



Road Safety Markings: Improving the driver experience and making roads safer

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About Us



- Established in 1976, the RSMA represents & supports its members and the industry, promoting the importance of road markings for a safe and effective road network
- Discussion base for training and standards, including health & safety of operatives, and training operatives through the Specialist Applied Skills Programme
- Represents circa 90% of the road marking industry by volume



Where have we been?



Where have we been?



New York, start of C20



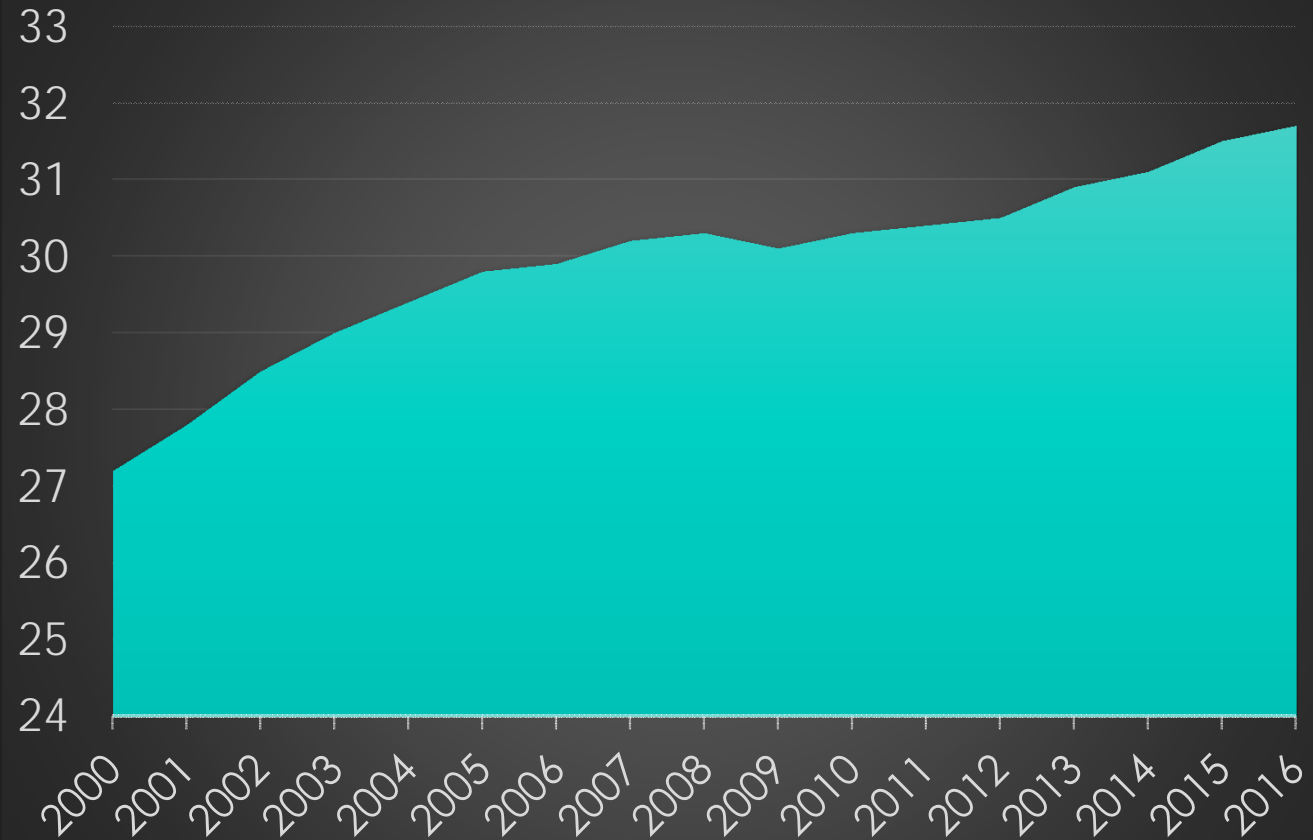
New York, 1913



Where have we been?



