

Enhancing intelligent urban road transport network and cooperative systems for highly automated vehicles

MAVEN expert group meeting

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Expert group meeting participants

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Richard Cuerden, TRL, UK

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Introduction

❑ Main objectives

- ✓ to validate the approach and results of MAVEN
- ✓ to gather input on some challenging and crucial topics

❑ Three topics

- ✓ validation and impact assessment (led by O. Pribyl)
- ✓ transition to the TM of CAV (led by S. Hoadley)
- ✓ management of CAV's in smart cities (led by J. Vreeswijk)

❑ Expected outcomes

- ✓ decisions on and agreement of solid approach for validation and impact assessment
- ✓ clarified and agreed scope, direction and next steps for transition roadmap and gap analysis
- ✓ common understanding on the wider management of CAVs in smart cities and contribution of MAVEN, and on how to operationalise use cases for unmanned logistics and service delivery

MAVEN



General information of MAVEN

- ❑ MAVEN - Managing Automated Vehicles Enhances Network
www.maven-its.eu
- ❑ Project period: 36M (01-09-2016 to 31-08-2019)
- ❑ Funded by EC Horizon2020 RIA with budget EUR 3 mil.
- ❑ Main objectives
 - ✓ develop mgt. regimes for highly automated driving in urban areas
 - ✓ ICT infra will monitor, support and orchestrate vehicle and VRU movements to guide vehicles at signalized intersections and corridors
 - ✓ enhancement for ADAS and C-ITS applications (e.g. safety with collective perception; efficiency by exploiting possibilities of AD driving)

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HYUNDAI
MOTOR GROUP

MAP >>>
TRAFFIC MANAGEMENT

tomtom

POLIS
CITIES AND REGIONS FOR
TRANSPORT INNOVATION



Gemeente Helmond



ROYAL borough of
GREENWICH

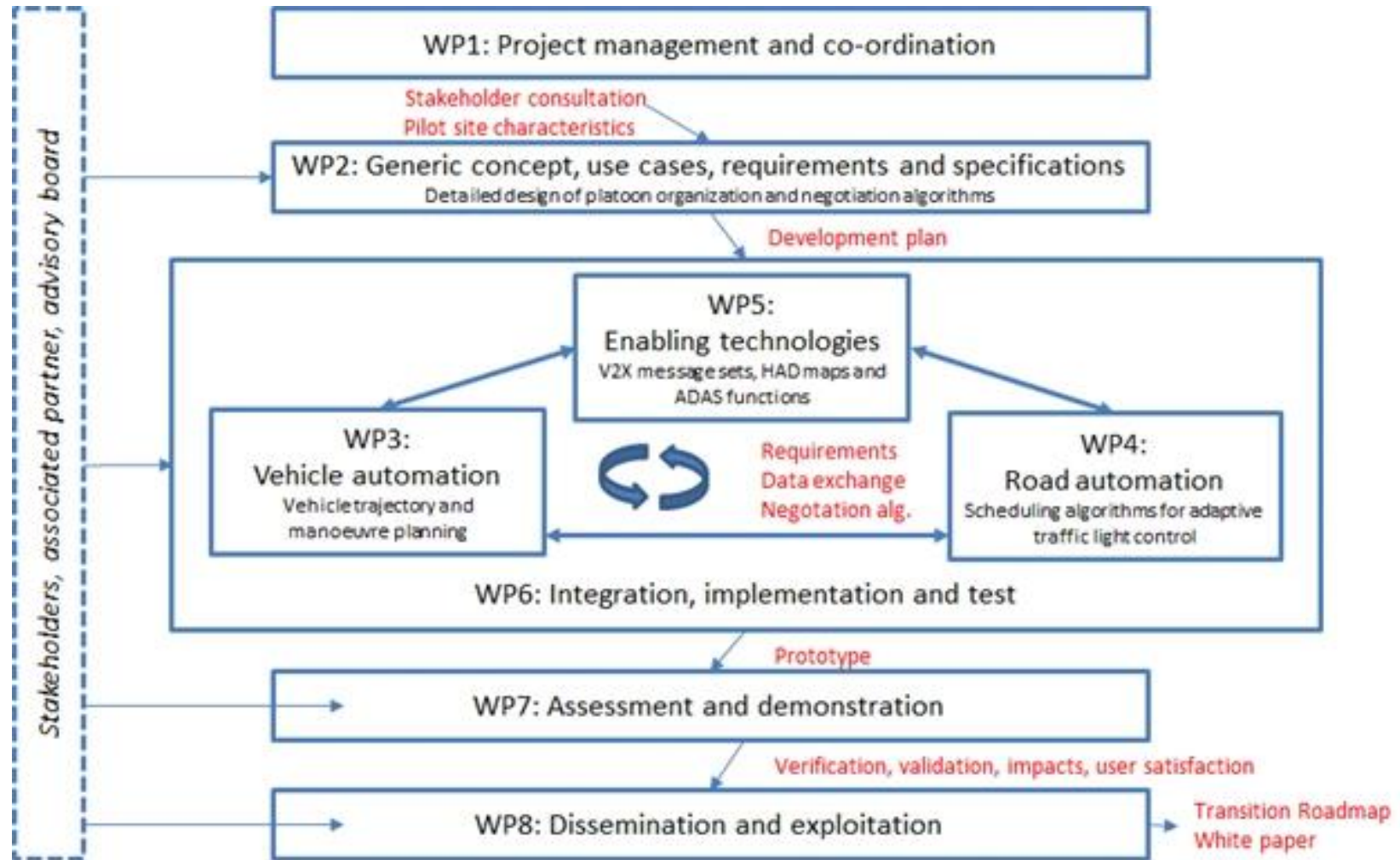
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MAVEN approach



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MAVEN use cases

Platoon management

UC1: Platoon initialisation

UC2: Joining a platoon

UC3: Travelling in a platoon

UC4: Leaving a platoon

UC5: Platoon break-up

UC6: Platoon termination

Longitudinal and lateral management

UC7: Speed change advisory (GLOSA - Green Light Optimal Speed Advisory)

UC8: Lane change advisory

UC9: Emergency situations

Signal optimisation

UC10: Priority management

UC11: Queue length estimation

UC12: Local level routing

UC13: Network coordination – green wave

UC14: Signal optimisation

Intersection and other road user management

UC15: Intersection negotiation

UC16: Detect non-cooperative road users

