



Future of Mobility

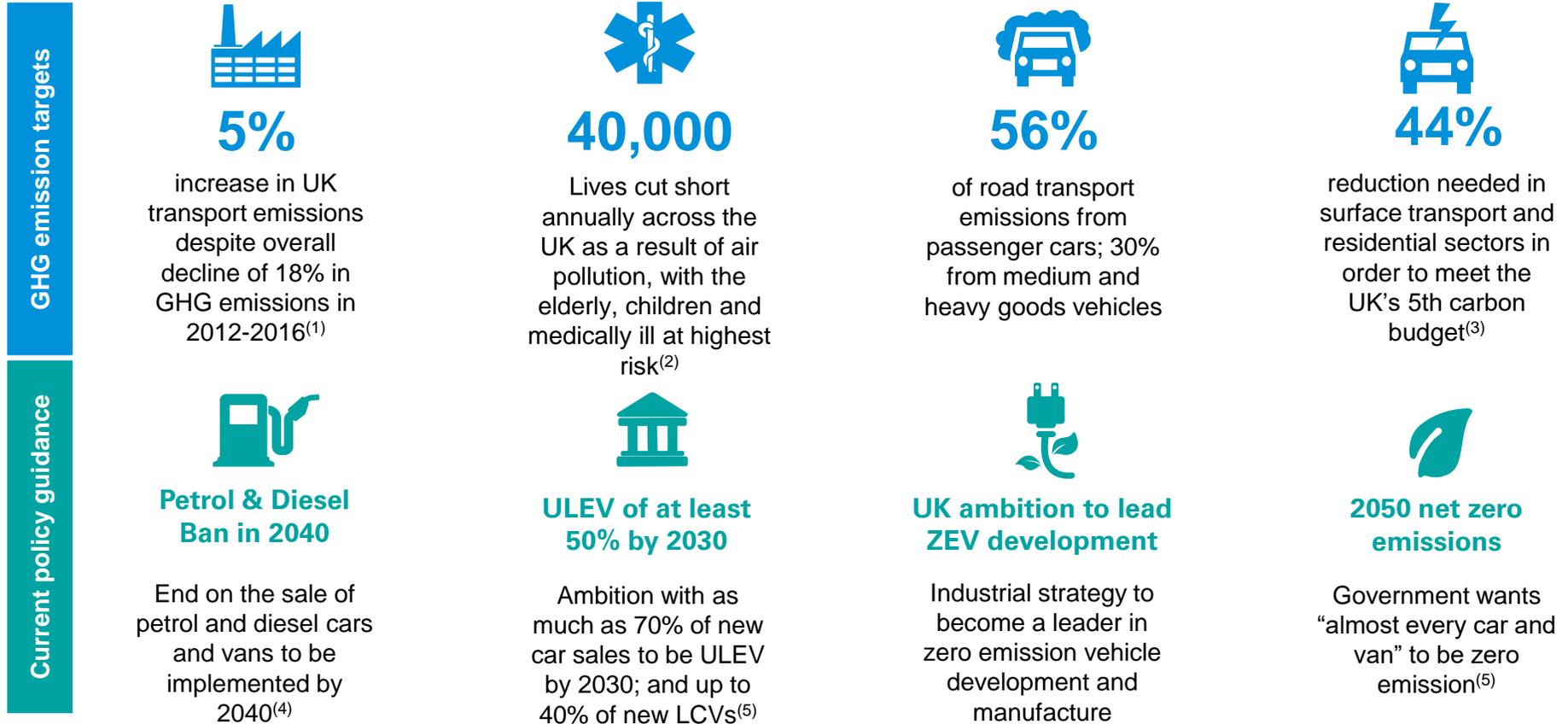
Low Carbon Vehicle Partnership

Presentation by Christoph Domke & Natasha Patel

12 July 2018

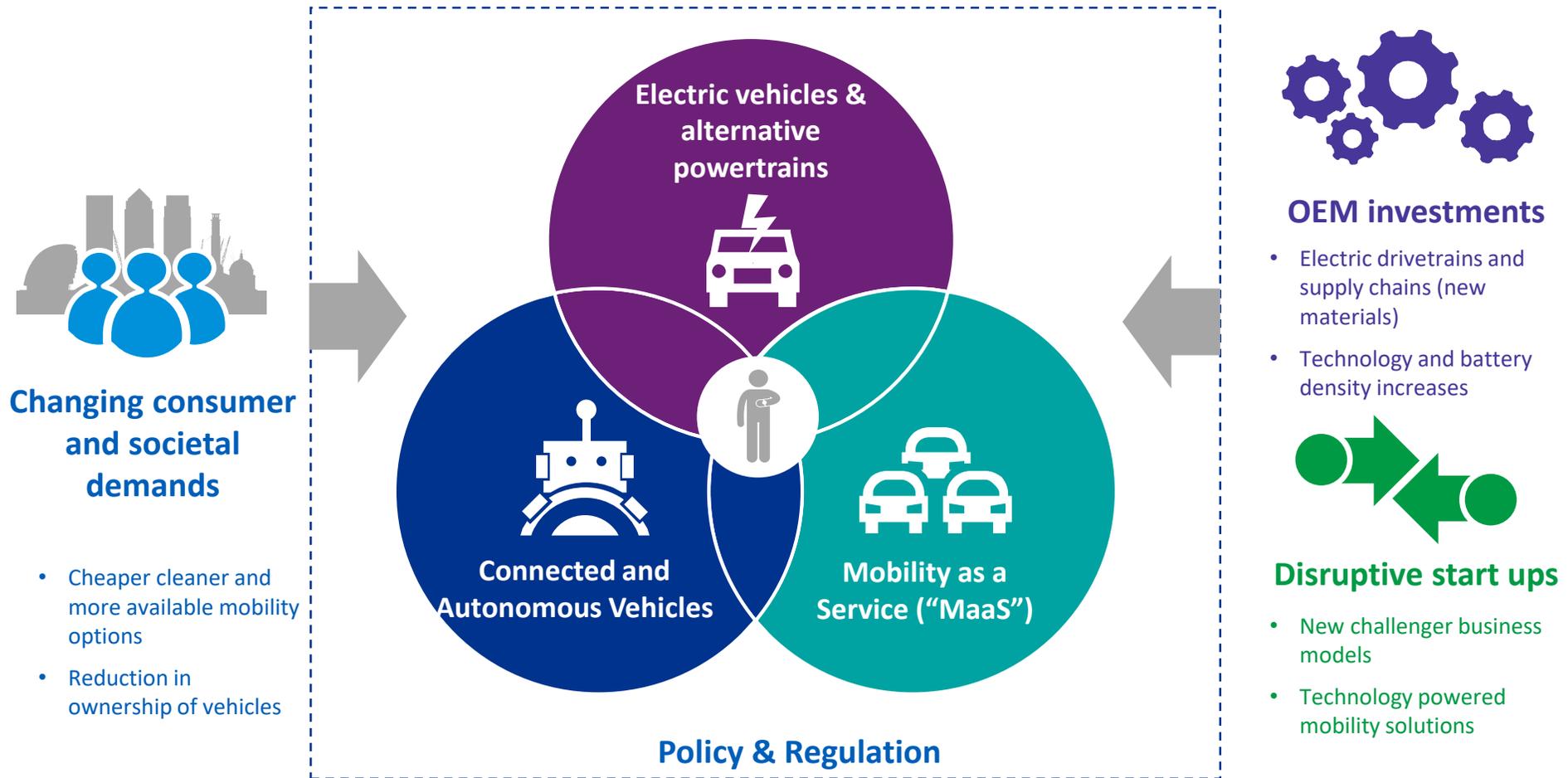


The rise in UK's transport emissions needs to be reversed

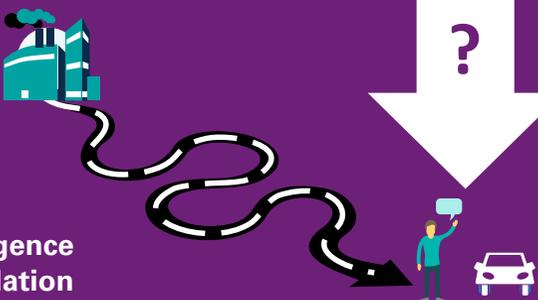


Source(s): (1) European Environmental Agency (2) Improving Air Quality, House of Commons, 4th Report of Environment, Food, and Rural Affairs Committee (3) National Statistics: UK Department for BEIS (3) Carbon Brief spring budget 2017 (4) Department of Transport; Gov.uk (5) Road to Zero, HM Government