Cars on the road
in the UK





Risks



- Road Quality
- Funding
- Contractor Quality
- Older Drivers





Road Quality



ALARM Survey

- Highways maintenance backlog
- Reactive approach to maintenance
- Huge shortfall in funding





Funding



Local Authority Funding

- Estimated catch-up cost
£12bn
- 12year maintenance
backlog
- Planned pothole filling: £49
- Reactive pothole filling:
£72



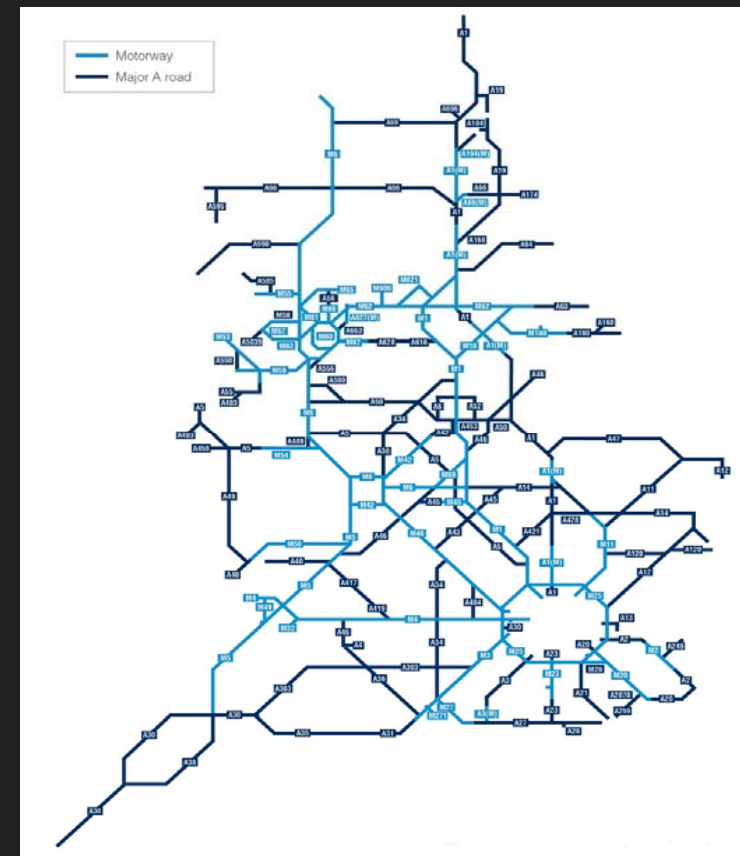


Funding



Highways England Funding:

- Huge gulf between LA/HE
- £15bn investment between 2015-20
- Over 100 major schemes
- Additional 1,300 lane miles





Quality Contractors



- Bespoke integrated management schemes within an ISO9001 framework
- Emphasis on health, safety and quality
- Requirement for HE network
- Utilised in many LAs but not mandatory
- Benefits would be felt across the highways network
- Driver and precursor to success

