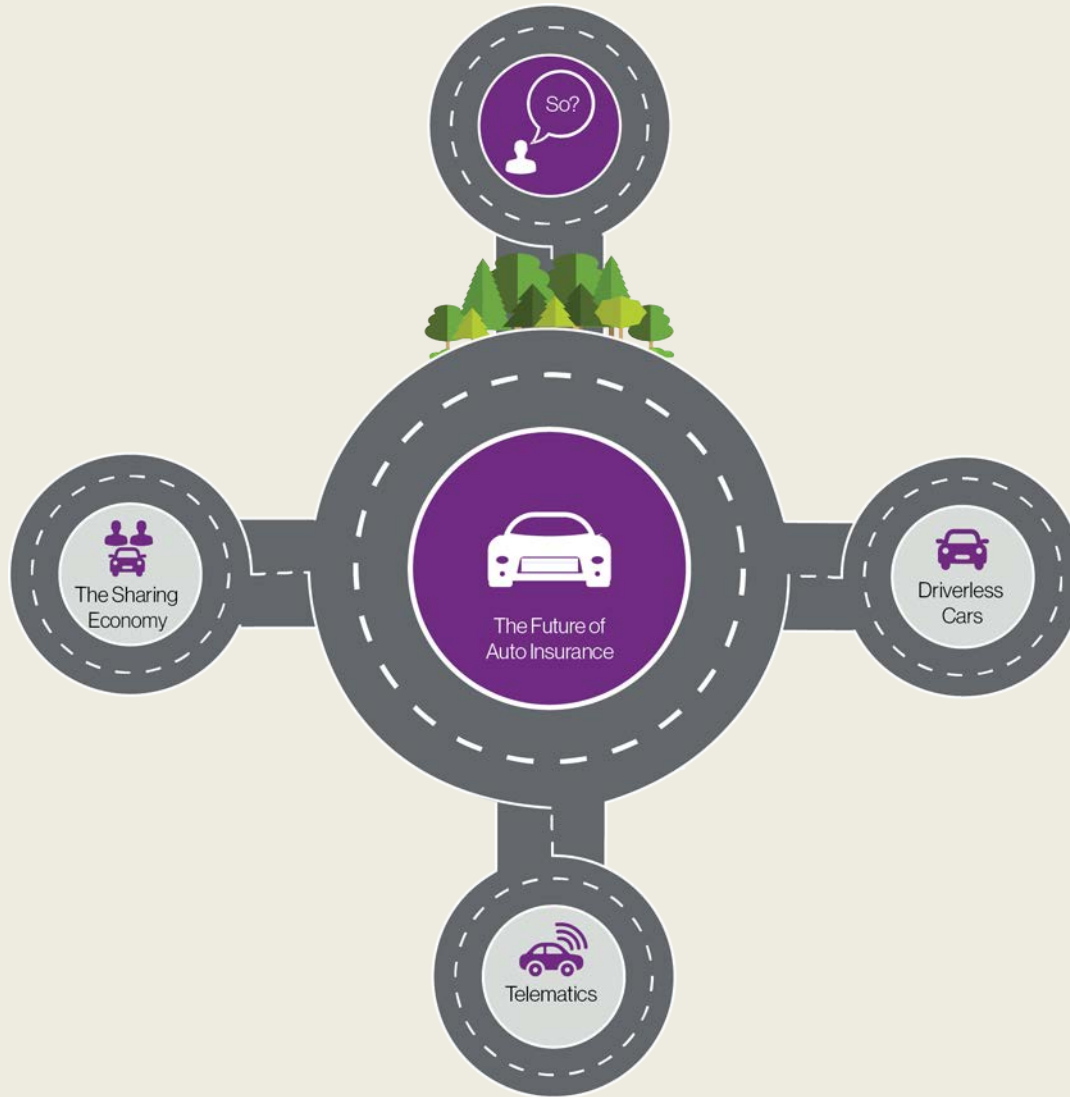


# How Technology Changes Will Impact The Auto Insurance Industry

Tammy Chen, Consultant

March 2016

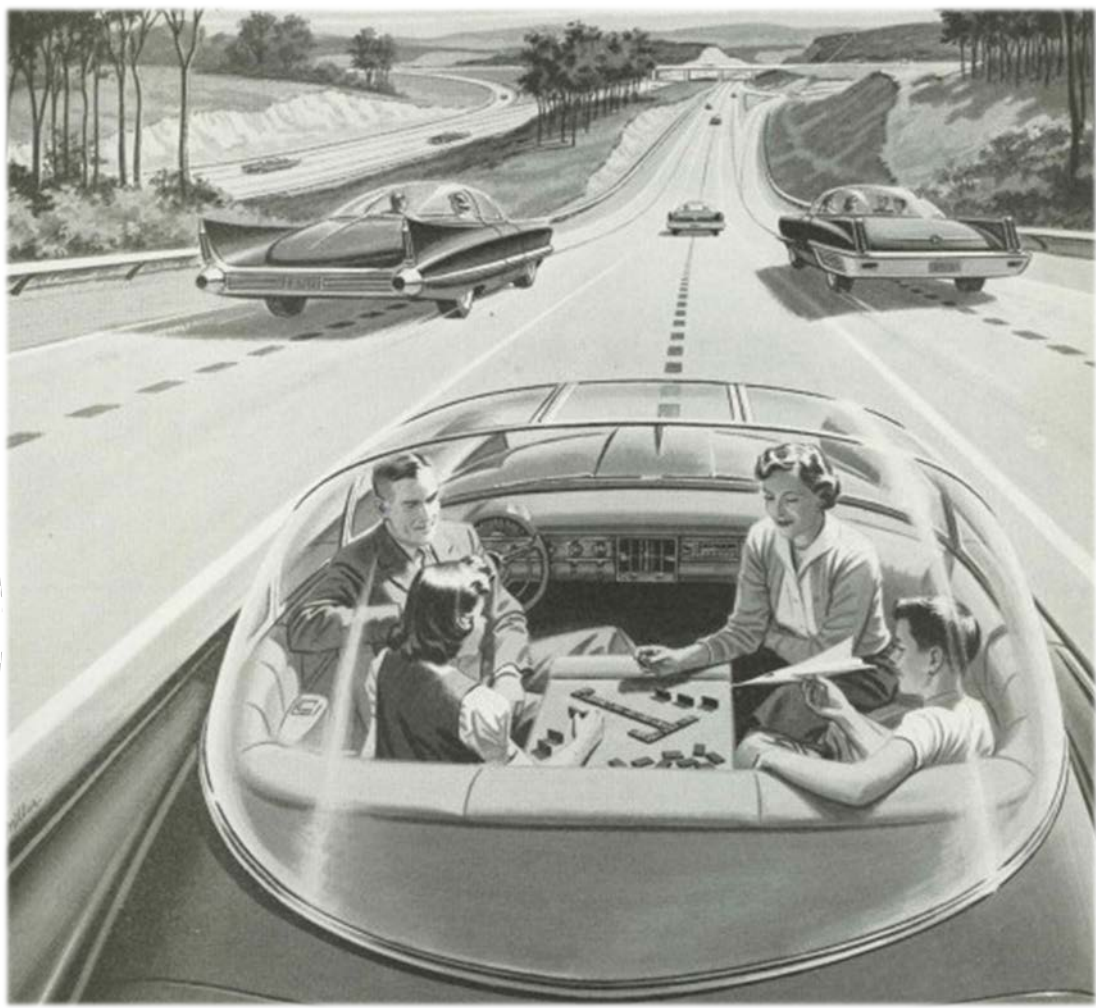
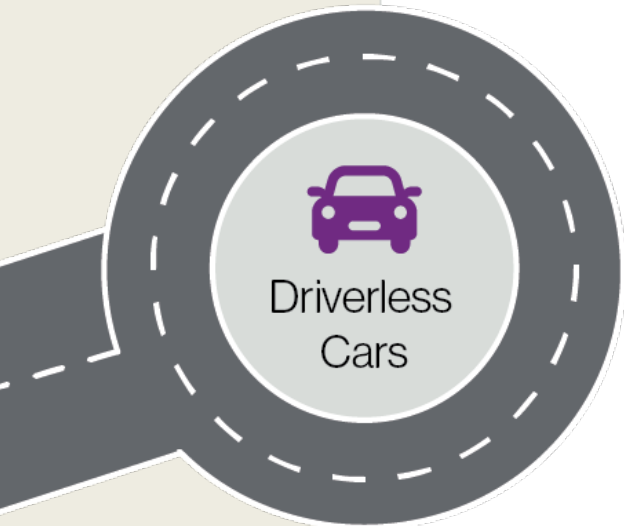


