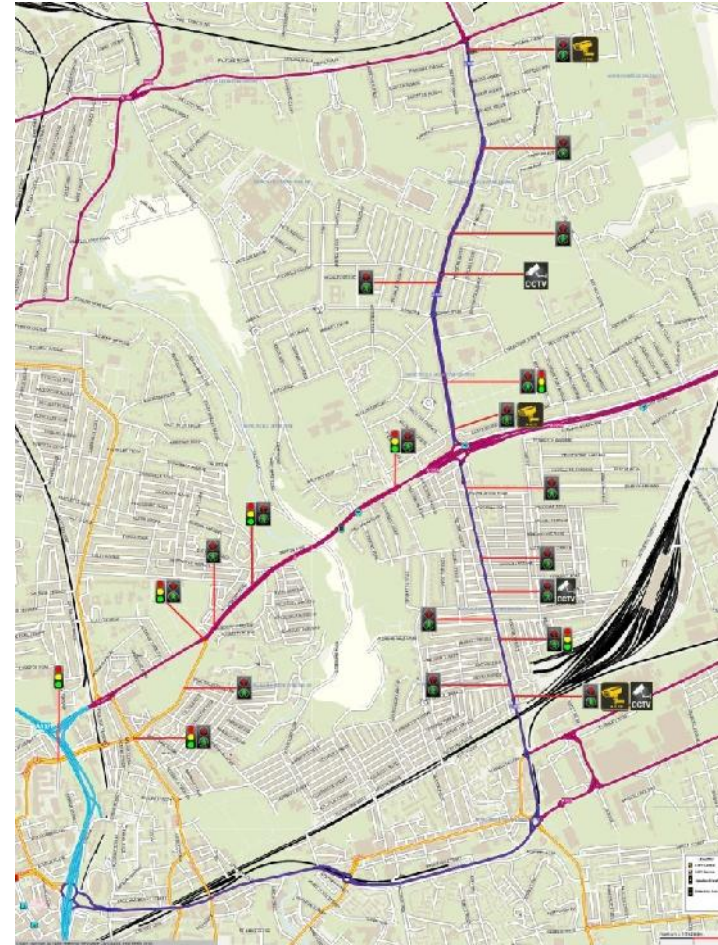


# Operation of System



# The Newcastle Experience

- 12 – 15% Fuel reduction
- 66% reduction in time spent below 5mph
- Increase to mean speed of 4mph



# Issues

- Drivers' acceptance of the system
  - GLOSA only effective in free flow traffic
  - Limited penetration
- Standards and backward compatibility
- Access to vehicles for upgrades
- Impact on the rest of the network



# Use Case Development

- Vulnerable Road Users
- Selective Priority
  - Freight on certain routes at certain times
  - Low Emission Vehicle
  - Express Bus Services (Park and Ride)
- Platooning vehicles