Three main disruptive forces will fundamentally transform how people and goods move in the future



Mobility is one of the most interconnected global mega-trends and will have far reaching implications across sectors

<p>Industry execs believe that....</p> <p>Up to 50%</p> <p>...of consumers will not want to own a car, as new mobility services begin to meet consumer needs</p> 	<p>Passenger miles travelled will increase....</p> <p>Up to 10%</p> <p>...following the growth of the mega-city and their suburbs</p> 	<p>Cost per mile could go down...</p> <p>Up to 40%</p> <p>...due to removing the driver cost, longer vehicle lives, new energy sources, technologies and mobility scaling</p> 
<p>5x</p> <p>Miles per vehicle could increase....</p> <p>...as fleet services use vehicles more efficiently</p> 	<p>The number of major ecosystem players will decline...</p> <p>...as sector convergence leads to consolidation</p> <p>?</p> 	

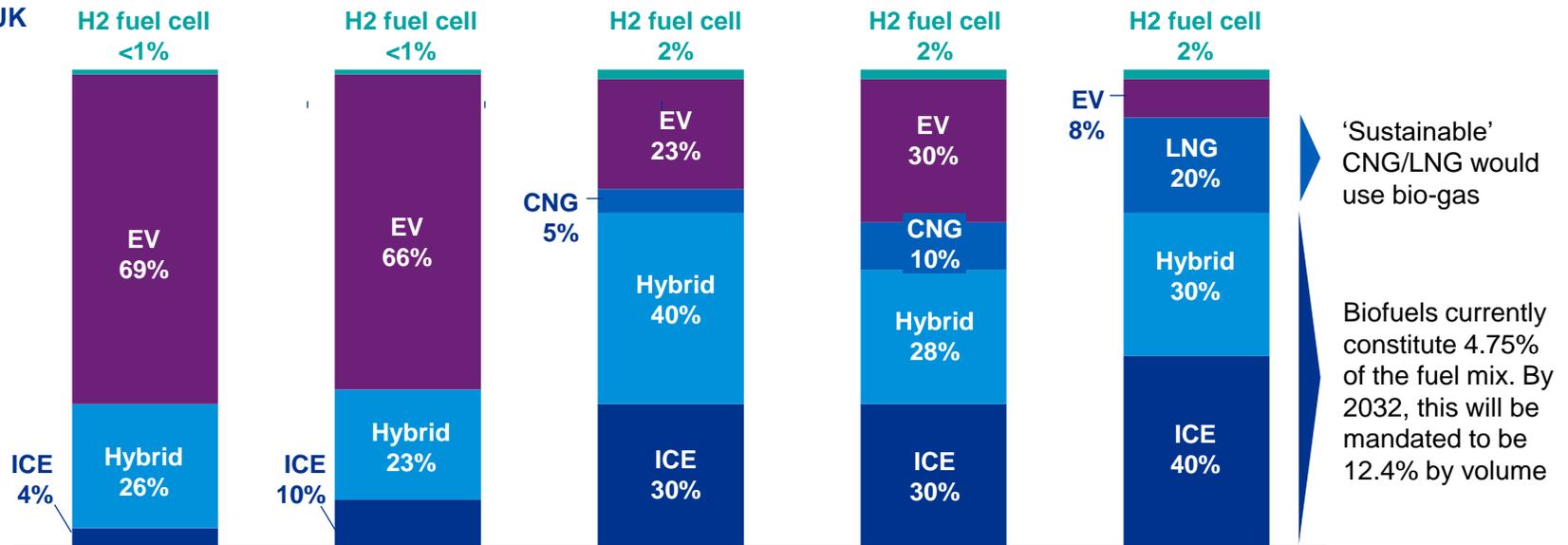
Mobility represents a £50-100bn opportunity for the UK economy alone^(a), and will have far-reaching implications across sectors

