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SUSTAINABLE  
CITIES


# NEW MOBILITY AND THE SUSTAINABILITY AGENDA

15 October 2016

IMSAD - SBE 16, ISTANBUL

# WHAT IS NEW MOBILITY?

New mobility is a loose term for models using technology to deliver transport in new ways. The most talked about disruptions are:



Reinventing  
ownership  
and delivery

Using data  
and  
connectivity  
in new ways

Developing  
new  
technologies

# IT IS CAPTURING FUNDING...

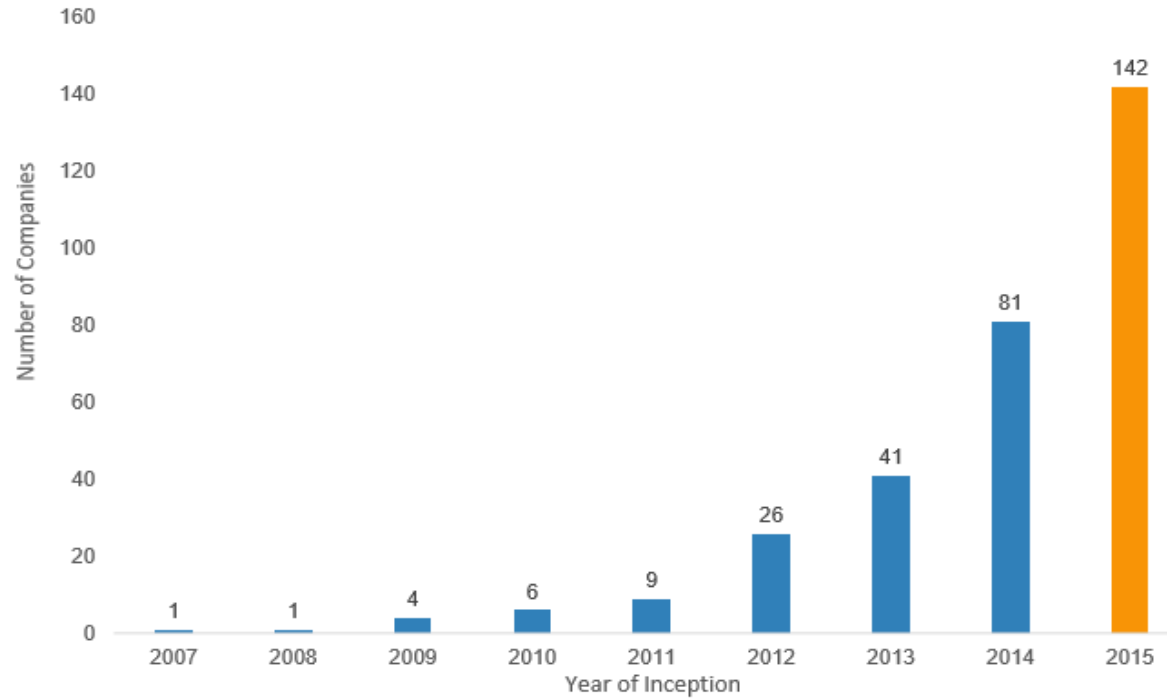
\$5 billion in 2014



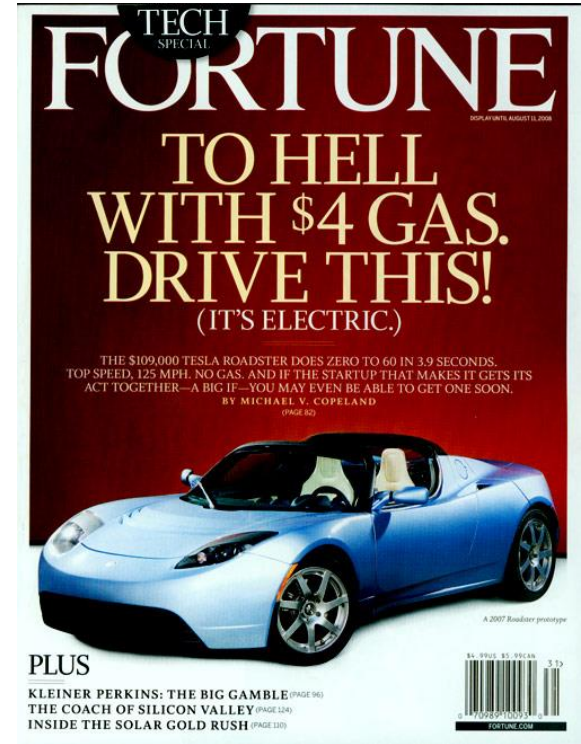
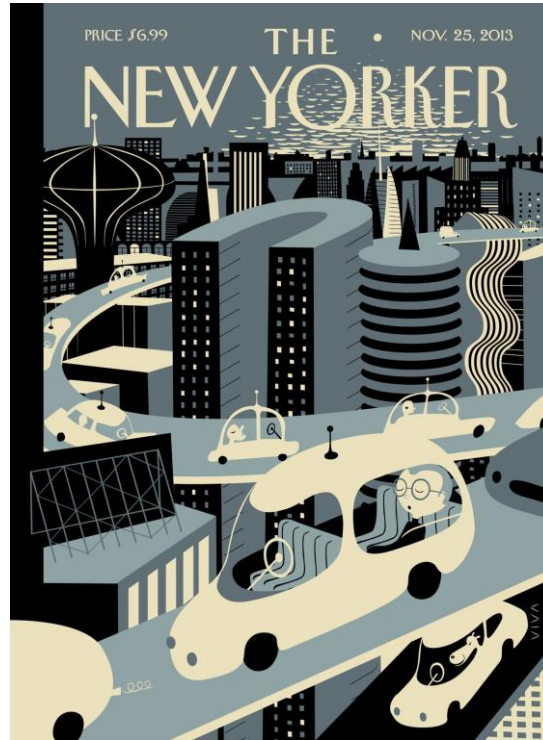
\$10 million in 2010