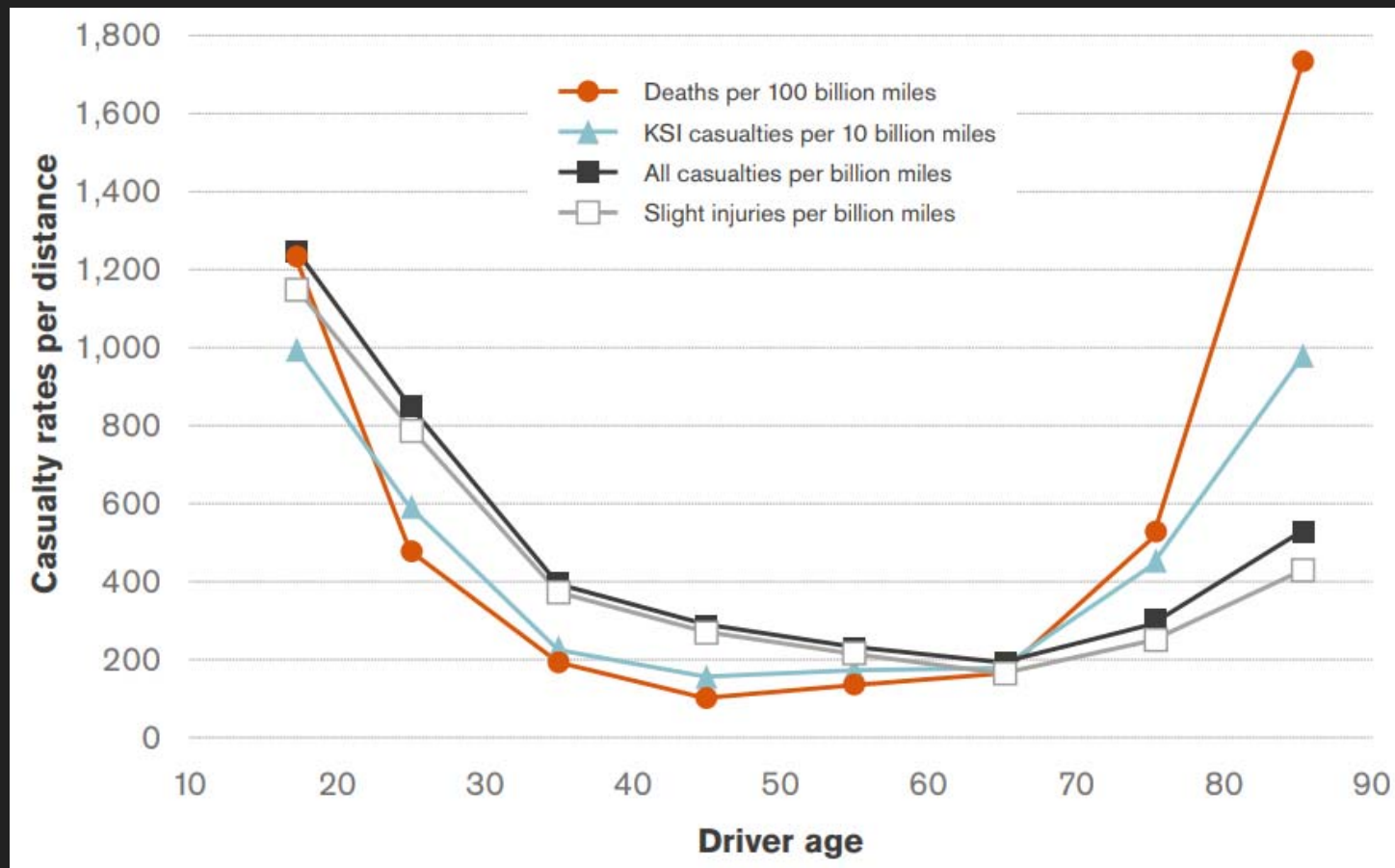




Older Drivers



“ in almost every area of activity involving older drivers more needs to be done to help them ”





Older Drivers



- Drivers aged 85+ expected to surpass 1 million by 2025
- Difficulty navigating complex driving situations, reduced ability to judge and adapt to speed
- Vision, reaction times and skills in executing manoeuvres decline with age
- Eye conditions/diseases, such as cataracts or glaucoma more common as age increases above 70
- Less likely to adopt and embrace new technology, e.g. autonomy



