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*Connected and Automated Driving:
What's needed from the EU?*

A light blue graphic consisting of a speech bubble with a tail pointing towards the bottom left, and a circular arrow above it, suggesting a cycle or a return to the start.

Richard Cuerden

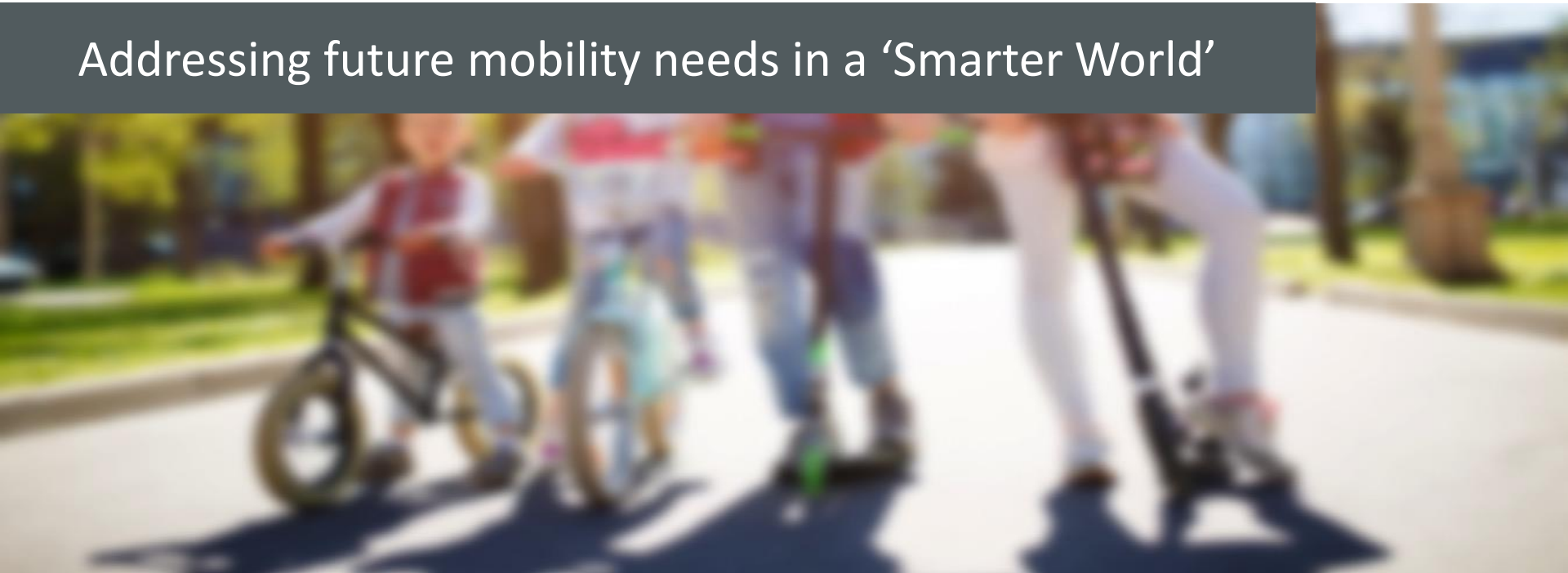
Director at TRL Academy

TRL Academy

Connected & Automated Driving:
What's needed from the EU?



Addressing future mobility needs in a 'Smarter World'



Vision

World leader in creating the future of transport and mobility, using evidence-based solutions and innovative thinking

Mission

Challenge and influence our chosen markets, driving sustained reductions (ultimately to zero) in:

- fatalities and serious injuries - Safe
- harmful emissions - Clean
- cost inefficiencies - Affordable
- barriers to inclusive mobility - Liveable
- unforeseen delays - Efficient

...enabling world-class transport and mobility solutions that underpin the needs of tomorrow's economy and society

Brand Values

Inquisitive



Progressive



Trusted



Relentless

Benefits of Connected & Automated Driving

Accessible, Affordable, Convenient & Congestion free mobility

Vision Zero – Safety & Emissions – Key part of decarbonisation

“Every single day over 500 children are killed on the world’s roads”

Zoleka Mandela, 2015



“The UK is the most obese country in western Europe”

(Organisation for Economic Co-operation and Development, 2017)



“The air in London is lethal and I will not stand by and do nothing”

Sadiq Khan, Mayor of London, 2017



The reality of Connected & Automated Vehicles

The Consolidation of automated driving roadmaps

Data, cyber security & infrastructure requirements

Pathway 1: ADAS +

- *Current vehicles sold across borders*
- *Continue to have human in the driving seat*



Pathway 2: Pure AV

- *Sells a journey rather than a vehicle*
- *No driving seat*



Part		
Traffic Jam	Assistance (Level 2)	
Highway		
City		
All situations		

		5)
		Taxi (Level 5)
		ate Car (Level 5)

The Future of Transport

CAVs, public transport and bike hire schemes will give users multiple transport options between residential, industrial and commercial districts

Ride sharing will increase



Transparent pricing

for multi-modal journeys

Single ticket valid for a journey that involves transfers within or between different transport modes