# Meet the Mercedes F 015



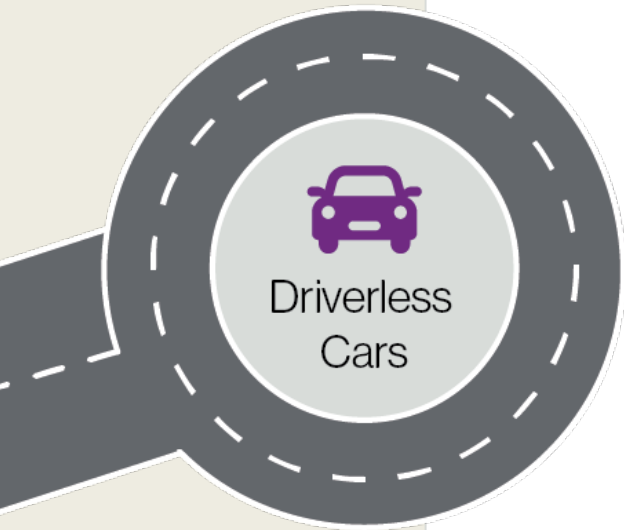
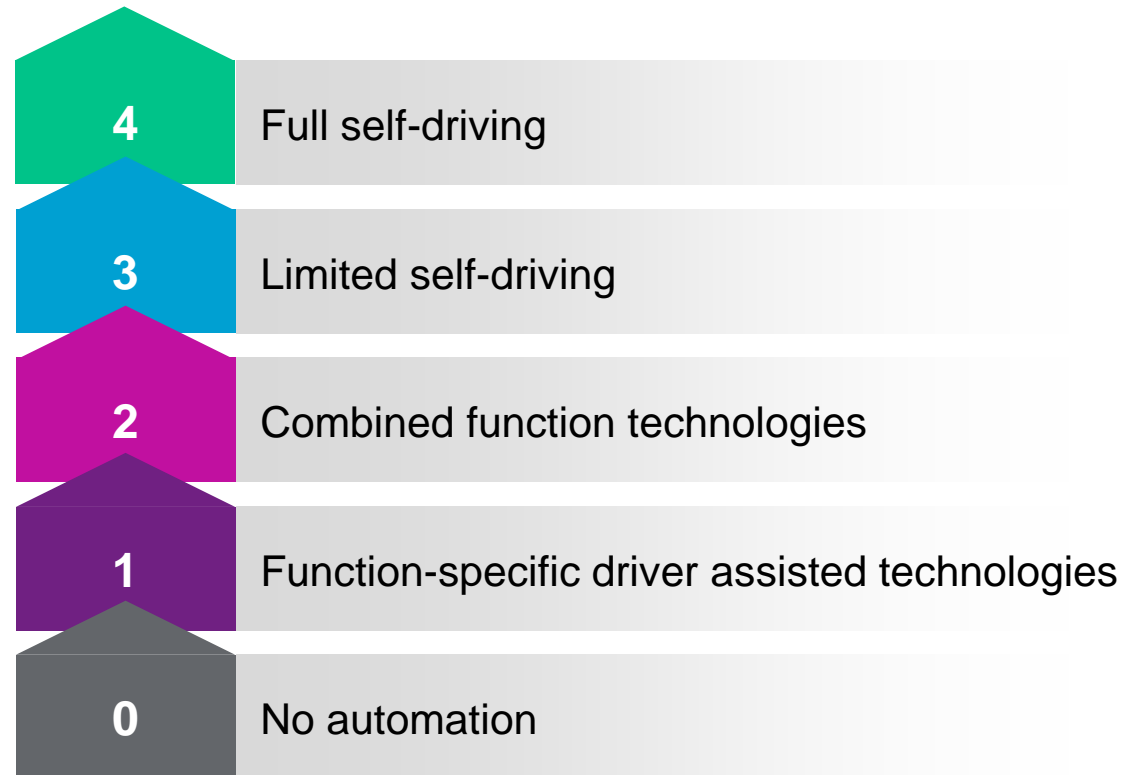
Driverless  
Cars