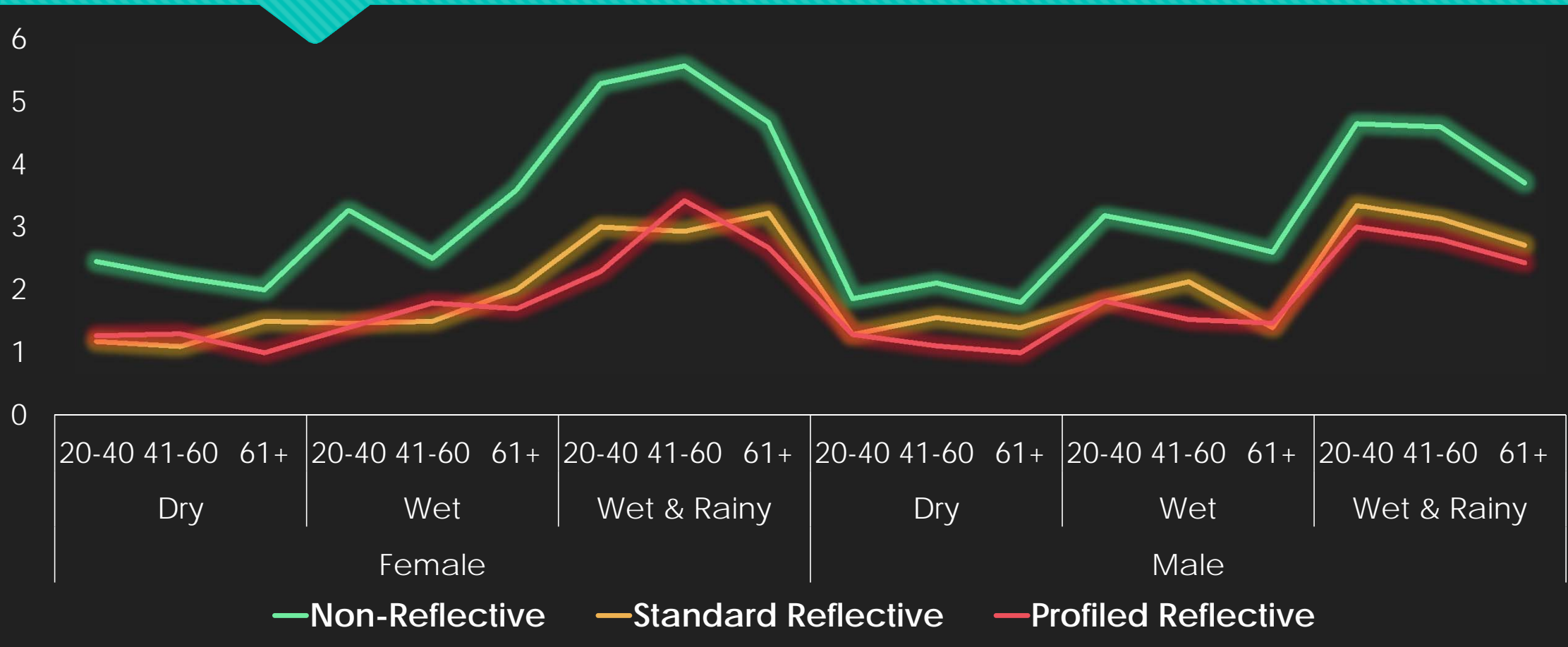


Rainvision



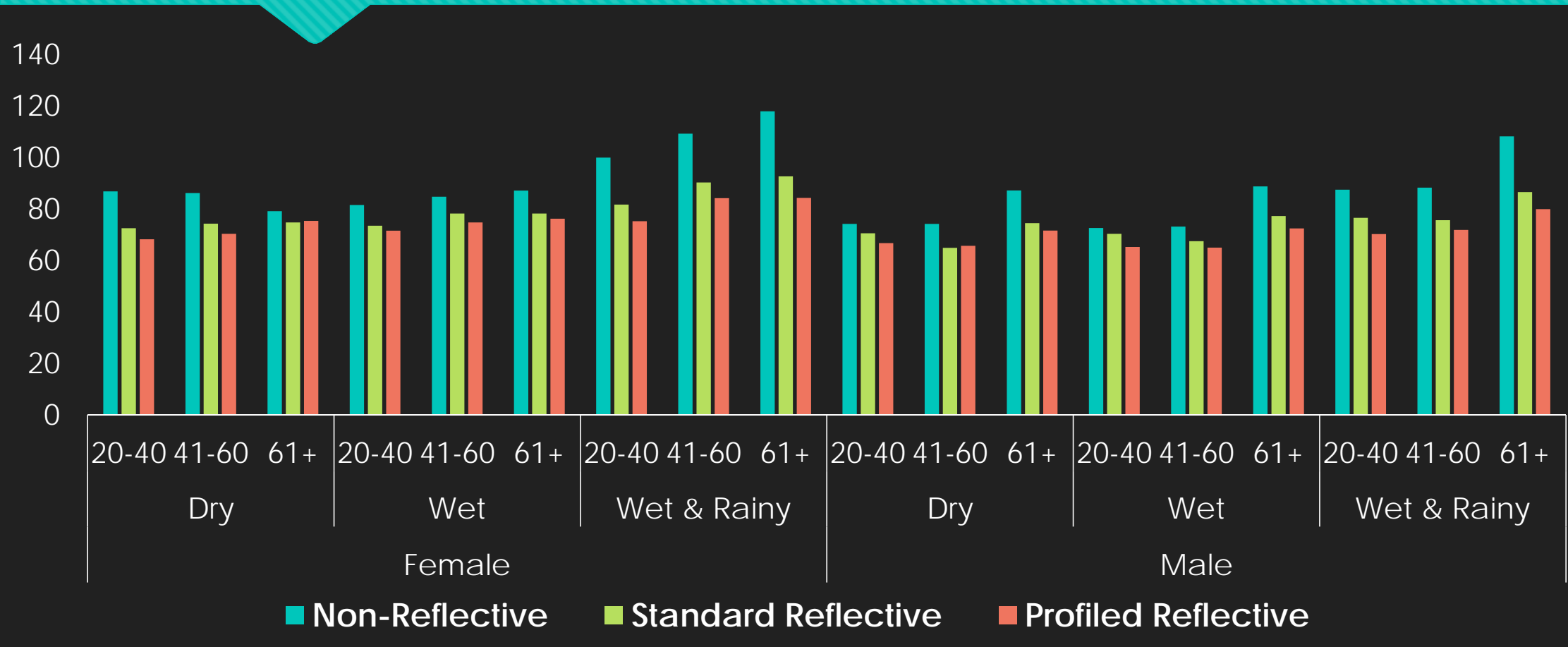


