

# Connected Mobility Scale

A measure for the levels of connected mobility in the UK

Connected vehicle level*	Co-operation examples		Comment
	Connection to a moving thing or user	Connection from moving thing or user	
<b>A</b>	Eyes and ears	Sounding the horn. Flashing Lights. Arm signals.	Minimum level - almost all road users today
<b>B</b>	Radio adds traffic news	Mobile phone for speech or text when parked or following a collision e.g. cashless parking by text, ringing 999	Almost every vehicle today with a user and a phone
<b>C</b>	Connected sat nav or smartphone giving traffic routes and some in-vehicle information e.g. congestion.	Smartphone data, fleet management or pay as you go insurance providing location and speed. New data sources e.g. potholes, road condition or roughness. Bus priority from vehicle data. eCall data for emergencies. Driver behaviour monitoring. Data from cycles, HGVs and pedestrians, not just cars.	Many users today especially with a linked smartphone or a new vehicle, but also with devices in older vehicles. Many projects have researched links to existing vehicles using existing communications - scaling them up takes them to Level D.
<b>D</b>	Next generation smartphone-based services - for in vehicle signing and emergency vehicle warnings, roadworks warning and GLOSA (to tell drivers when signals will turn green). Speed advisory using Digital Traffic Regulation Orders.	Wide use of data harvested from all types of vehicles at scale to improve road network management and maintenance. This includes better signal setting, priority to vehicle types, queue detection, road safety, and prediction of collisions, for example.	<b>Connected roads level 1</b> - uses existing communications to add wide coverage of a range of services, for both existing and new vehicles. Most vehicles today are level 1 ready, as are smartphones, but the roads data hasn't been, until recently, ready to support this.
<b>E</b>	Covers three areas: <ul style="list-style-type: none"> <li>• <b>Vehicles to Infrastructure (V2I)</b> - adding new services fully integrated into the vehicle using data from the road (e.g. queue warning, GLOSA) that can add to or replace roadside information.</li> <li>• <b>Vehicles to pedestrian (V2P)</b> - linking vehicle, cyclists and pedestrians for awareness for safety</li> <li>• <b>Vehicles to Vehicles (V2V)</b> - data exchange between vehicles for immediate queue warning and services like platooning, deployed by vehicle makers</li> </ul>		<b>Connected roads level 2</b> - new communications technologies allowing additional services for new vehicles, with some retrofit via future smartphones. Needs investment in roads and resources to make roads "ready for V2I", for example, through a Connected Vehicle Services Framework. Some new vehicles may be Level 2 ready next year.
<b>F</b>	Links vehicles to everything (V2X) to support autonomy, future mobility services and safety. New data includes hi definition mapping of the road network.		<b>Connected roads level 3</b> - new vehicles and new technology for communications, supporting significant investment in roads.

\*Each level adds to to the former (e.g. B includes A, C includes A & B)