Note: (a) Estimated annual boost to UK GDP by 2030 from CAVs. Includes value of consumers' time freed up during travel, value of more efficient journeys contributing to productivity and the value to UK industry from new revenue streams
Source(s): Department for Transport, KPMG Global Auto Executive Survey 2017, KPMG UK Mobility 2030 analysis, SMMT Connected and Autonomous Vehicles 2015

By 2030, electrification will dominate in lighter vehicles, with a plural fuel mix for medium/heavy vehicles

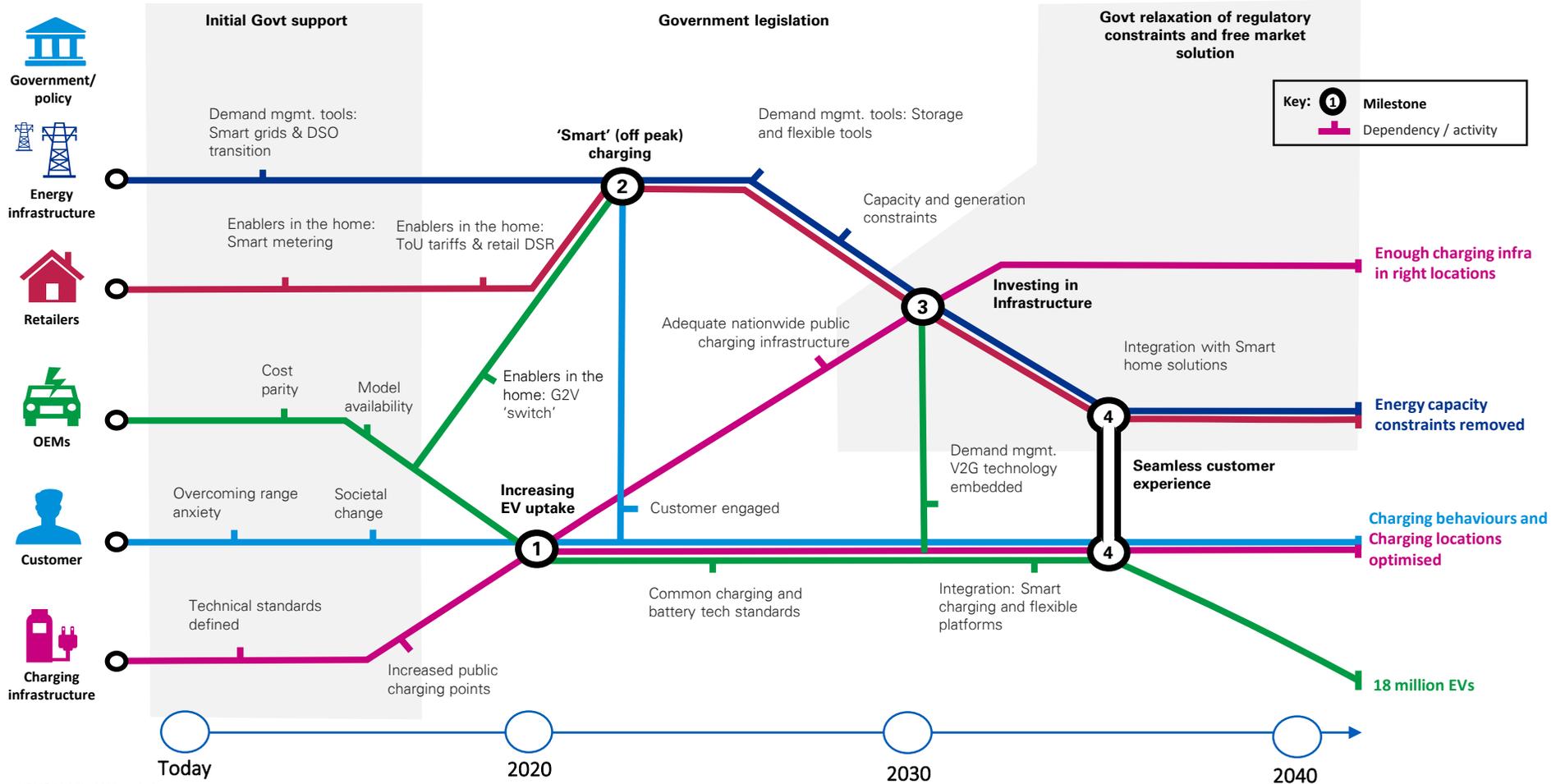
2030	Passenger Cars	LCV	Bus & Coach	MCVs	HGVs
					