Rainvision





Rainvision

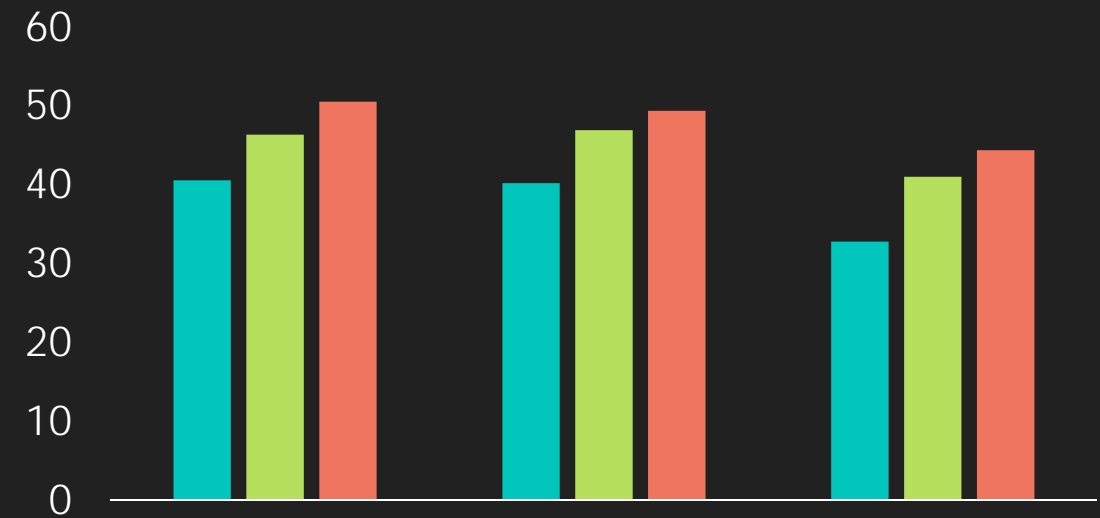
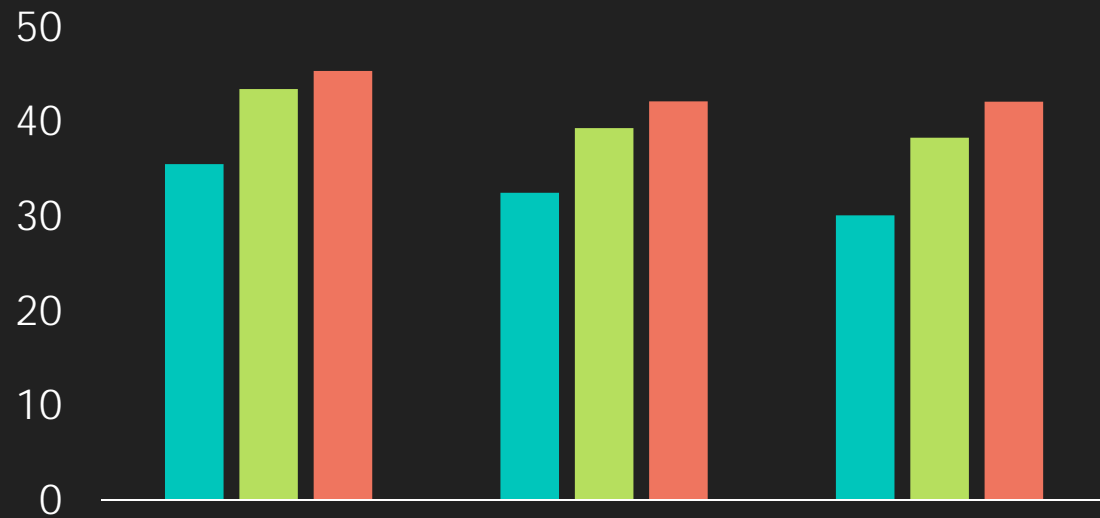