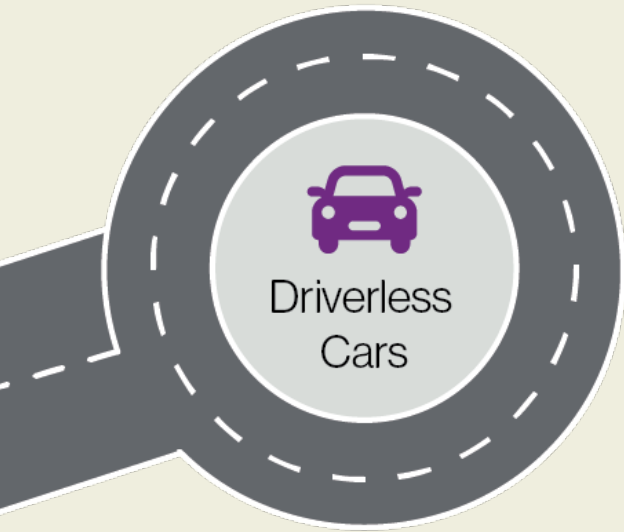


## Levels of vehicle automation (NHTSA)





# Autonomous car features



Self-driving

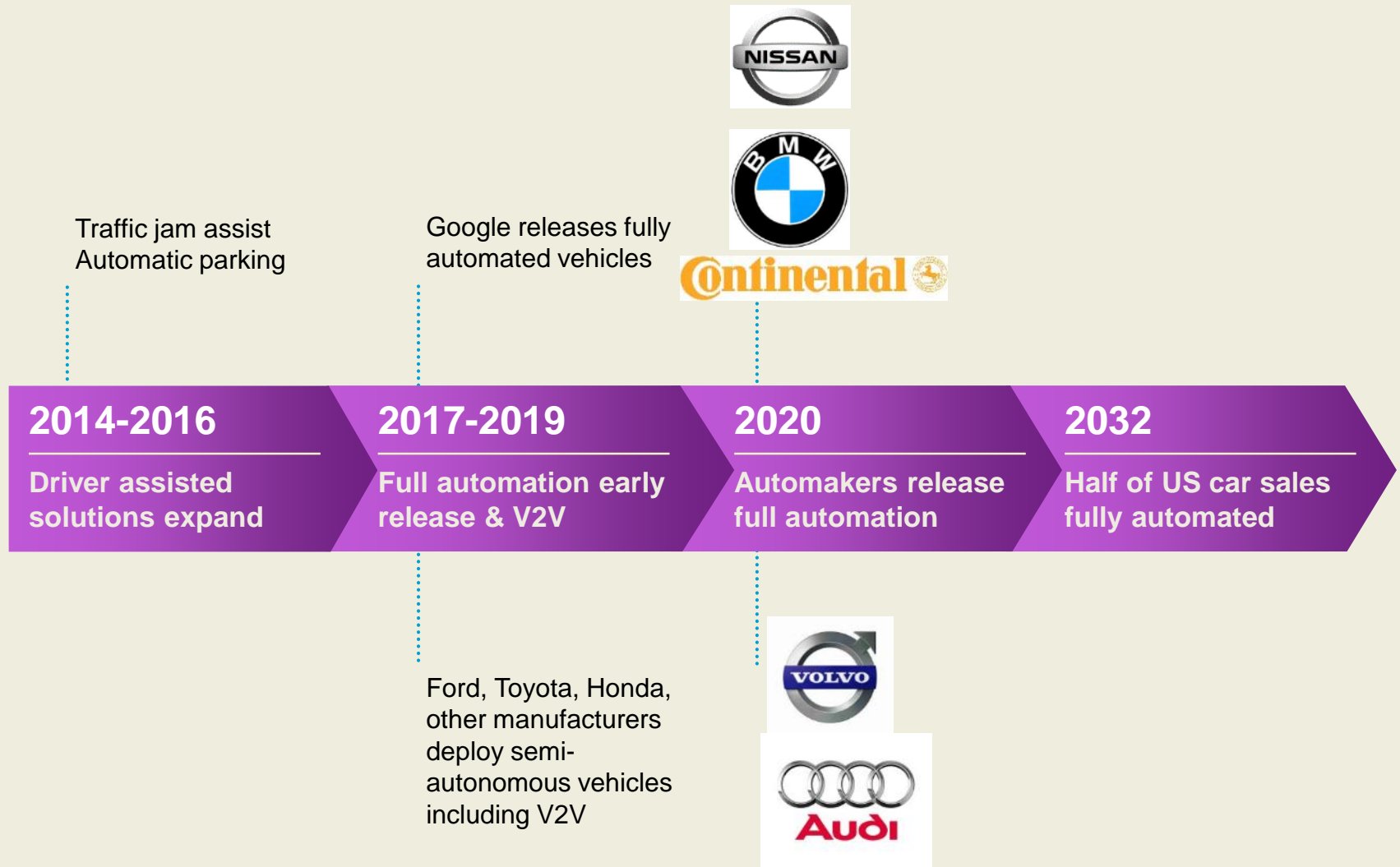
Connected

Shared





# Predictions



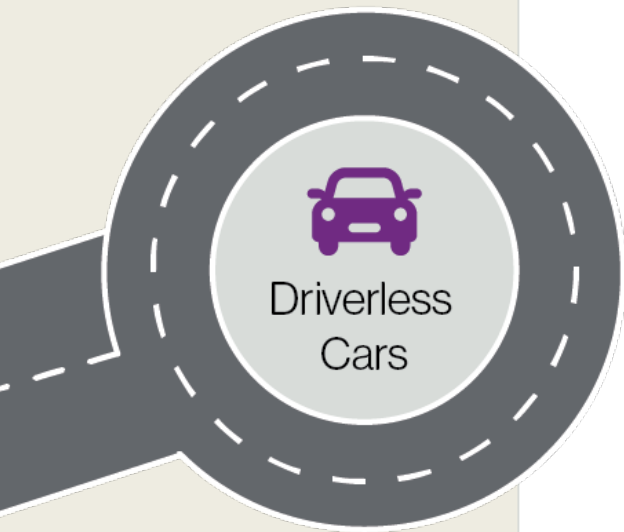




## Insurance implications: Introduces new insurance needs / fragmentation

- Shift from personal liability to product liability
- Other parties now involved
  - OEMs
  - Traditional suppliers
  - New suppliers eg
    - Software providers (Cyber crime)
    - Map providers
  - Telecoms
- Ride sharing, liability shifted to the entire infrastructure





### Insurance implications:

- Safer, reduces risk. Shift to loss prevention
- Reduces frequency, with catastrophic loss
- Co-existence of technologies for some time





Driverless  
Cars



Telematics



Traditional UBI

### Self-selection



**20+%**

Average discounts: 12% - 25%  
Maximum discounts: 30% - 50%

### Pricing



**10x**

Differential in loss ratio from TW DriveAbility score

### Retention



**40%**

Improvement in retention cited by Progressive

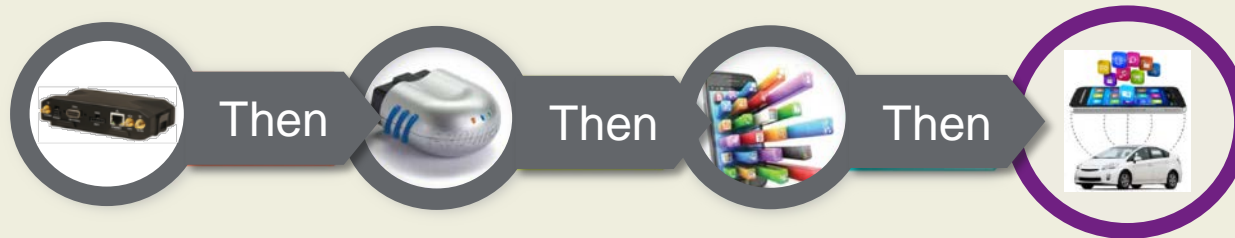
### Behaviour change



**30+%**

Reduction in claims costs  
Young driver: 30% - 40%  
Commercial fleet : 54% - 93%

# Evolution of technology



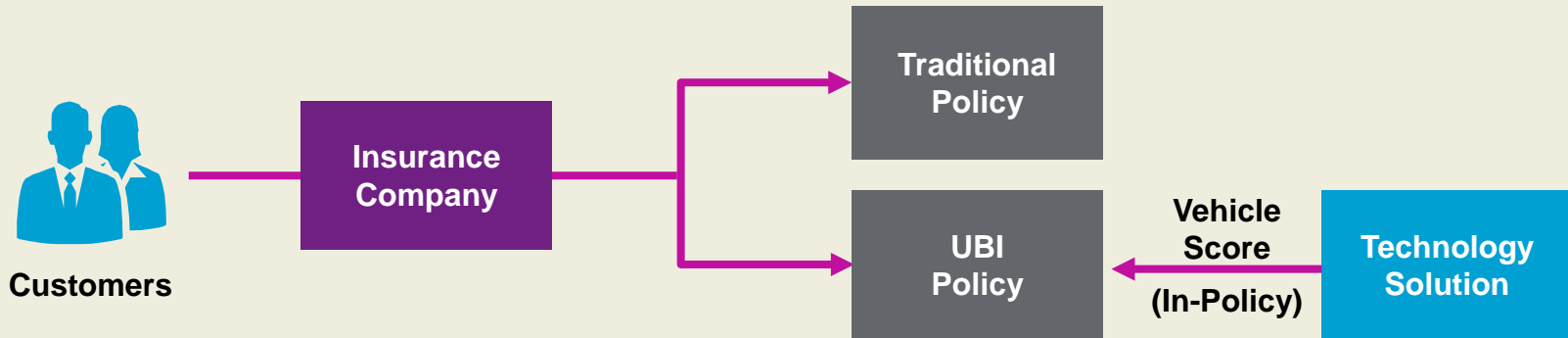
Technology	Description
Hard install device	After-market 'black-box' device - requires professional installation. Installation varies from simple to invasive.
On-Board Diagnostics (OBD) device	After-market device plugs into the vehicle's OBD port by the customer.
Smartphone app	A smartphone application which captures driving data. It is not connected to the car.
Smartphone with tethering	A smartphone application tethered (often via Bluetooth) to a device