# TALENT...

New mobility companies founded year-on-year in India

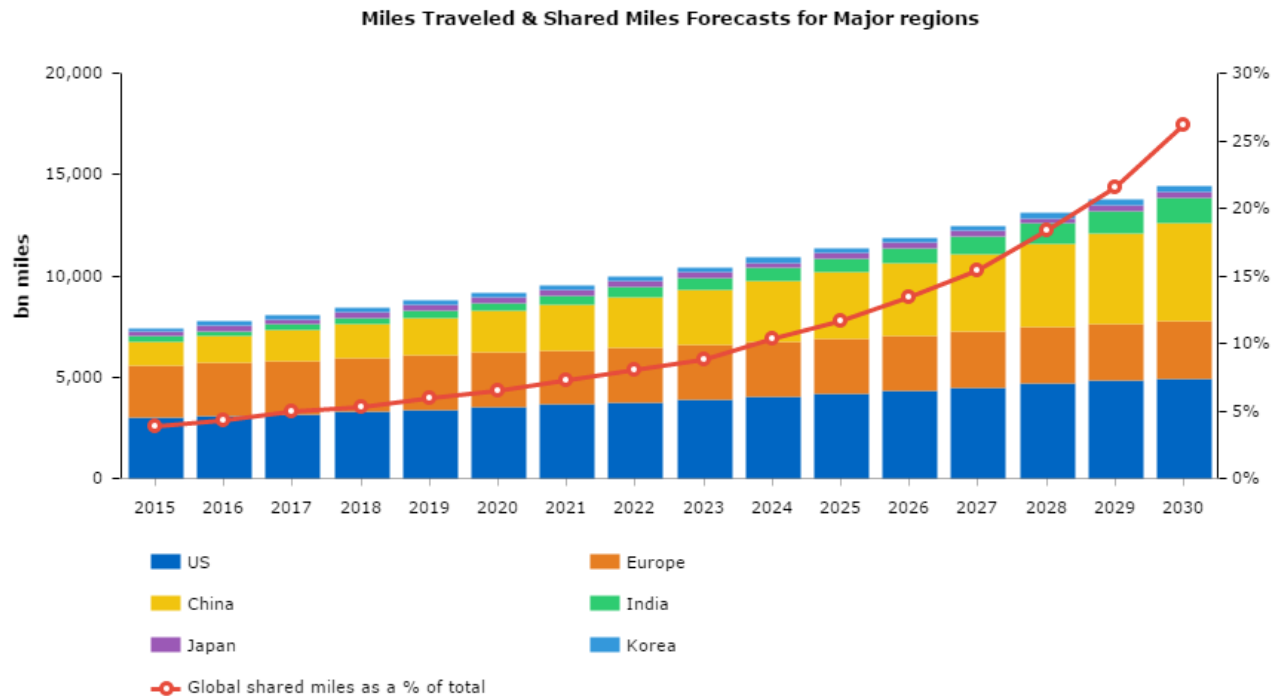


# MEDIA ATTENTION...



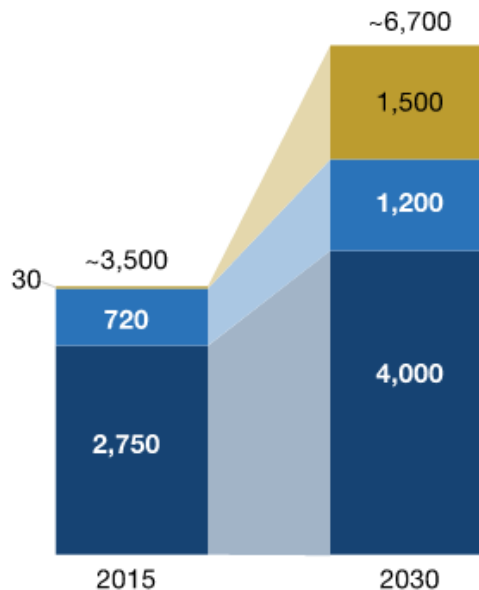
<b>Date</b>	<b>Partnership</b>	<b>Details</b>
Jan 2016	GM – Lyft	\$500 million invested into Lyft
Mar 2016	GM – Crusie Automation	GM buys self driving tech for \$1 billion
May 2016	Toyota – Uber	Toyota bought a stake in Uber
May 2016	Apple – Didi Chuxing	Apple invests \$1 billion in Didi
May 2016	BMW- Scoop	BMW invests undisclosed amount in Scoop
May 2016	Google – Fiat Chrysler	Google to use Fiat cars to run self driving tech
May 2016	Volkswagen - Gett	Volkswagen to invest \$300 million in Gett
Jun 2016	BMW – Intel – Mobileye	Launch autonomous rideshare company in 5 years
Aug 2016	Ford – ZoomCar	Ford Invests \$24 million in Series B round funding
Sep 2016	Ola- Mahindra	Attractive Mahindra-Ola package for Ola drivers
Sep 2016	Ford – Chariot	Ford buys Chariot in all cash deal

# MODE SHARE...



# MARKET SHARE...

High-disruption scenario, \$ billion



## Recurring revenues from new services

- Shared mobility—eg, car sharing, e-hailing<sup>1</sup>
- Data-connectivity services—including apps, remote services, software upgrades

## Aftermarket

- Growth from increased vehicle sales

## One-time vehicle sales

- ~2% annual increase driven by macroeconomic growth in emerging markets

<sup>1</sup>Excludes traditional taxis and rentals.





