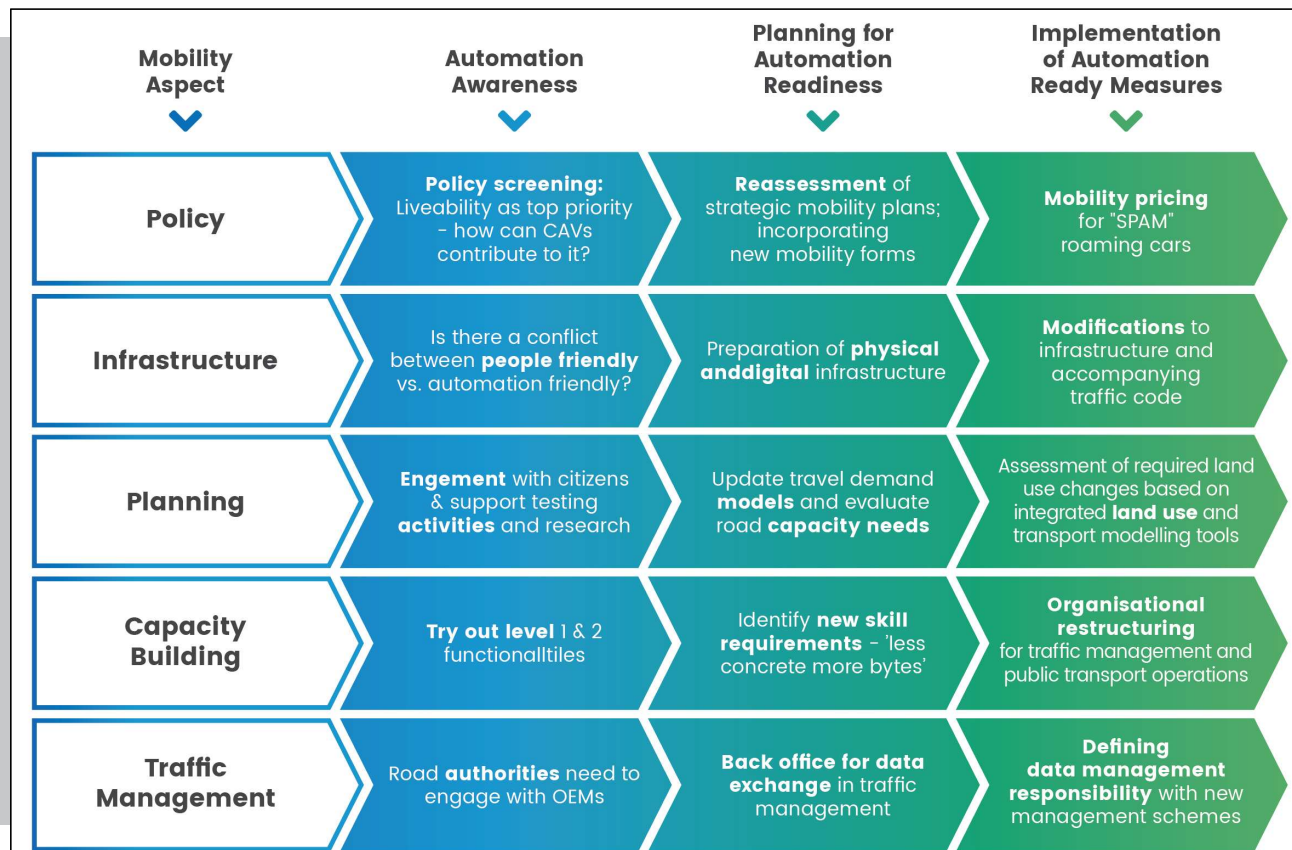


**Possible actions for public authorities
to facilitate automated driving**
ITS Congress, 4 June 2019
Suzanne Hoadley, Polis





