

# RoadLab 2.0

# Portable Traffic Signals

## Problem Statement I

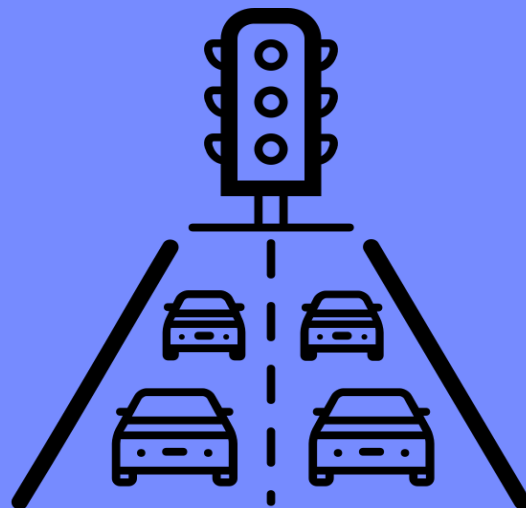
## Transport for London



**TRANSPORT  
FOR LONDON**

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How might we...  
**improve the reliability  
and efficiency of  
Portable Travel Signals  
in order to reduce  
congestion and  
emissions?**



# 1

## Problem Statement

We are looking for solutions that can improve the efficiency of Portable Traffic Signals (PTS)

PTS are a form of traffic management which can cause serious delays to transport users:

- 80% of bus delays are caused by roadworks, when PTS break down or are not optimised for changing traffic conditions. Safety issues arise for pedestrians and cyclists when crossings or phases are lost.
- 20k+ sets of portable traffic signals (PTS) are used in London every year causing thousands of hours of lost productivity, wasted time and excess carbon emissions and pollutants.
- Control of PTS is highly variable with negative effects for operators, road users and transport authorities. UTC temps is a solution in some circumstances, but not all.

TfL wants to improve the road user experience by reducing delays caused by PTS.

£38,544

The annual cost of a 10 minute traffic delay per bus

How might we...

## improve the reliability and efficiency of Portable Travel Signals in order to reduce congestion and emissions?



### Current Situation:

TfL manages thousands of traffic lights in London, and carefully plans and manages the network to optimise it efficiently and to achieve our strategic objectives. Short, unexpected road works are an unavoidable part of managing our network, but often the use of PTS can cause delays to users with no remote control of signal timings and low reliability.



### Area of focus:

We are looking for innovative solutions that can reduce delays for road users, increase safety and reduce environmental impact. This could include products that:

- Are improved portable traffic signals themselves;
- Are add-ins which can be used with existing PTS stock;
- Optimise signal timings to adapt to changing road conditions and/or adjusted remotely
- Can be two-way and multi-way operated with pedestrian crossing and cycle lane functionality
- Are able to identify pedestrians and cyclists waiting
- Transcends current technology to work with nearby permanent traffic signals
- Can self report faults or self correct if needed

It is important that solutions are:

- Portable and quick to deploy
- Reliable
- Provide an accessible service for vulnerable road users

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