

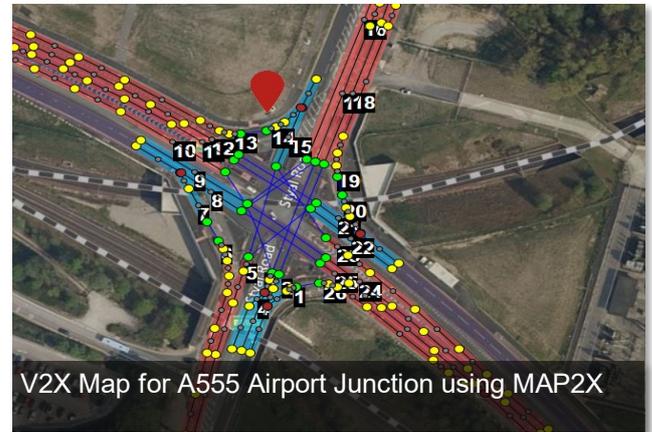
# New SPaT Algorithm and Project Synergy

## Project Synergy

As part of Project Synergy (established in 2019 and funded by Innovate UK) to test autonomous vehicles, Yunex Traffic and Transport for Greater Manchester completed a Connected Mobility trial on a challenging busy junction on Manchester Airport Relief Road / Styal Road (A555).

Aiming to provide traffic signal information to equipped vehicles, Yunex Traffic provided the turnkey solution:

- Producing V2X Map (**MAP Message**) for the proposed junction using **MAP2X Tool**.
- Developing and testing a **New Flexible SPaT** algorithm for this use case.
- Supplying an **ESCoS RSU** (which enables two-way vehicle to infrastructure communication).
- Generating and distributing **4 types of IVI messages** (In-Vehicle Information).
- Integrating SPaT/MAP messages with a **third party OBU**



## New SPaT Algorithm

The New SPaT Algorithm was developed to bring **efficiency** and **flexibility** as well **new and improved features** for the next generation of Connected Mobility projects to provide the following benefits:



**Any Stage & Phase arrangement**

**Controller mode independent**



**Provides Time to Red and Time to Green**

**Faster configuration**



**Timing confidence levels**

**Improved monitoring**



**Yunex Traffic**  
**Connected Mobility**

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