Total parc	32m	4m	75k	180k	375k
ULEV or low carbon % of parc	20%	25%	10%	14%	6%

Market share - UK sales % by drivetrain type



Notes: (1) Commercial vehicle classes defined by weight as: 3.5t (LCV); 3.5t-16t (Bus); 3.5t-16t (MCV); >16t (HGV); >40t (Gigaliner)
 (2) Hybrid is non plug-in electric hybrid. (2) H2 Fuel Cells convert H2 to electricity in the vehicle. (3) EVs include BEVs and PHEVs only. (4) ICE include all vehicles using either petrolfuels or biofuels.
 Source(s): (1) National Statistics; UK Department for BEIS (2) KPMG Mobility 2030 analysis (3) International Council on Clean Transport (4) SMMT (5) ACEA (6) TIL

Achieving the 2040 EV vision will be complex and will require convergence and collaboration across the Ecosystem



Source: KPMG Mobility 2030 analysis

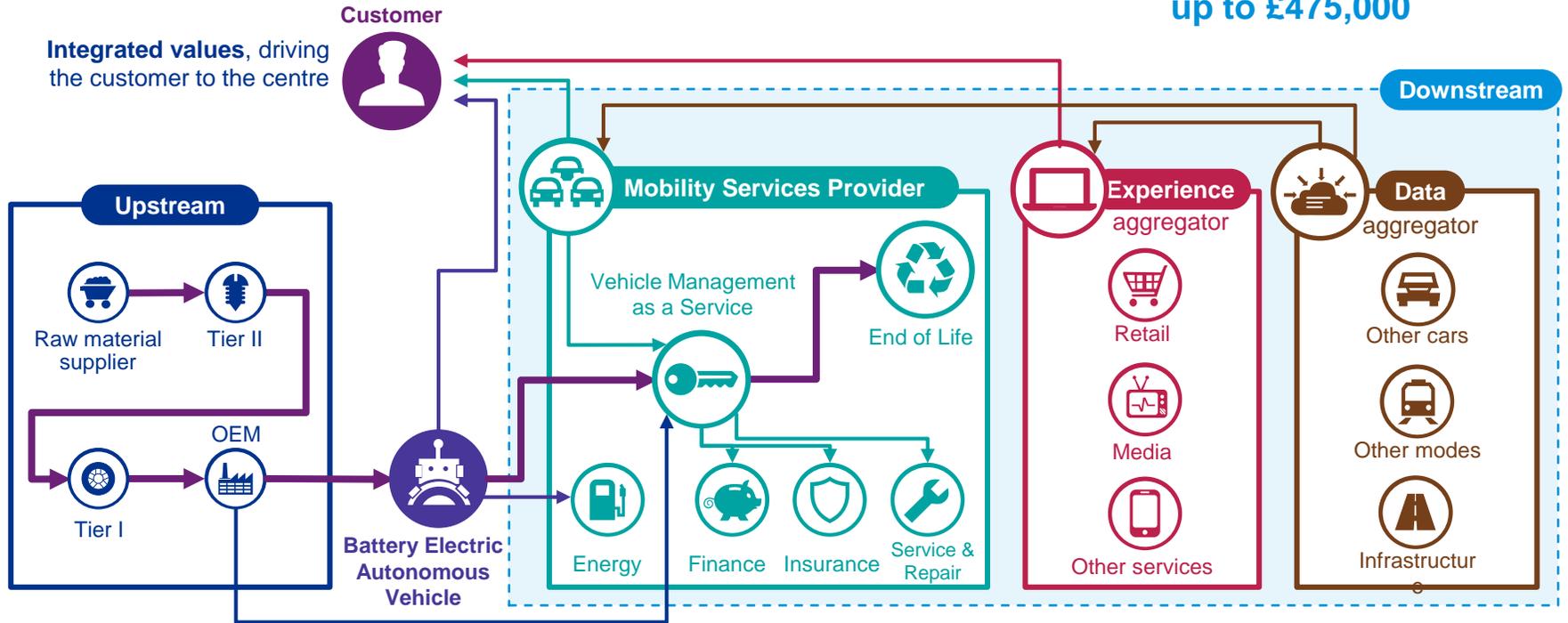


The value derived in 2030 will be weighted towards the downstream with aggregators providing seamless services

