AUTONOMOUS VEHICLES:
Challenges and Hope for future

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INTRODUCTION

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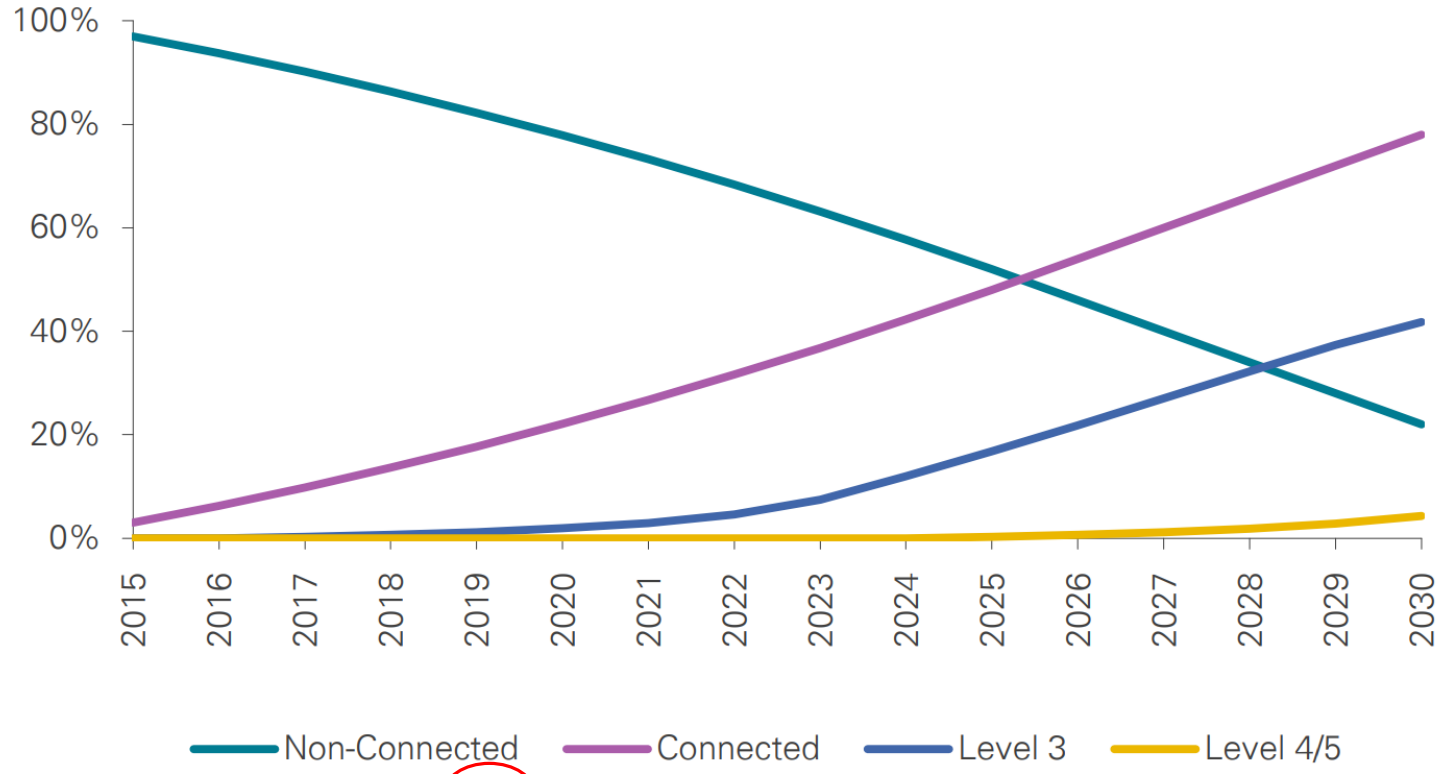

Source: KPMG analysis based on IHS (2015) estimates and publicly available information from GSMA (2014), Ofgem, MobileSquared and RAC Foundation (2008).

I think we are slightly behind schedule…

WHAT ARE THE CHALLENGES?

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Challenge area	Challenge deffinition
Social	Demand, Safety, Reaction/acceptance of users and the public, Trust, Safety, Accessability, etc…
Technological	Mission planning, Localisation, Trajectory planning, Cybersecurity, Communications, Digital Infrastructure, etc…
Political	Fit with overall transport policy, Need for regulation
Economic	Charging models, Insurance models, Impact on established industry sectors, Business models, Changing carownership models, Benefits
Environmental	Energy use, Emissions, Network optimisation (empty vehicles), Impact on congestion
Legal	Liability issues, Global standartisation, Safety standards, Data ownership

IS THE FUTURE ANYWHERE NEAR?

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- Systems of increasing sophistication in the AV sector are in development
- Ultimately it could be that no infrastructure is needed, as AV's can visually interpret environment as humans do, and "learn" to drive like humans
- Certain infrastructure may not be absolutely necessary, but could enhance reliability and operation.
- Car makers traditionally have developed vehicles without much collaboration with road authorities and other stakeholders (such as telecommunication companies). **This will have to change.**
- The Theory of Social Practice suggests that, you need to bring together materials, competence and meanings in order for social change to be accepted. New materials for example will defiantly affect not only the design of vehicles, but roads as well, and will impact to a **NEW OPERATION AND DESIGN PHILOSOPHY**

Thank you for attention!

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