Rainvision

Female - Wet & Rainy

Male - Wet & Rainy



- Non-ref Female (km/h)
- Std ref Female (km/h)
- Pro-ref Female (km/h)

- Non-ref Male (km/h)
- Std Ref Male (km/h)
- Pro-ref Male (km/h)



Autonomy

History of Autonomous Vehicles

1948 Modern cruise control invented

1966 Mechanical antilock braking installed in a standard production car, the British Jensen FF

1968 Electronic cruise control invented

1987 Electronic stability control invented by BMW, Bosch, and Mercedes

1995 Mitsubishi Diamante introduces laser-based adaptive cruise control

2012 Nevada offers licenses for autonomous cars

2010 Google Car debuts. It takes a blind man for tacos

2007 DARPA's third driverless-car competition, the DARPA Urban Challenge



2001 Nissan Cima introduces lane-departure warning system

2014 NHTSA issues draft of proposed rule making for autonomous driving



2013 Mercedes "Bertha" AG takes itself on a road trip. Mercedes S-Class gets highway autonomy (but requires attentive driver as a backup)

2025 Fully autonomous cars (with driver backup) tested

2003 Toyota Harrier comes with precrash mitigation system

2018-2019 Expected launch of first vehicles with vehicle-to-vehicle and vehicle-to-infrastructure communication



2020 Limited self-driving expected to begin, starting with traffic-jam assist

2030 Fully autonomous cars (with no driver backup)



2032 Half of all new cars are autonomous



Autonomy Today



- Lane Departure Warning Systems
- Lane Keep Assist
- Braking Assist
- Dynamic Cruise Control
- Autonomous Parking





