

# MOBILITY ON DEMAND: WHAT DOES THE FUTURE HOLD?

Rob Deans, Transurban

# It's coming, but when and with what impact

## Autonomous Vehicle Adoption

### Today -> 2035

Maturing technology, early adopters

### 2035

25% of vehicles on the road will be autonomous

### 2035-2050

50% of vehicles on the road will be autonomous

### 2050

90% of vehicles on the road will be autonomous

Morgan Stanley & FP Think

## How and Where We Live

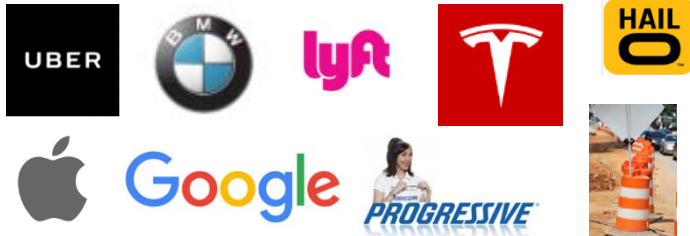
*"Research suggests advances in transportation technology contribute to bigger and more sprawling cities."*

THE WALL STREET JOURNAL.

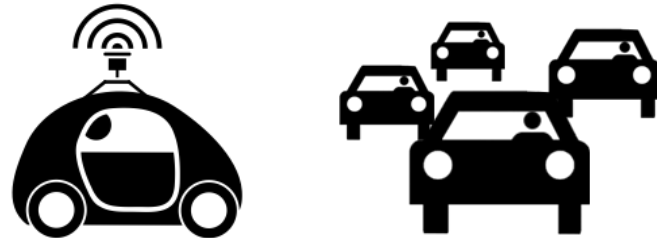
The Economist

*"Self-driving vehicles could, in short, reduce urban vehicle numbers by as much as 90%."*

## Winners vs. Losers

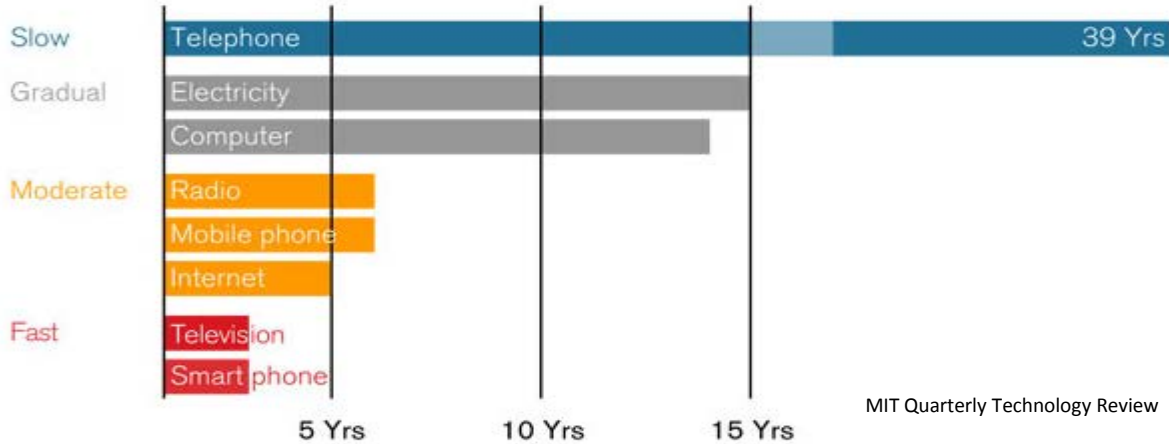


## Heaven or Hell



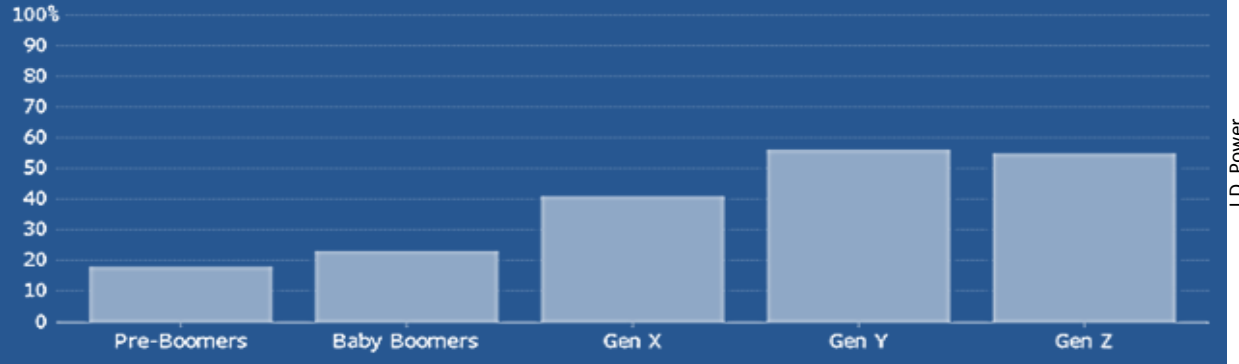
# Autonomous Vehicle Adoption

**Maturity:** Time from 10% to 40% penetration



**What if analogy  
is not the  
smartphone,  
but the tablet?**

Trust in fully automated cars is scarce, even among younger vehicle owners



# How and where we live

How will the urban environment change if millennials don't follow the script?

**There will be fewer cars on the road – perhaps just 30% of cars we have today**  
Sebastian Thrun, Stanford Univ.

**AVs could...potentially reducing the need for parking space in the United States by more than 5.7 billion square meters**  
McKinsey & Company

**...increase VMT by 10x** A World Without Drivers

**New survey shows 66% of millennials want to live in the suburbs** The Wall Street Journal

**Autonomous taxis could greatly reduce greenhouse-gas of US light-duty vehicles by 87-94%** Lawrence Berkeley National Laboratory

**The faster humans move, the bigger and more sprawling our cities become**  
Robert McDonald, Nature Conservatory

**Initially they will likely require separate lanes or separate facilities so they are not mixed with traditional vehicles** FP Think

**If 90% of cars on American roads were autonomous, accidents would fall from 5.5M a year to 1.3M** Eno Center for Transportation

# Winners vs. losers

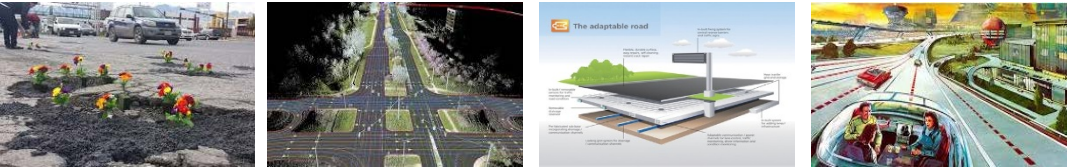
## Mobility



## Ownership



## The road



## The ecosystem



# Heaven or Hell?



Induced demand and other factors, could potentially increase congestion, vehicle miles travelled, and GHG emissions.

Ryan Chin, Optimus Ride

# Predictions



The transition to the future mobility model will not be smooth



A person born today will never directly purchase car insurance



Current infrastructure investment will prove inadequate as the increase in VMT will outstrip the reduction in number of vehicles



While core urban areas will become less congested, urban sprawl will continue to expand at an increasing rate



Mobility-on-demand will disrupt the economy more than the invention of the car



**Rob Deans, Technology**

IBTTA Conference

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