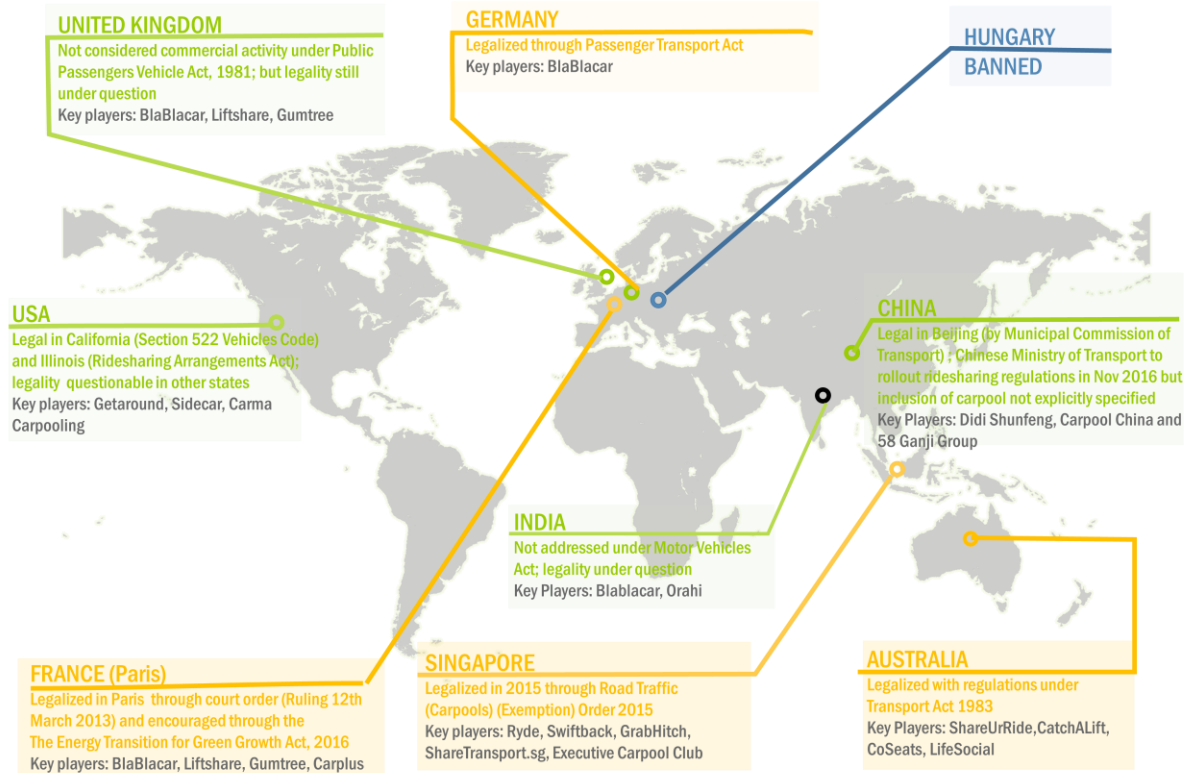
# ...AND THE ATTENTION OF REGULATORS

## STATUS OF GLOBAL CARPOOL REGULATIONS

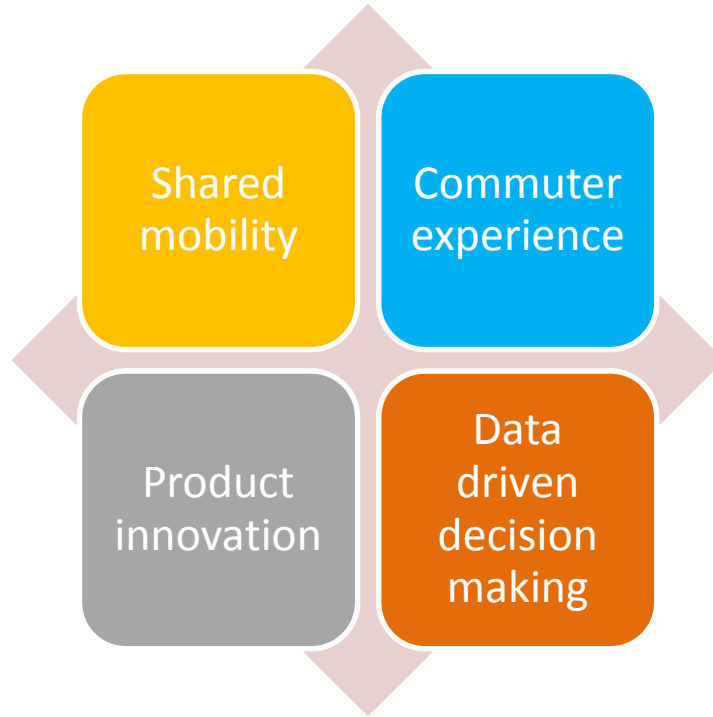
Carpooling models are legalized

Legality of carpooling business models is under question or where there is disparity in status across cities

Carpooling businesses are illegal



# WE SEE FOUR KEY AREAS OF DISRUPTION



# THE BEST CASE SCENARIO

- 50% NMT and 50% “shared” mobility operated by public and private players
- Integrated and seamless transport from door-to-door
- Multiple and flexible mobility options
- Steep reduction in use of personal vehicles
- Reduction in cost of providing services
- Cities know their options to shape engagement with private operators
- New technologies / models incorporated into PT