Autonomous Cars



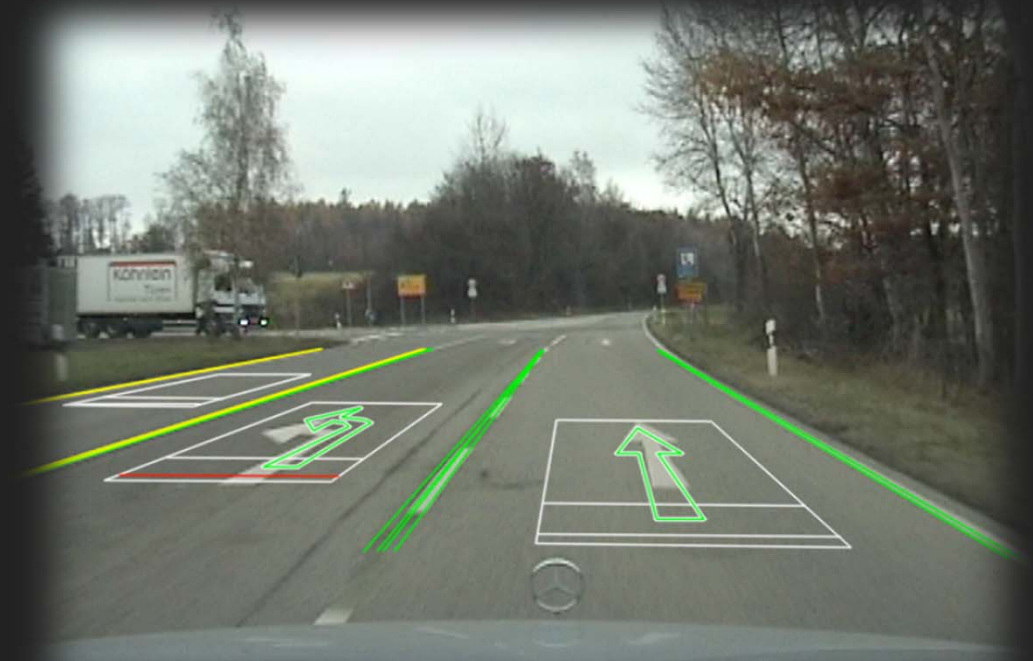
Level 1: Assisted

Level 2: Partial Automation

Level 3: Conditional Automation

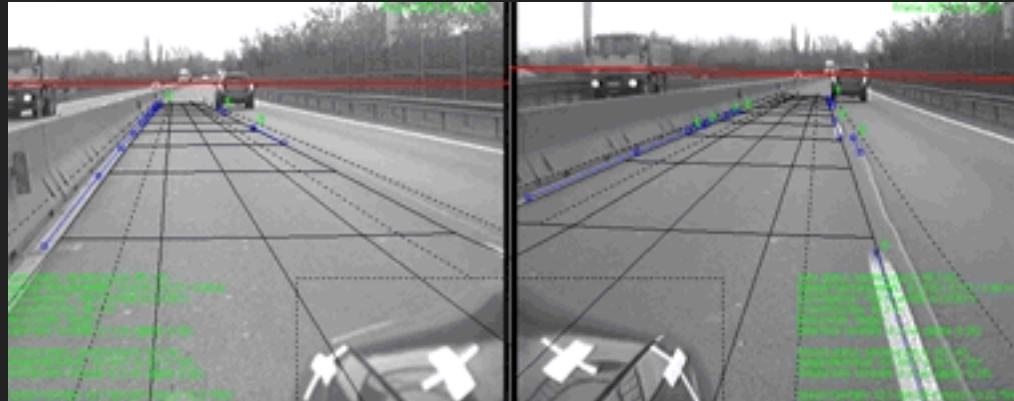
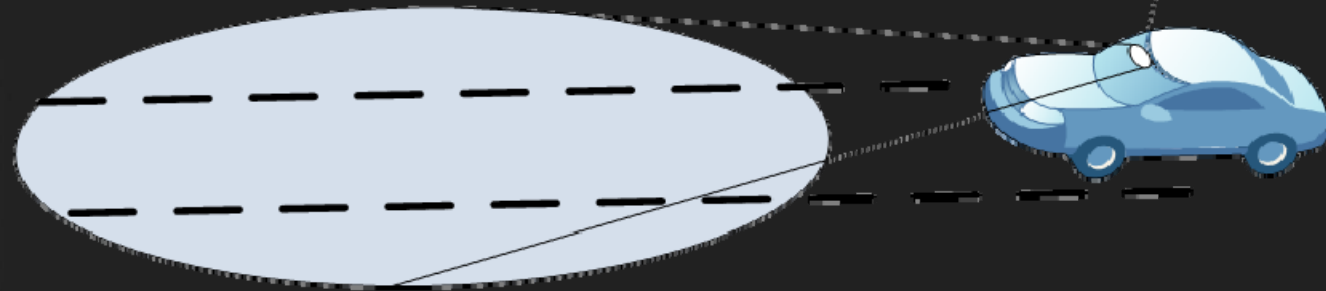
Level 4: High Automation