## How is vehicle data used today?

### Issues

- Technology cost and management
- Vehicle data is not available until after the UBI policy is accepted
- Only applies to UBI policies

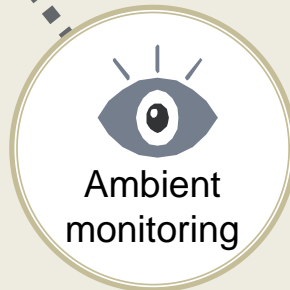




Telematics

## Some interesting sources of data...

- Telecom
- OEM on-board systems
- Smartphone operating systems
- Apps and other sources



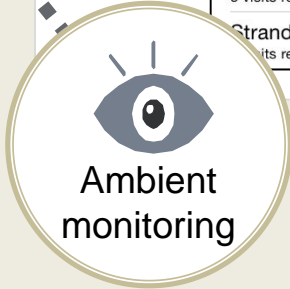
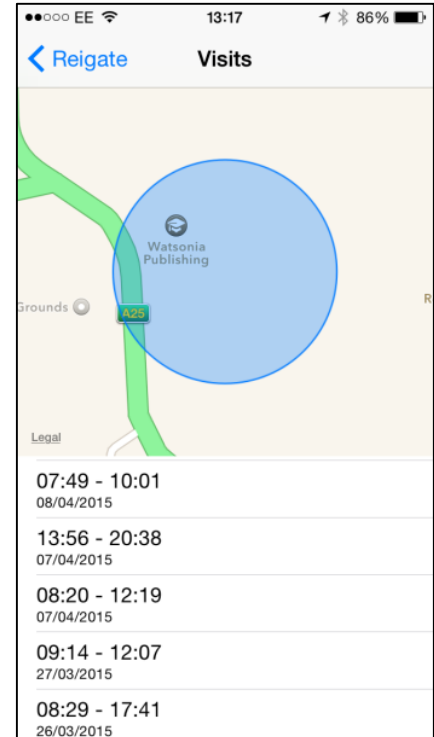
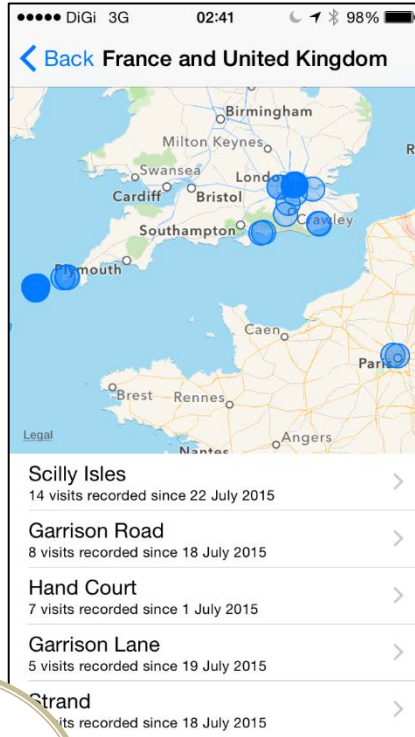


Traditional  
UBI



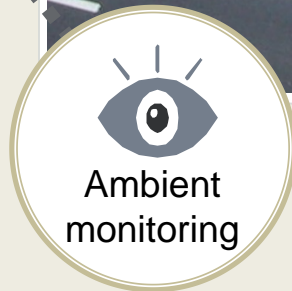
Telematics

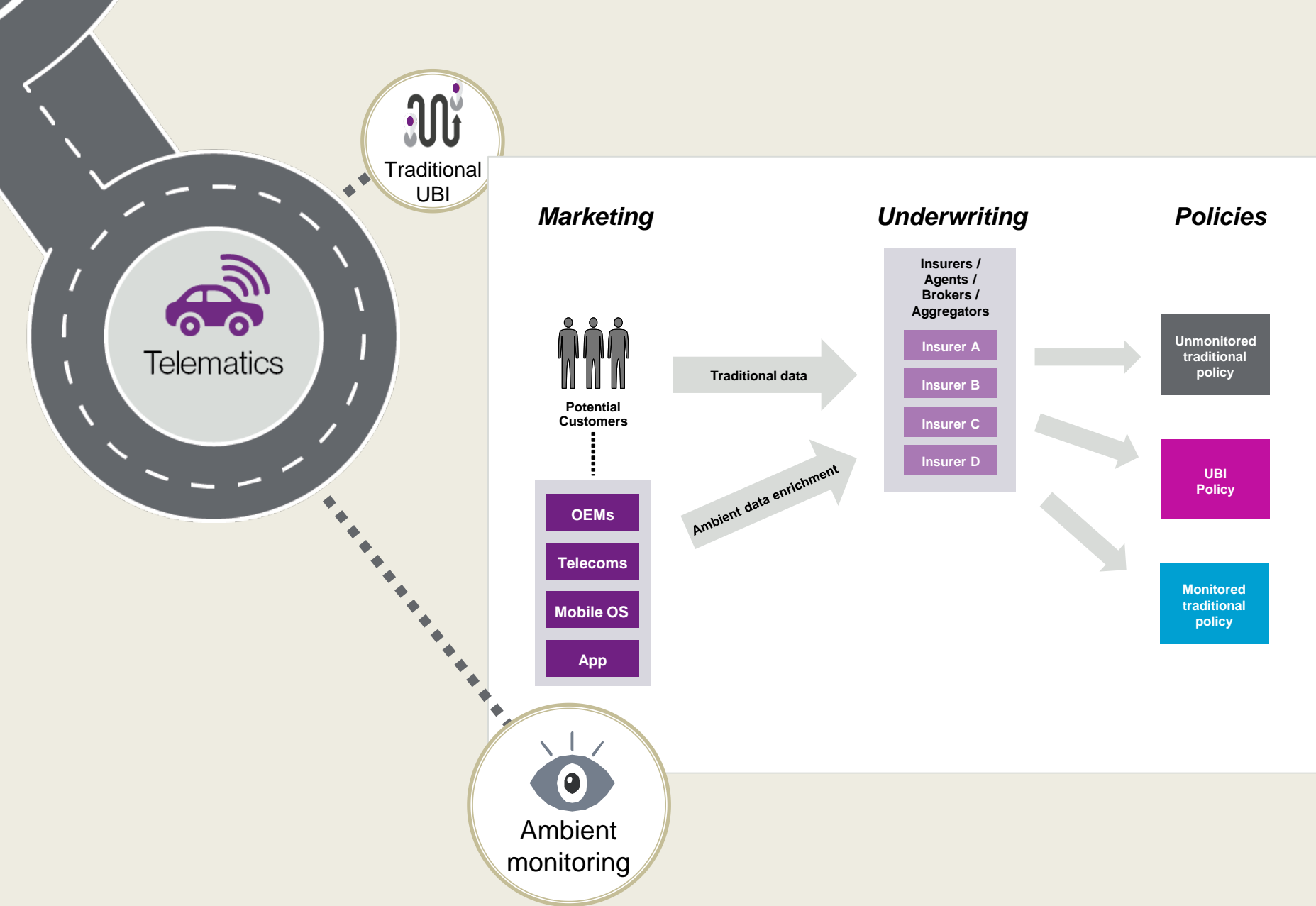
**iPhone:** Settings > Privacy > Location Services > System Services > Frequent Locations