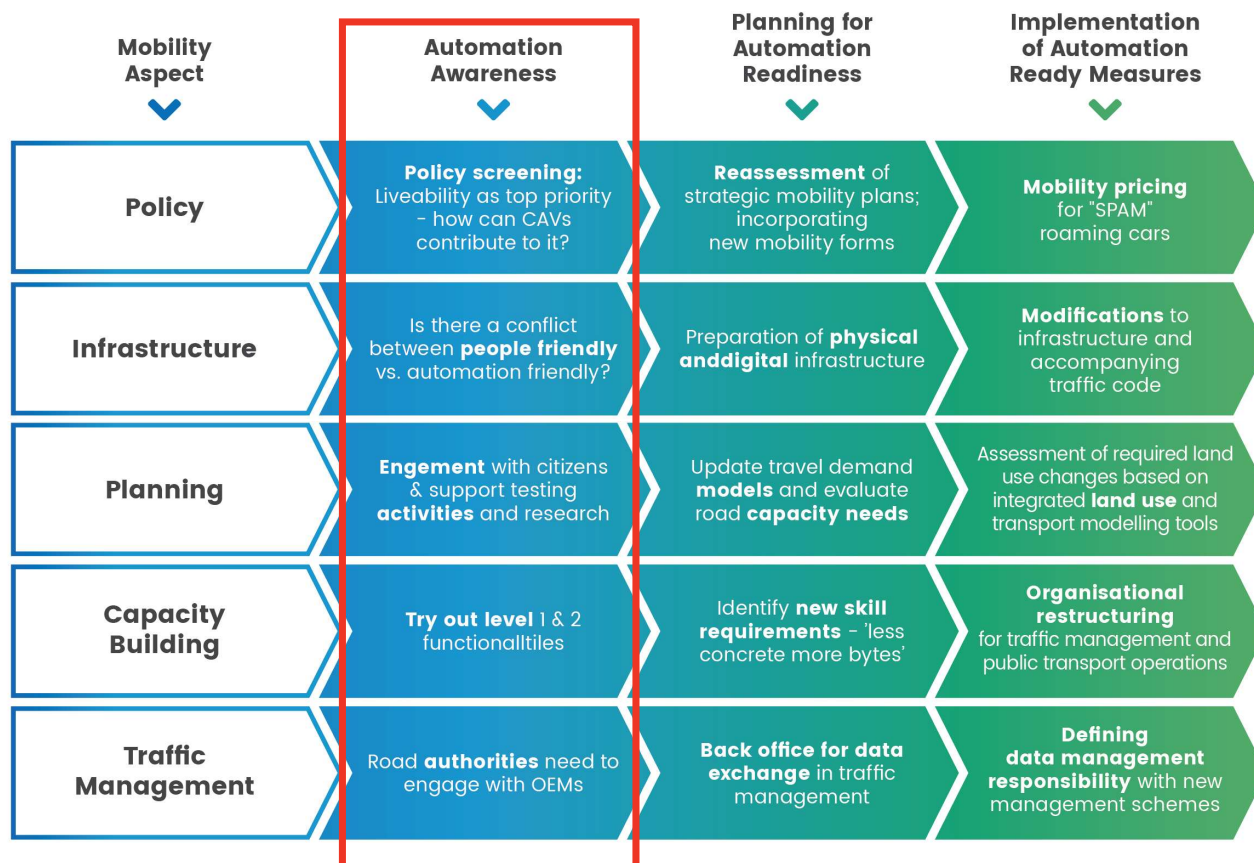
Co-EXist AV-ready framework



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 723201-2



Co-EXist AV-ready framework



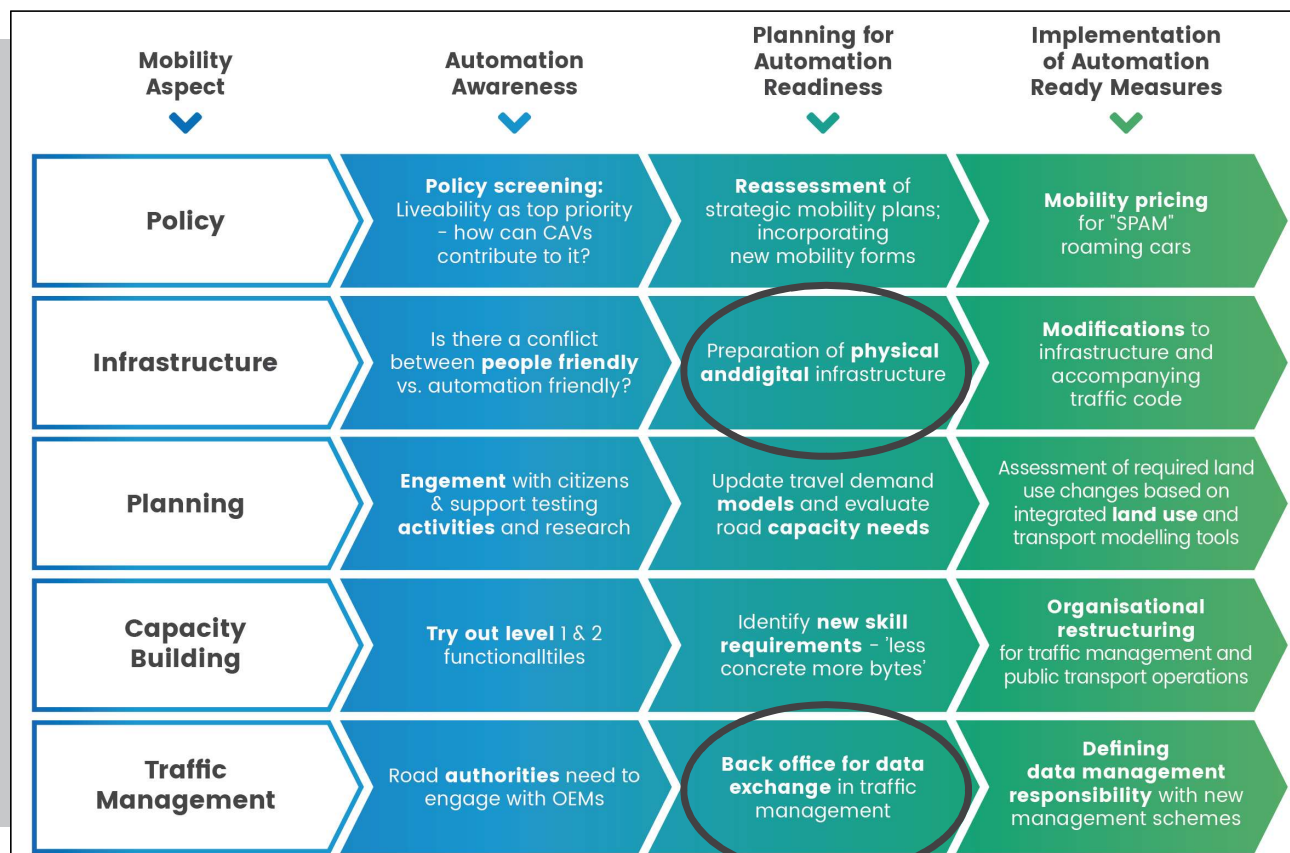
How to create awareness about CAVs?

- ☐ What is a CAV? How does it behave?
- ☐ What functionalities can it offer?
- ☐ What do my citizens feel about the technology?
- ☐ Which stakeholders need to be consulted?
- ☐ How to create awareness within the transport authority?
- ☐ How to develop scenarios that represent the potential impacts of CAVs?



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Co-EXist AV-ready framework



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Physical infrastructure

AA blames profits fall on callout surge fuelled by 'pothole epidemic'

Effects of weather and decline in road spending hits half-year figures, spooking investors



INDEPENDENT

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Potholes repair bill 'to reach £14bn by 2020', amid warnings this year will be 'tipping point'

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Vanishing road markings causing major concern

A photograph of a road with faded white markings, showing a crosswalk area where the lines are barely visible.

Trending

- 1 Special pleading for British soldiers will not be tolerated...
- 2 Video: Peter Casey 'reclaims Lough Foyle for Ireland' by...
- 3 Stephen Nolan shocks social media with 'astonishing' weight...
- 4 'Snow Patrol' frontman to sing at rally in Derry after Lyra's Walk
- 5 Derry Girls star Nicola Coughlan hits back after BAFTA dress...

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Saint-Lormel. Des actes de vandalisme perpétrés dans la nuit

Modifié le 19/07/2017 à 06:45 | Publié le 19/07/2017 à 06:45

A photograph of a road sign with a blue arrow pointing left, partially obscured by a white object.
A photograph of a road sign with a red border and a white center, partially obscured by a white object.
A photograph of a road sign with a red border and a white center, partially obscured by a white object.