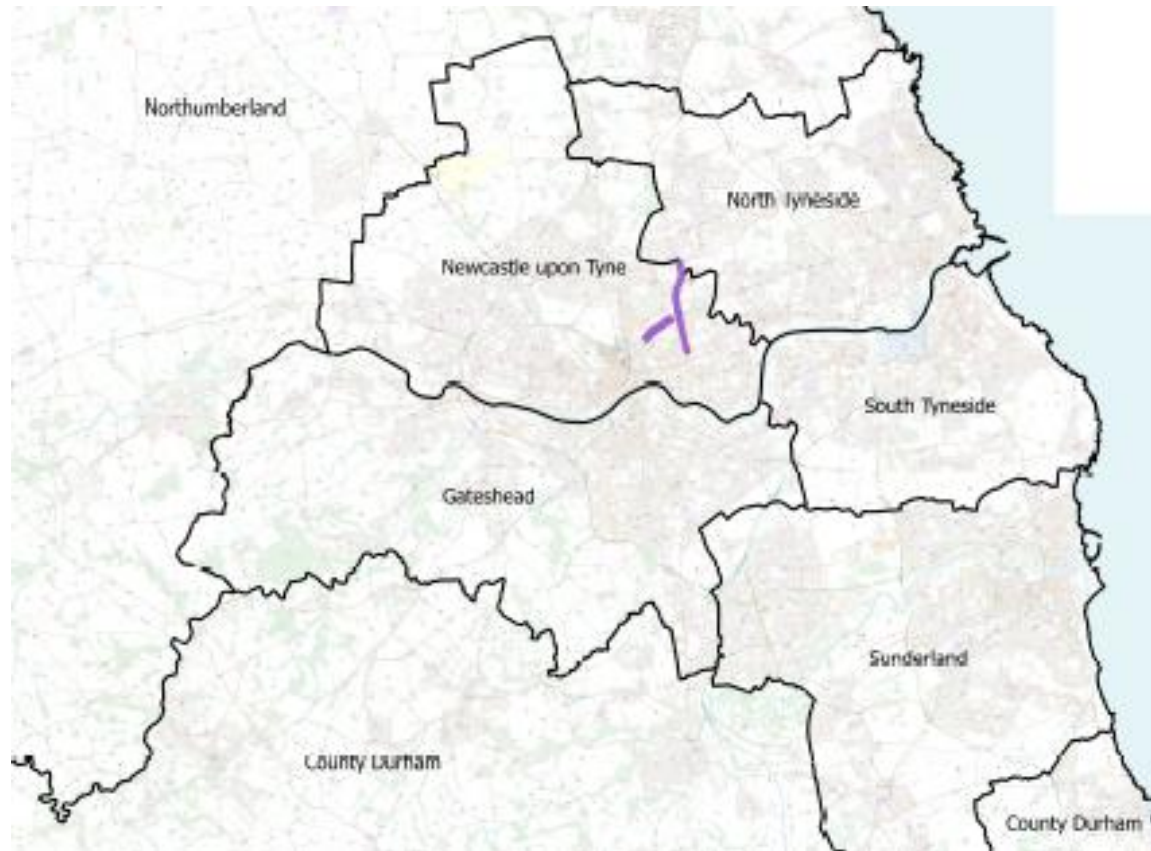
# Business Case Development

- Based on Express Buses on a 6km corridor:
- 20 Buses an hour, 12 hours a day, 5 days a week, 50 weeks of the year = 60,000 Buses.
- Average Occupancy 12? = 720,000 people
- 2 Minutes per journey = 24,000
- =~£600k based on current webtag values





# Very low equipment penetration



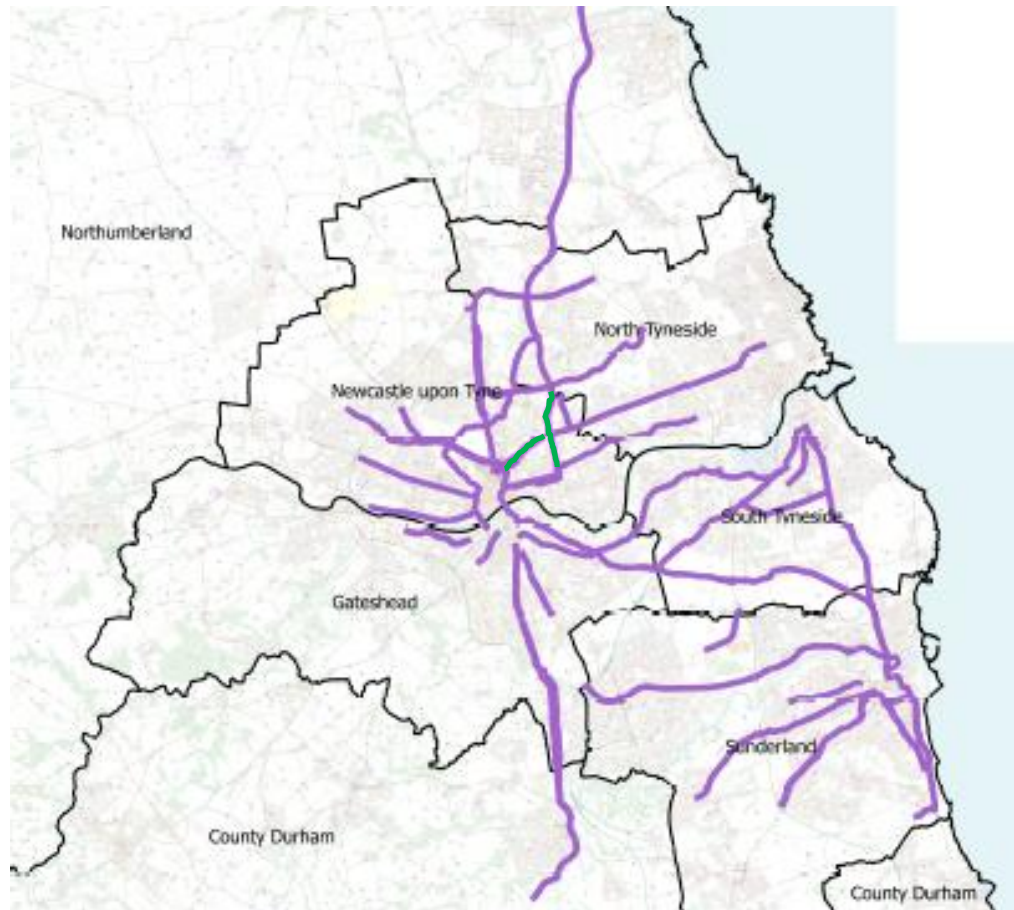


# Future Deployments

- Gosforth Corridor Project (17 Signalised controls)
- UKCRIC (Smart Cities Project – 15 Signalised controls)
- *Nissan to the Port of Tyne (HE, Sunderland and South Tyneside)*
- *NECA Aspiration (100+ Signalised Controls)*



# Greater level of equipment penetration



# Any Questions?

Thank you for your time

For further information on Compass4D please see [www.compass4d.eu](http://www.compass4d.eu)

For information on NECA Open Data (Traffic) please see [www.netraveldata.co.uk](http://www.netraveldata.co.uk)

For NECA travel information please see [www.transportnortheast.com/](http://www.transportnortheast.com/)

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