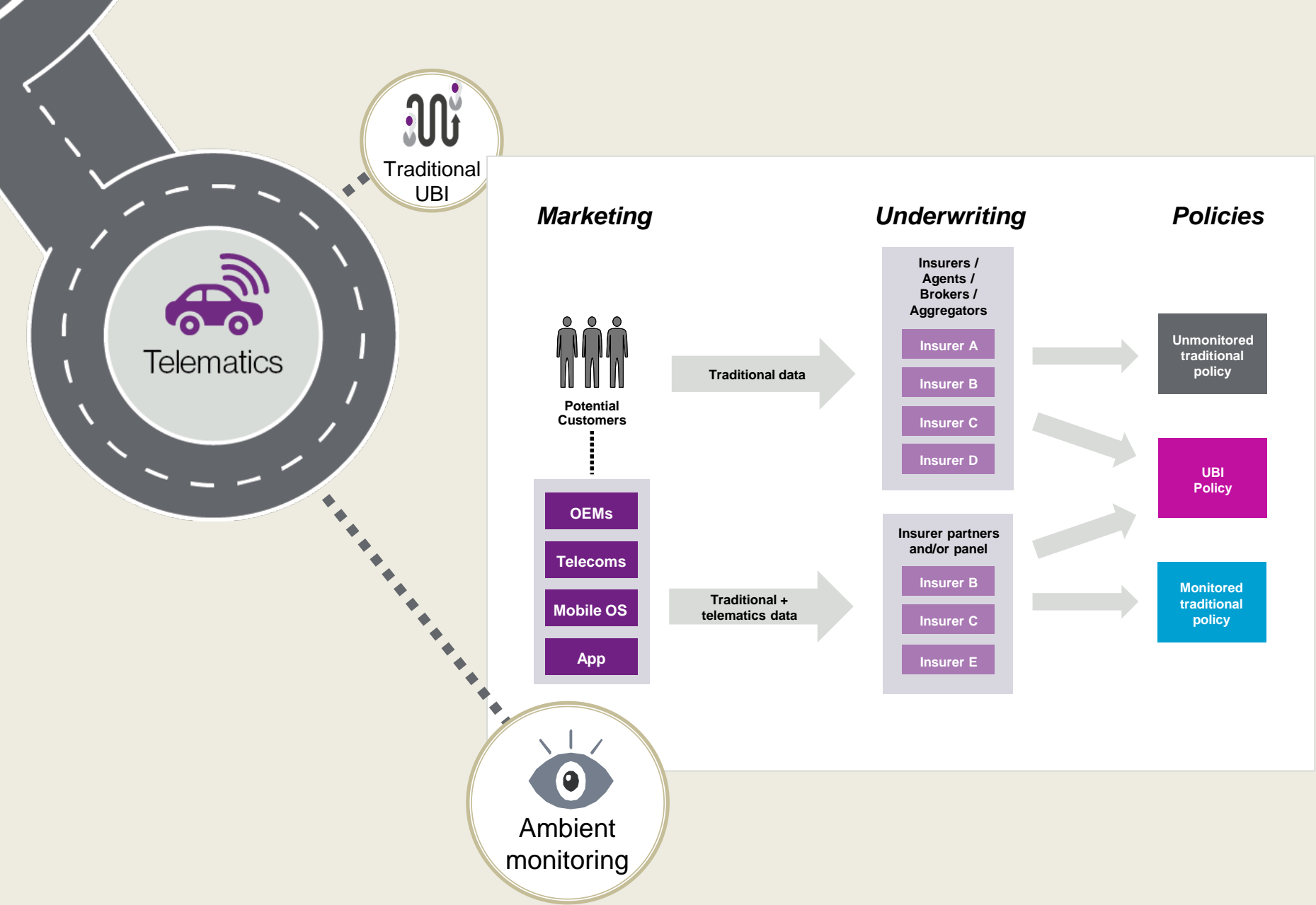


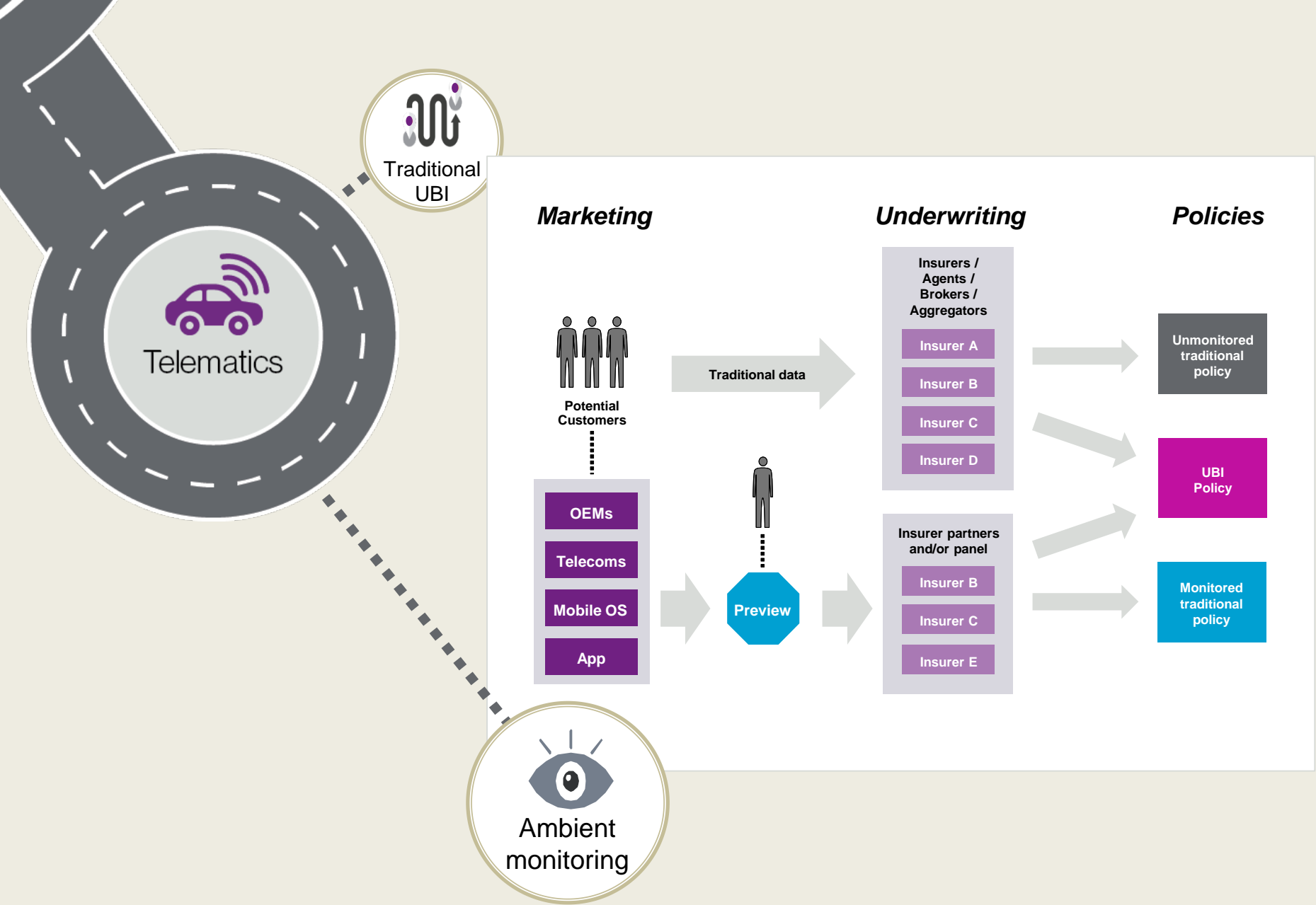
Ambient  
monitoring

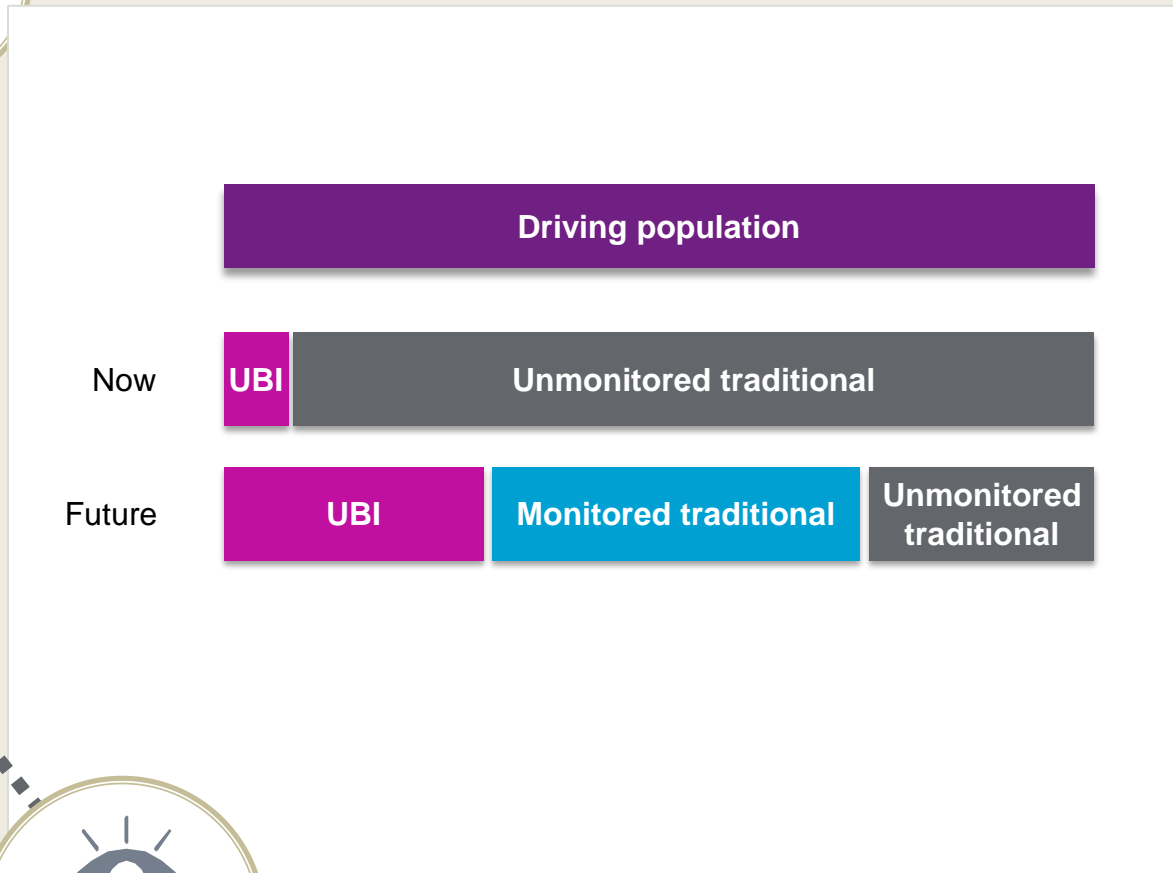
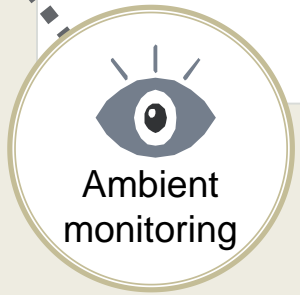








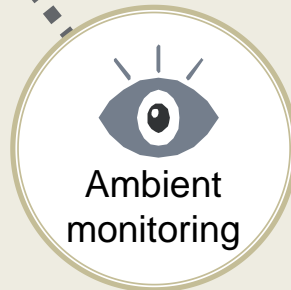






### Implications to auto insurance:

- Reduction in risk from monitoring, driver feedback
- Rising power of OEMs and other data owners
- Data ownership moving from insurers to ambient data providers, to consumers