# SIGNIFICANT PRIVATE SECTOR ACTIVITY

## COMMUTER EXPERIENCE

E.g. Mobile ticketing, mobility apps



## SHARED MOBILITY

E.g. Bike-sharing, car-sharing, ride-sharing



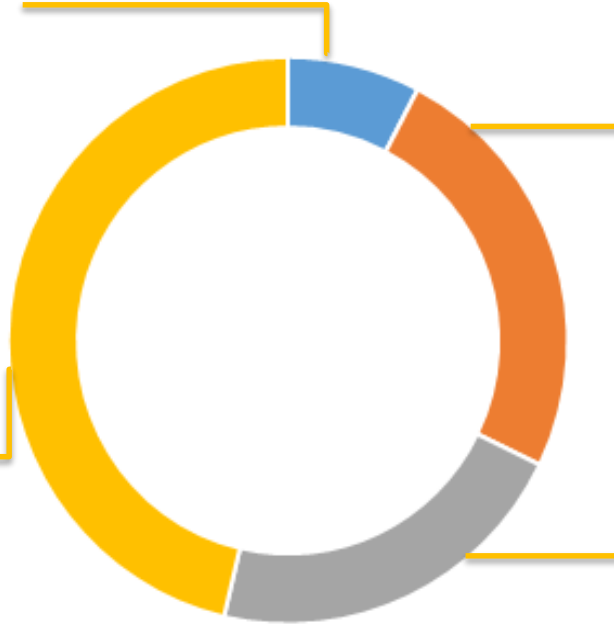
## DATA DRIVEN DECISION MAKING

E.g. Traffic flow sensors, auto-routing software, on-demand shuttles



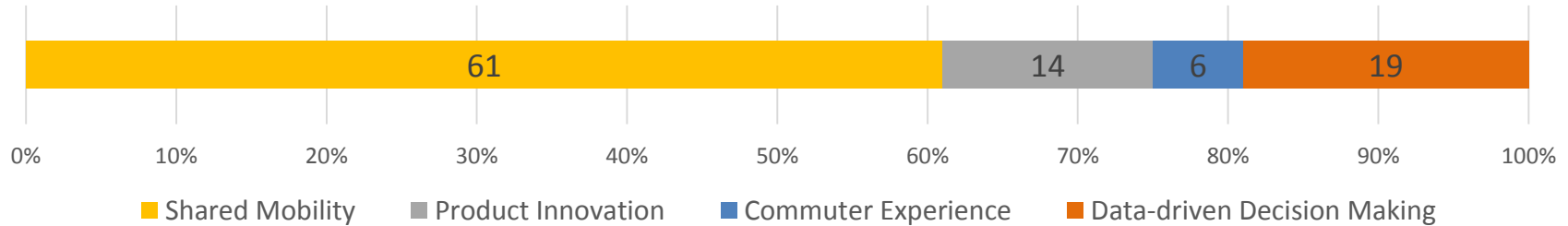
## PRODUCT INNOVATION

E.g. Autonomous vehicles, Electric vehicles

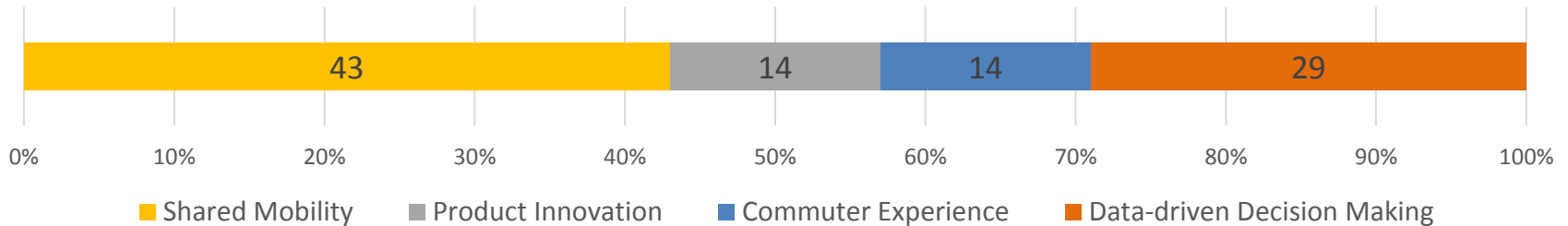


# GROWING ACTIVITY IN EMERGING CITIES

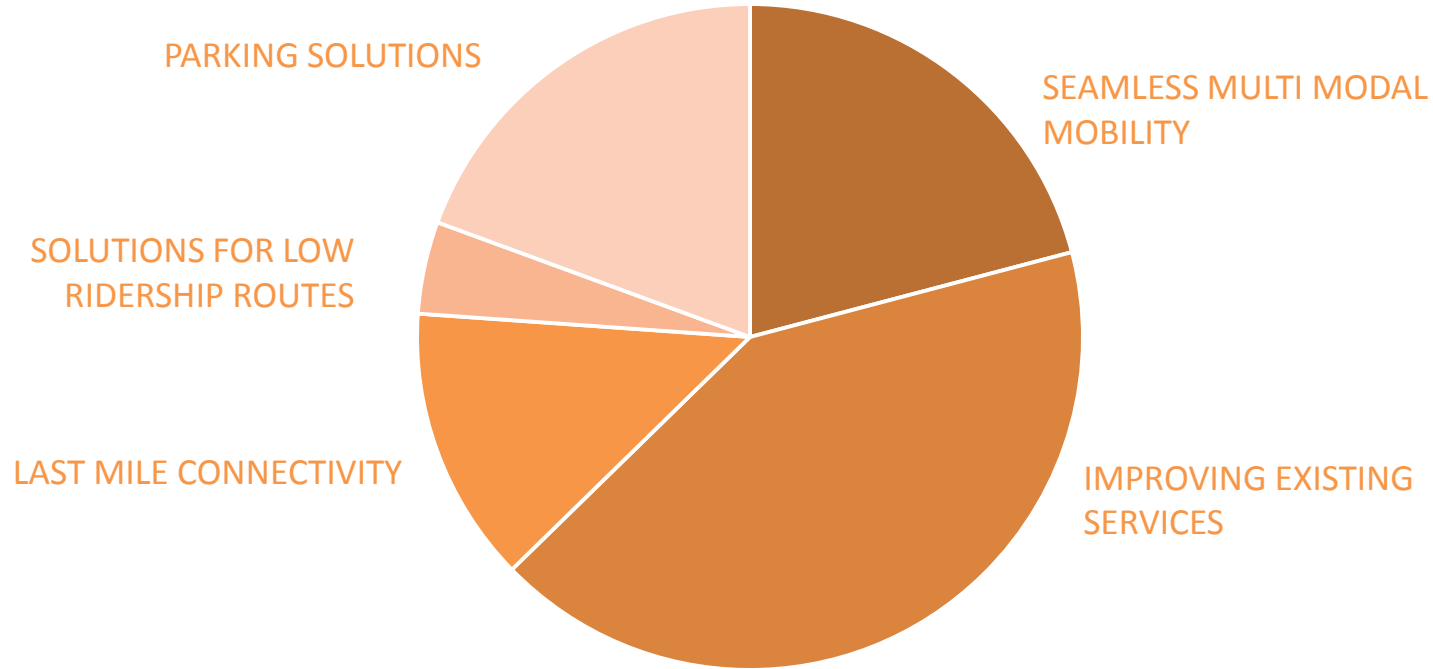
## New mobility solutions in Asia



## New mobility solutions in Africa



# AND EMERGING PUBLIC-PRIVATE PILOTS



# WHAT DOES THIS MEAN FOR CITIES?

- Business models are still evolving, in flux
- Impact is unclear
- Few existing studies funded by enterprises themselves
- Situation changing
  - NCE and WRR analysis
  - NRDC, UCB analysis of TNCs
- Need for analysis of impact on emerging cities

Equity

Emissions

Safe access

Congestion

**IN THE LAST 5 YEARS, NEW  
MOBILITY ENTERPRISES  
FOCUSED ON REDEFINING  
THE END-TO-END TRIP**





# END TO END TRIPS

- No shift for those that walk, cycle
- Positive impact in North America from car-driving populations:
  - Access to carshare removes 9-13 vehicles on road and postpones purchase
- In Mumbai, initial study indicates:
  - 69% would have made the trip by regular taxis in the absence of on-demand taxis
- Income for drivers on shared mobility platforms has increased:
  - Speed of payment
  - Number of rides completed in a day

Equity  
Mixed impact\*

Emissions  
Poor impact\*

Safe access  
Positive impact\*

Congestion  
Mixed impact\*

# (CONTINUED)

- Autonomous, shared vehicles promise 90% reduction in number of vehicles
- Expected to lower operating costs
- Technology being tested on buses too
- Without necessary regulation can result in “zombie cars”
- Impact on people working as drivers will be drastic
- Impact on cities with high walking / cycling will be very different

Equity  
Poor impact

Emissions  
Mixed opinions

Safe access  
Positive impact

Congestion  
Mixed opinions

# THANK YOU

@wrisehirler

+90 212 2435305

Arzu.Tekir@wri.org