2030 scenario Revenues associated with a EV, AV, MaaS vehicle over a 10 year period, where mobility service providers and integrators aggregate services for consumers

Upstream £25,000

Downstream £275,000 up to £475,000



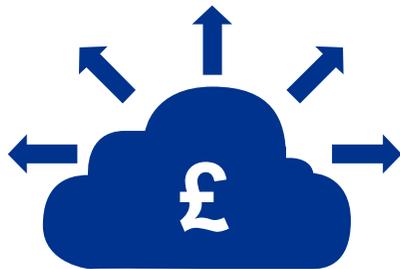
Source: KPMG UK Mobility 2030 analysis



Three key implications to reflect on...

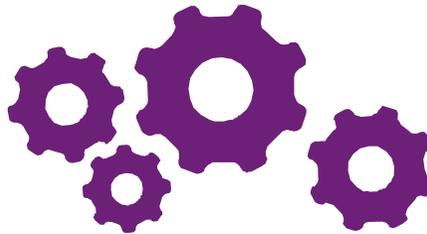
1

Explosion in value and investment activity (across all parts of the value chain)



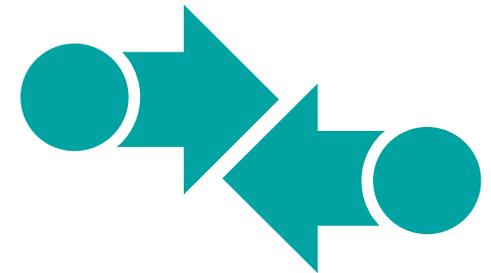
2

New business model concepts are emerging...



3

...frequently requiring new collaboration and partnerships





Thank you



Christoph Domke

Director
Mobility 2030

KPMG LLP
15 Canada Square
London, UK E14 5GL

M: +44 (0) 7557 179 843
E: Christoph.Domke@KPMG.co.uk



Natasha Patel

Associate Director
Mobility 2030

KPMG LLP
15 Canada Square
London, UK E14 5GL

M: +44 (0) 7824 605 340
E: Natasha.Patel@KPMG.co.uk