- Insurers becoming wholesalers not retailers







Value ~ \$50bn  
Revenue ~\$10bn pa  
Operating in 55  
countries  
8m users



Uber et al



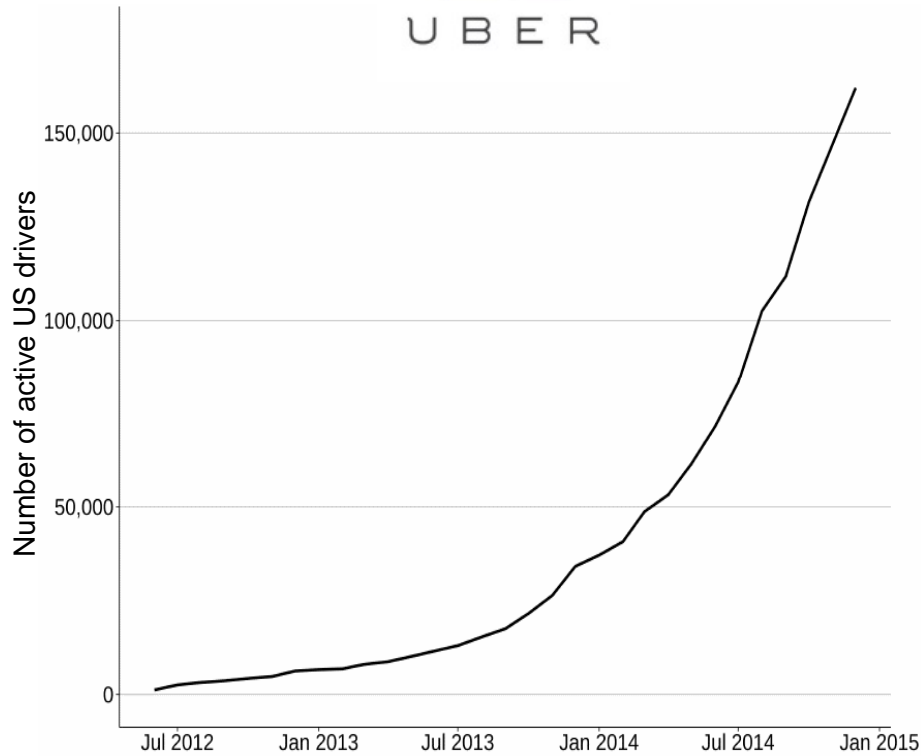
The Sharing  
Economy

Value ~\$2bn  
Secured over \$330m  
in funding since  
2007



Raised \$35m  
recently including  
support from  
Richard Branson





Source: An analysis of the labor market for Uber's driver-partners in the US, Hall & Krueger 22/1/15