HERALD

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FEBRUARY 11 2012 - 2:19PM

Hidden road signs a danger at schools

Heath Aston, Katie Cuttriss

A photograph of a road sign with a red border and a white center, partially obscured by a white object.

Star Online

News Business Sport Metro Tech Lifestyle Education Opinion Videos Property Jobs

Cut foliage blocking road signage

Views

Saturday, 24 Mar 2018

A photograph of a road sign with a blue arrow pointing left, partially obscured by a white object.

Physical infrastructure

- Road administration cannot guarantee good state of roads.

- What's needed?



- Additional complexity:

- More than one road authority typically responsible for roads in a city

Q1. Which roads should be prioritised for making them automation ready?

Q2. How can the resources, (new) powers and technology be made available?



Digital infrastructure

Heterogeneity across cities in terms of readiness of digital infrastructure

Where infrastructure digitised, procedures for immediate updating often lacking

National action needed, eg, UK DfT-funded Traffic Regulation Order digitisation

EC ITS Directive also addressing this

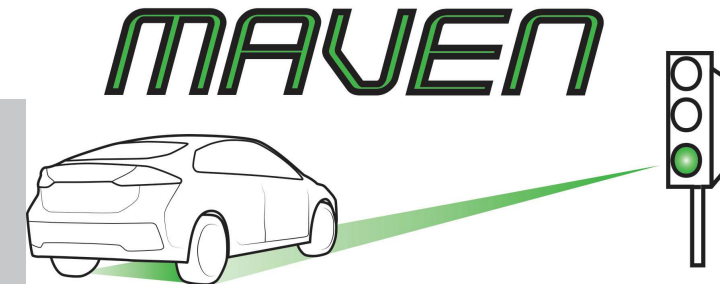
Key challenge for cities: financial, expertise/skills & processes needed

Traffic management in an increasingly automated system

H2020 MAVEN project is working on management regimes for highly automated vehicles at urban intersections and role of infrastructure & traffic manager

Main achievements:

- Extended messages sets to enable platooning and V2I
- Enhanced traffic control algorithms for CAVs
- Algorithms for forming and progressing a platoon
- Engagement with city/regional traffic managers about their role



INFRA-ASSISTED & INFRA-INITIATED USE CASES	
Traffic control optimization <ul style="list-style-type: none">➤ Signal optimization➤ Priority management➤ Queue estimation➤ Green wave	Platoon management <ul style="list-style-type: none">➤ Forming a platoon➤ Joining a platoon➤ Platoon progression➤ Leaving a platoon➤ Breaking a platoon
I2V interactions <ul style="list-style-type: none">➤ Negotiation (signal timing vs. vehicle arrival pattern)➤ Speed change advisory➤ Lane change advisory	Conventional traffic and VRUs <ul style="list-style-type: none">➤ Detection of non-cooperative vehicles➤ Vulnerable road users➤ Emergency situations



Traffic management in an increasingly automated system

AV-awareness for TM:

- understand need, urgency and system functionality
- Build understanding of use cases and their benefits (if any) in relation to existing approaches/technologies.
- Start reflection on changes to traffic management task and role of traffic manager
- Does city/regional authority have a policy on AVs?
- What if I do nothing?

AV-based TM planning/preparation:

Implementation



Traffic management in an increasingly automated system

Traffic management strategy assessment:

- How will cooperative perception and cooperative driving help me to do my job better as traffic manager
- Which use cases hold most value for my city/region? Will the benefit be greater if implemented together or can it be done incrementally?
- Which intersections/corridors should be prioritised?
- How will my role as traffic manager evolve?
- What influence will I have on vehicle movements as connected and automated motoring advances?

Organisational change assessment:

- Do TM staff have right knowledge and skills?
- How will the use cases affect existing TM procedures?
- New guidelines for vehicle guidance and control

Traffic management infrastructure assessment:

- Traffic signals readiness
- Additional infrastructure needed
- Integration with legacy systems, systems upgrading?

Digital data assessment:

- Digitise infrastructure – what, who and how?
- Provide access to traffic & infrastructure related data

Procurement

- Market readiness: is infra/systems on market already?
- When will equipped vehicles be there in sufficient numbers to justify action/investment?
- Procurement guidance

Business plan development:

What benefit will it bring?

How much will it cost and who will pay?

What if I do nothing?



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