Level 5: Full Automation



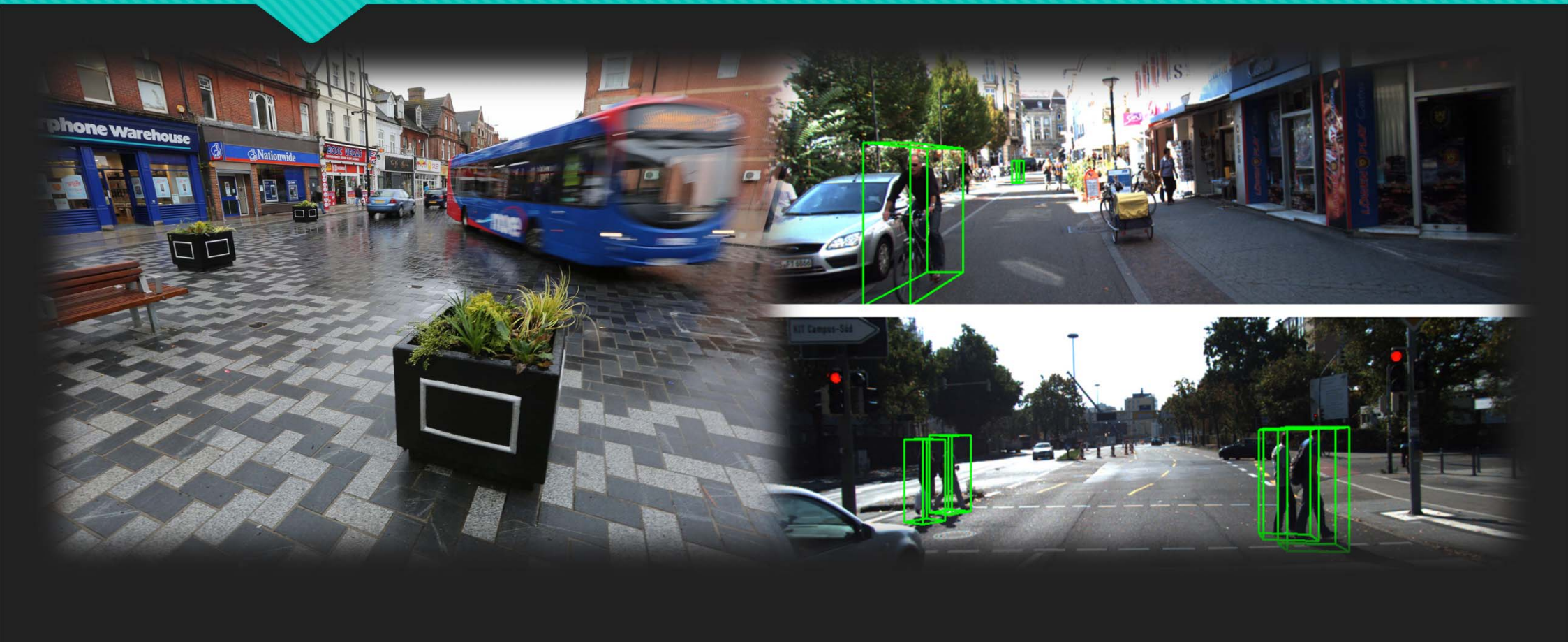


Reading the Marking





Shared Space



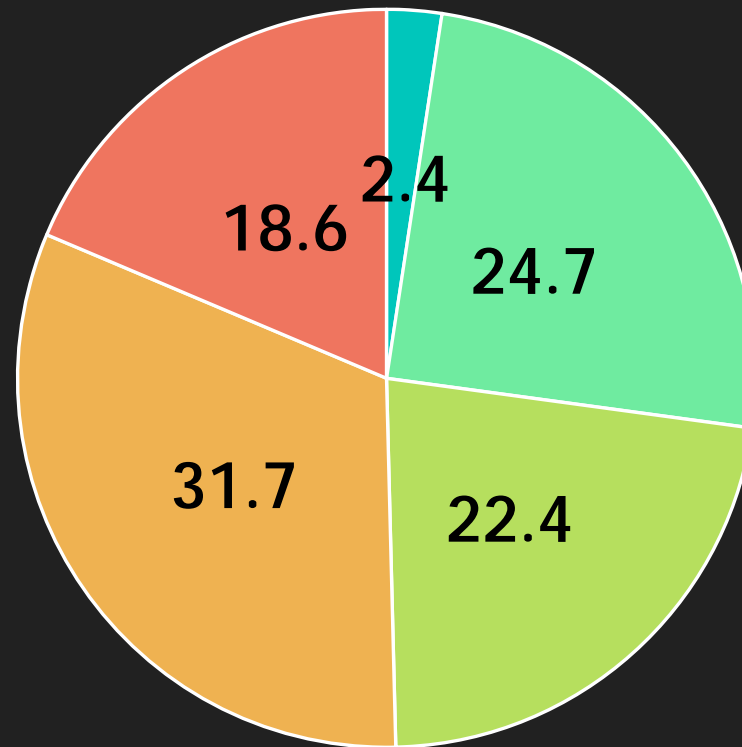


Lifelines



Summary of Lines (2015)

- Worn/Missing (%)
- <80mcd (%)
- 80 <100mcd (%)
- $\geq 100 < 150$ mcd (%)
- ≥ 150 mcd (%)



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