Driving privately



App on, available to be hailed



Hailed - make way to passenger



Pick up passenger



Deliver passenger



- Reduced private car mileage
- New (fragmented) insurance needs



## 4 simple steps to zipcar freedom



1. join



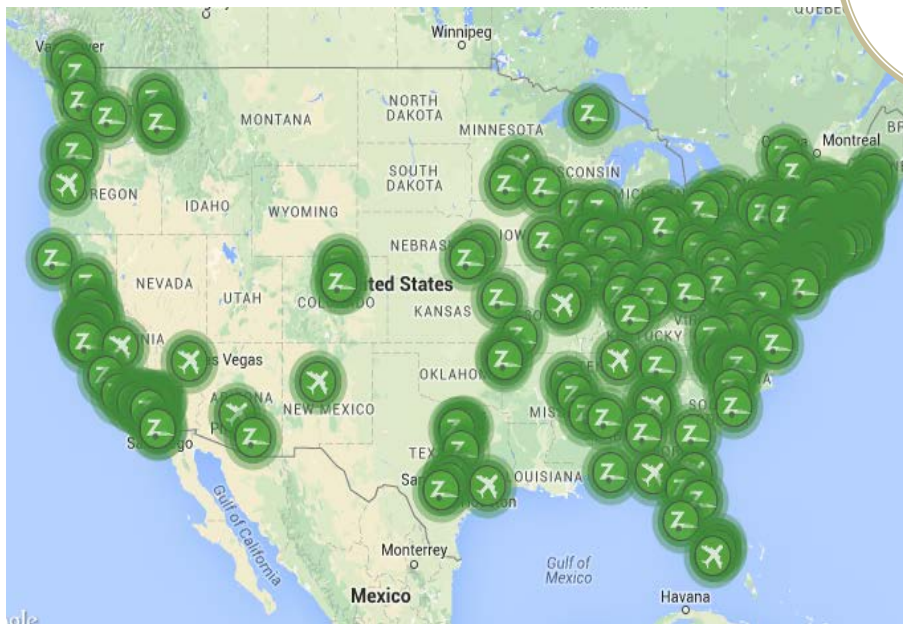
2. reserve



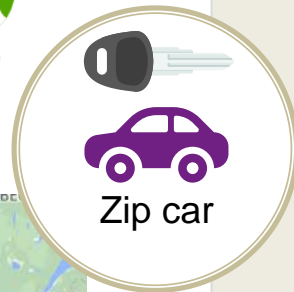
3. unlock



4. drive



Uber et al



Zip car



The Sharing Economy

## 4 simple steps to zipcar freedom



1. join



2. reserve



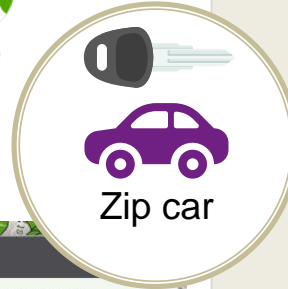
3. unlock



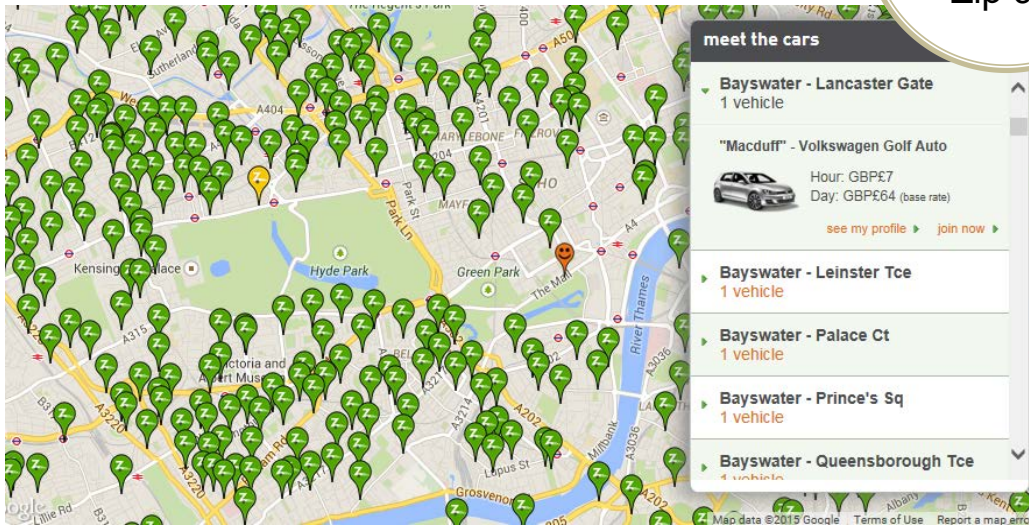
4. drive



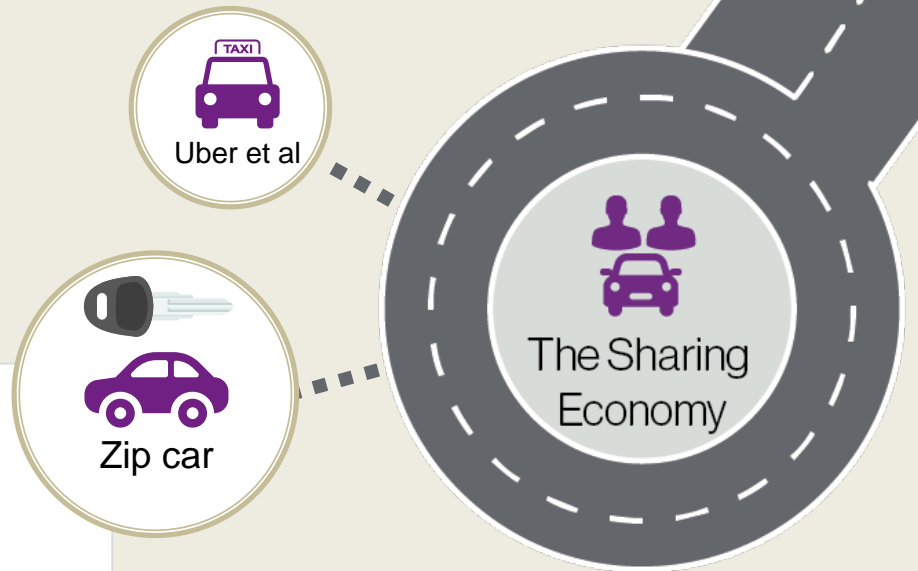
Uber et al

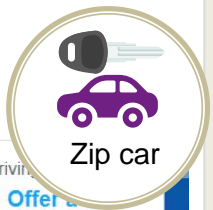


Zip car



- Reduced private car mileage
- New (fragmented) insurance needs





**Bla Bla Car** Find a ride or Offer a ride Sign up | Log in | How it works | £ | €

Birmingham Bristol Find

**Date**  
dd/mm/yyyy  
Departure time: 6h - 20h

**Price**  
 Best price (7)  
 Higher price (2)

**Photo**  
 With photo only (8)  
 All (9)

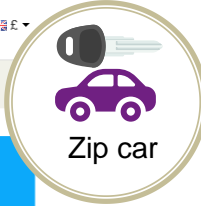
**Experience**  
 Expert (1)  
 Experienced (3)  
 All (9)

**Car comfort**  
 Comfortable + (2)  
 Normal + (9)  
 All types (9)

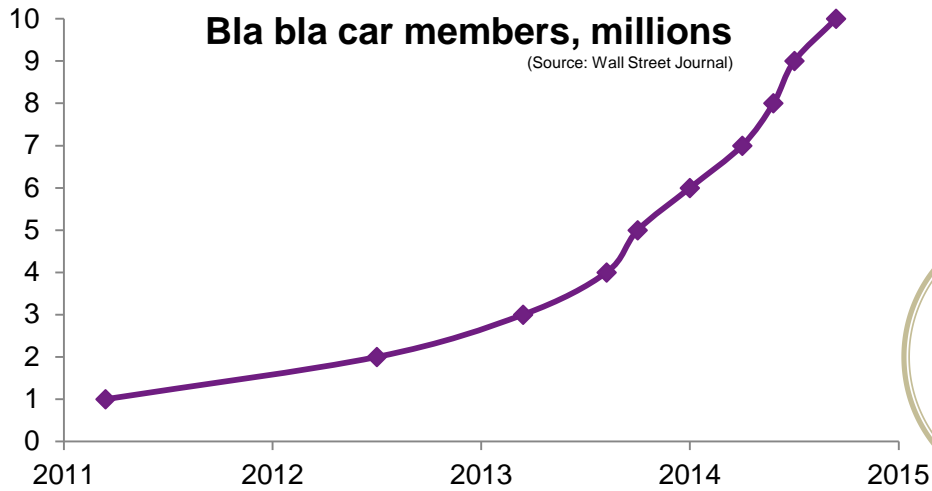
**Create an alert**  
Create an alert to receive an email when new Birmingham - Bristol rides are offered  
Your travel date @ Your email Create email alert

