#### MAVEN (Managing Automated Vehicles Enhances Network)

# Cities and Connected Autonomy Gap Analysis

**Ben Morris**DG Cities, UK

MAVEN Final Event, 6th June, Helmond





Where Cities are Now





Where Cities are Now

Ideal Future





Where Cities are Now

Gap

Ideal Future





#### **Transition Roadmap**







#### **The CoEXist Framework**

Mobility Aspect	Automation Awareness	Planning for Automation Readiness	Implementation of Automation Ready Measures
Policy	Policy screening: Liveability as top priority - how can CAVs contribute to it?	Reassessment of strategic mobility plans; incorporating new mobility forms	Mobility pricing for "SPAM" roaming cars
Infrastructure	Is there a conflict between <b>people friendly</b> vs. automation friendly?	Preparation of <b>physical</b> anddigital infrastructure	Modifications to infrastructure and accompanying traffic code
Planning	Engement with citizens & support testing activities and research	Update travel demand models and evaluate road capacity needs	Assessment of required land use changes based on integrated land use and transport modelling tools
Capacity Building	Try out level 1 & 2 functionalItiles	Identify <b>new skill</b> requirements - 'less  concrete more bytes'	Organisational restructuring for traffic management and public transport operations
Traffic Management	Road <b>authorities</b> need to engage with OEMs	Back office for data exchange in traffic management	Defining data management responsibility with new management schemes





#### **Grading System**



Ready

**Partial** 

Partially Ready



No Progress





#### The CoEXist Framework Applied to Greenwich

Mobility Aspect	Automation Awareness	Planning for Automation Readiness	Implementation of Automation Ready Measures
Policy		Partial	$\bigotimes$
Infrastructure			Partial
Planning		Partial	×
Capacity Planning			×
Traffic Management	Partial	×	×





#### **Policy**







#### **Policy Progress in Greenwich**

Mobility Aspect	Automation Awareness	Planning for Automation Readiness	Implementation of Automation Ready Measures
Policy	<b>⊘</b>	Partial	<b>⊗</b>
Infrastructure			Partial
Planning		Partial	×
Capacity Planning			×
Traffic Management	Partial	×	×





#### **Policy Progress in Greenwich**

**Policy** – CAVs are seen as an opportunity area to improve accessibility, use of space and air quality





#### Infrastructure







#### **Infrastructure Progress in Greenwich**

Mobility Aspect	Automation Awareness	Planning for Automation Readiness	Implementation of Automation Ready Measures
Policy		Partial	<b>※</b>
Infrastructure		<b>⊘</b>	Partial
Planning		Partial	×
Capacity Planning			×
Traffic Management	Partial	×	<b>×</b>





#### Infrastructure Progress in Greenwich

**Policy** – CAVs are seen as an opportunity area to improve accessibility, use of space and air quality

Infrastructure – Investment in CAV projects including Smart Mobility Living Lab





#### **Planning**







#### **Planning Progress in Greenwich**

Mobility Aspect	Automation Awareness	Planning for Automation Readiness	Implementation of Automation Ready Measures
Policy		Partial	$\otimes$
Infrastructure			Partial
Planning		Partial	$\otimes$
Capacity Planning		<b>②</b>	×
Traffic Management	Partial	×	×





#### **How has Greenwich Made Progress?**

**Policy** – CAVs are seen as an opportunity area to improve accessibility, use of space and air quality

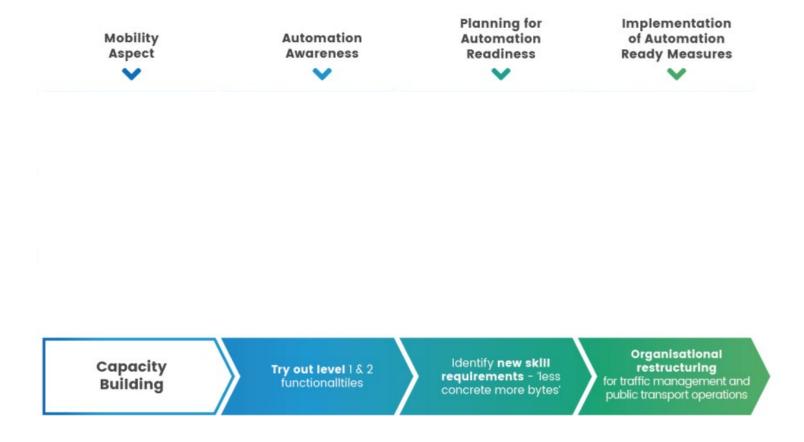
Infrastructure – Investment in CAV projects including Smart Mobility Living Lab

Planning - Citizen engagement and some small scale modelling





#### **Capacity Building**







#### **Capacity Building Progress in Greenwich**

Mobility Aspect	Automation Awareness	Planning for Automation Readiness	Implementation of Automation Ready Measures
Policy		Partial	<b>※</b>
Infrastructure			Partial
Planning		Partial	×
Capacity Planning	<b>Ø</b>	<b>Ø</b>	<b>×</b>
Traffic Management	Partial	×	<b>×</b>





#### Capacity Building Progress in Greenwich

**Policy** – CAVs are seen as an opportunity area to improve accessibility, use of space and air quality

Infrastructure – Investment in CAV projects including Smart Mobility Living Lab

Planning – Citizen engagement and some small scale modelling

Capacity Building - Greenwich created DG Cities to build capacity





#### **Traffic Management**

Mobility Automation Automation of Automation
Aspect Awareness Readiness Ready Measures

Traffic Management

Road **authorities** need to engage with OEMs

Back office for data exchange in traffic management Defining data management responsibility with new management schemes





#### **Traffic Management Progress in Greenwich**

Mobility Aspect	Automation Awareness	Planning for Automation Readiness	Implementation of Automation Ready Measures
Policy		Partial	×
Infrastructure			Partial
Planning		Partial	×
Capacity Planning			×
Traffic Management	Partial	$\otimes$	$\otimes$





#### **Traffic Management Progress in Greenwich**

Policy – CAVs are seen as an opportunity area to improve accessibility, use of space and air quality

Infrastructure – Investment in CAV projects including Smart Mobility Living Lab

Planning – Citizen engagement and some small scale modellingCapacity Building - Greenwich created DG Cities to build capacity

**Traffic Management** – Different in London with TfL more responsible than the boroughs





#### **Conclusions**

**Policy** – Variable awareness across cities

Infrastructure – Fibre, 5G and V2X deployment required

Planning – Engage citizens and enhance models

Capacity Building – Innovation teams, collaboration and best practice

**Traffic Management – Validates need for Transition Roadmap** 





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## Thank you!

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