Dynamic Roads

Road space will be dynamically reconfigured in response to demand

Static road markings and signage may be removed

Vehicles will communicate real-time network conditions



Energy Management

A charging lane for electric vehicles

Solar panels and wind turbines will be integrated into transport infrastructure

CAVs could potentially sell unneeded electricity back to the providers



Integrated Highways

Future network will be all-encompassing for all modes

'Active travel ways' will be adaptive, controlled solar paths for pedestrians and bicycles

Drones may illuminate pedestrians

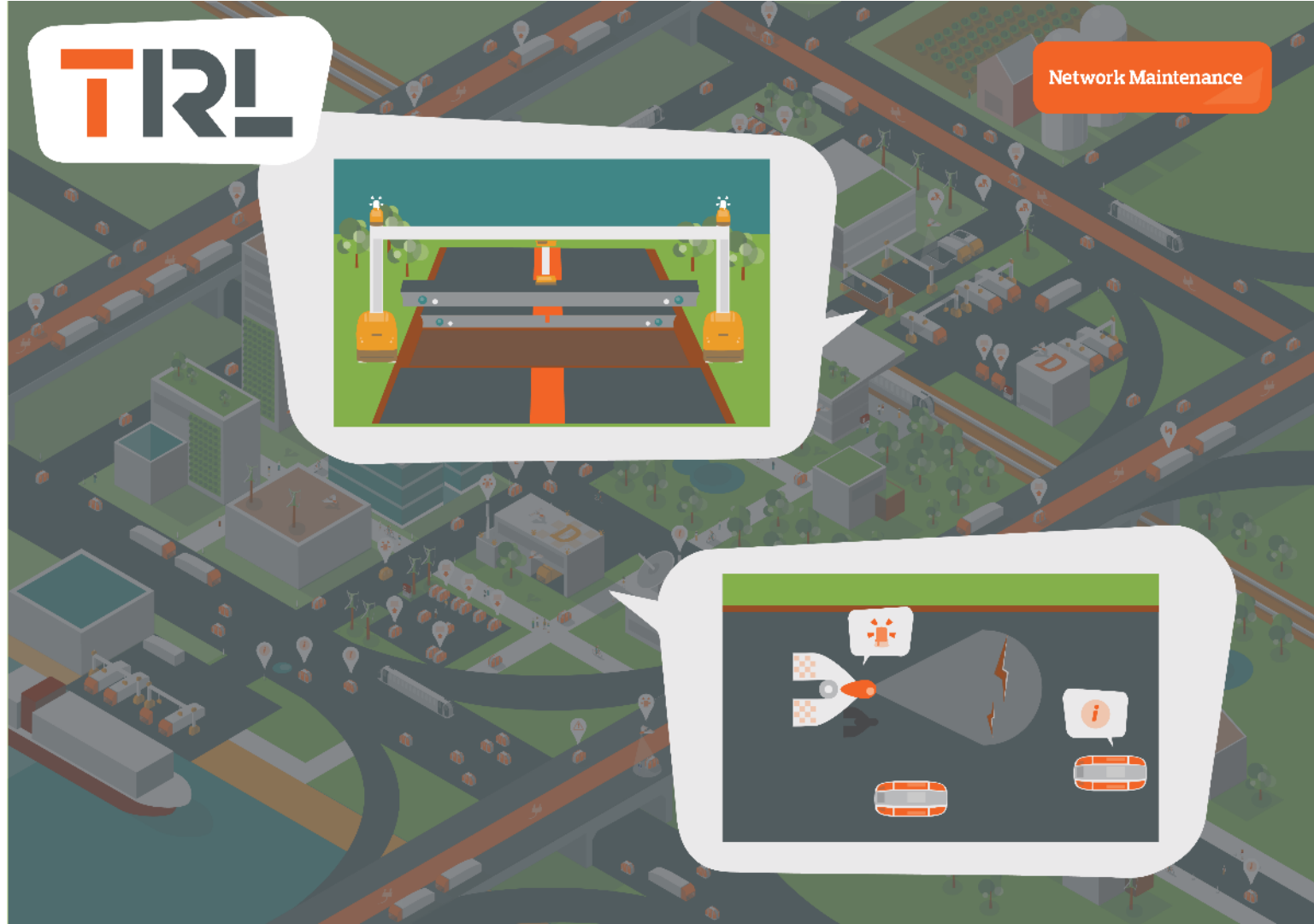


Network Maintenance

Durable road bases that never wear out and a modular replaceable surfacing

Non-bituminous surfacing that robots can repair

Some surfacing units are pre-fabricated with in-built power components



Smart Mobility Living Lab: London



www.smartmobility.london

Changing world: Connected & Automated Driving

- CAVs will **radically change the way we all travel** and **merge the private and public transportation systems**, with extensive revenue opportunities from product sales, advertising, data monetisation and entertainment
- The financial rewards could be measured in **trillions of Euros**
- The path towards approving CAVs is not straightforward, requiring changes to:
 - **Driver rules and licensing**
 - **Criminal law and procedures**
 - **Civil liability for personal injury**
 - **Insurance governance and supply**
 - **Privacy (data protection) guidelines**
 - **Vehicle regulations, including new measures, for example cyber security**

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