**9 rides from Birmingham to Bristol** Rearrange by £

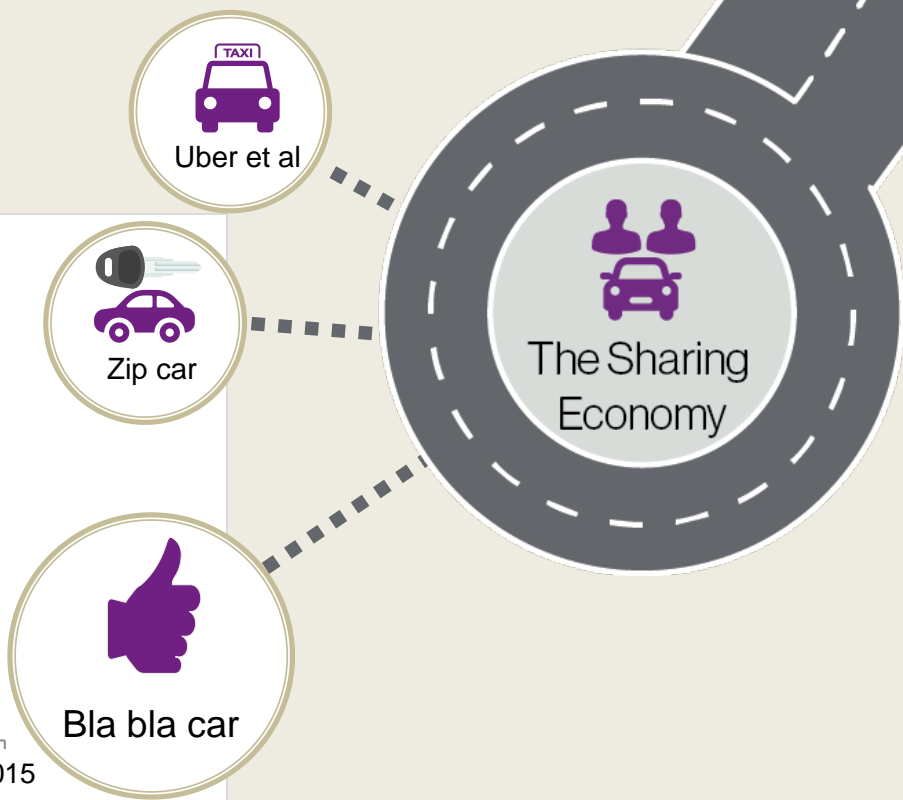
 <b>Tiffany G</b> 23 years old ★ 2.0 - 1 rating 829 friends	<b>Today - 11:50</b> Liverpool → Birmingham → Bristol → Cardiff Departure point: Birmingham. Contact driver for details Arrival: Bristol. Contact driver for details. Car: CITROEN C1 ★★	<b>£7</b> per passenger 3 seats left Driver approval: Manual < 3h
 <b>Scarlett H</b> 19 years old 538 friends	<b>Sunday 12 April - 18:20</b> Huddersfield → Birmingham → Stoke Gifford → Exeter Departure point: Birmingham. Contact driver for details Arrival: Bristol Parkway, Stoke Gifford. Contact driver for details. Car: CITROEN SAXO ★★	<b>£5</b> per passenger 2 seats left Driver approval: Instant
 <b>Leon R</b> 30 years old Experienced ★ 4.6 - 7 ratings	<b>Sunday 12 April - 18:50</b> Derby → Birmingham → Bristol → Bath Departure point: Birmingham. Contact driver for details Arrival: Bristol. Contact driver for details. Car: VOLKSWAGEN GOLF ★★	<b>£7</b> per passenger 2 seats left Driver approval: Manual < 6h
 <b>Emma R</b> 34 years old	<b>Thursday 16 April - 18:55</b> Skipton → Birmingham → Bristol → Plymouth Departure point: Birmingham. Contact driver for details Arrival: Bristol. Contact driver for details.	<b>£6</b> per passenger 2 seats left Driver approval:

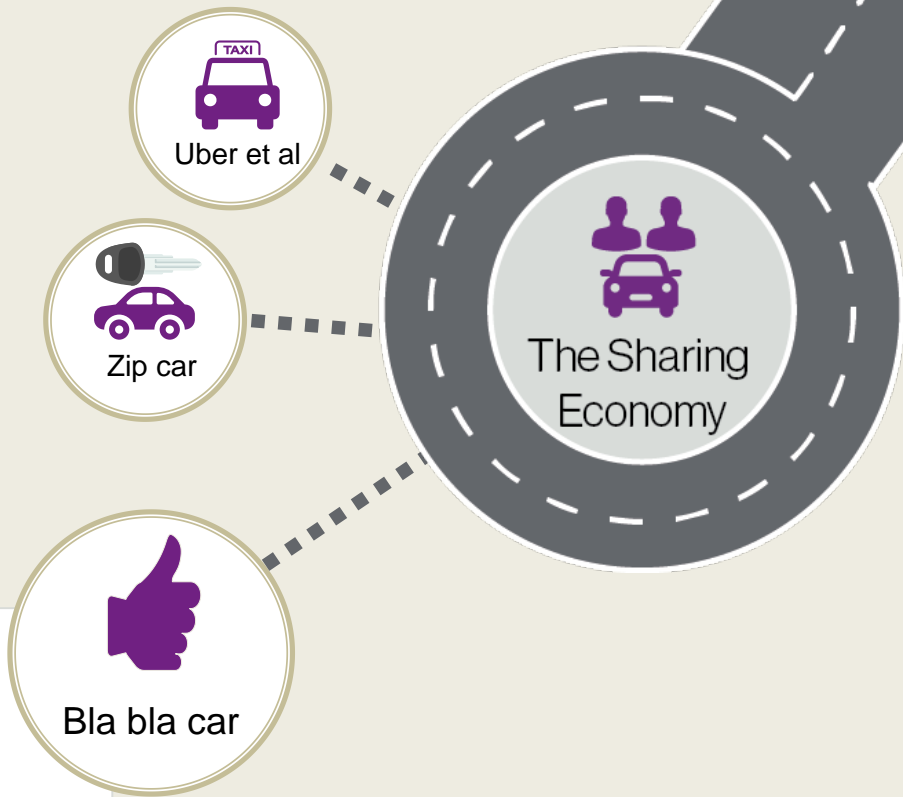






- Value ~\$1.4bn
- 25 million members
- 22 countries
- >10 million travellers per quarter
- >2 million trips available in the future at any given time
- >3 billion miles shared
- Average car occupancy 1.6 → 2.8





- Reduced private car mileage
- New (fragmented) insurance needs
- Consumer rating data



- Telematics data
  - Shifting power to OEMs and other data holders
  - Should the industry act to allow customers to manage their data?
  - Up game in customer analytics
- Deflationary pressure from many sources
  - Expense base, current model unsustainable in long term
- Fragmentation of risk
  - Risk from e-commerce giants for simpler fragmented risks
  - Package more - insure all a customer's (fragmented) needs
- Threats from distribution changes
- Address engagement - digital is more than a mobile website



