URBANISM NEXT:
IMPACTS OF EMERGING TECHNOLOGIES ON COMMUNITIES

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ADAPTATION OF TECHNOLOGY

PERCENT OF U.S. HOUSEHOLDS

100%

80%

60%

40%

20%


TELEPHONE  AUTOMATIC RADIO  REFRIGERATOR  CLOTHES WASHER  DISH WASHER  CLOTHES DRYER  AIR CONDITIONING  MICROWAVE  COLOR TV  VCR  COMPUTER  INTERNET

SOURCE: MICHAEL FELTON, THE NEW YORK TIMES

HBR.ORG

AUG 2016

OCT 2016

NOV 2017

MAY 2018

WAYMO

CONSUMPTION SPREADS FASTER TODAY

80%

60%

40%

20%

80%

60%

40%

20%

100%

Source: Michael Felton, The New York Times
How a Self-Driving Uber Killed a Pedestrian in Arizona

By TROY GRIGG and DASUKE WAKABAYASHI  UPDATED MARCH 21, 2018

A woman was struck and killed on Sunday night by an autonomous car operated by Uber in Tempe, Ariz. It was believed to be the first pedestrian death associated with self-driving technology.

What We Know About the Accident

- Body seen in this area
- Elaine Herzberg was struck while walking her bike across the street somewhere in this area
- The self-driving Uber was traveling north at about 40 m.p.h.

Another Driver Died in a Tesla That Was on Autopilot

We need to keep scrutinizing the technology—and whether drivers are too easily lulled into trusting it more than they should.

By JONATHAN L. FISCHER  MARCH 31, 2018 • 12:02 PM

Autopilot might not be the selling point Tesla’s made it out to be.

Andrzej Wiegmans/Reuters
MOBILITY AS A SERVICE

FORD AUTONOMOUS VEHICLES LLC

AV LLC
Research & Engineering
Transportation-as-a-service Platform
Business Development & Go-to-Market Strategy
UX Design

MONETIZATION
MOVING PEOPLE & GOODS
DATA FROM VEHICLE
IN VEHICLE SERVICES
BUSINESS SERVICES

CAPABILITIES
SELF-DRIVING SYSTEM
DISPATCH & ROUTING
VEHICLE INTEGRATION
PARTNER API PLATFORM
DATA & ANALYTICS
FLEET MANAGEMENT

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AUTONOMOUS VEHICLES
FLEETS OR INDIVIDUALLY OWNED?
INDIVIDUAL RIDES OR
POOLED RIDES
ZOMBIE CARS...
ROLE OF TRANSIT

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E-COMMERCE
MALLS ACROSS AMERICA ARE AT RISK OF CLOSING

Number of malls

180
150
120
90
60
30
0

Mall grade

A++
A+
A
A-
B+
B
B-
C+
C
C-
D

334 malls that qualify as C & D rated are at high risk of closing

SOURCE: Green Street Advisors
PRICE/ACRE OF INDUSTRIAL LAND, US, 2012-2017

Small = 5-9.99 acres, large = 50-500 acres
Source: CoStar, CBRE Research • Created with Datawrapper

Car
Type of parking demand/supply

- **Temporary**: surface or deconstructable structures
- **Repurposable**: repurposed structures or podiums
- **Permanent**: onsite or at a mobility hub

Variables:
- Population over time
- Mode share over time
- Vehicle autonomy over time
Repurposable Parking: Considerations

- Materials
- Floor strength
- Cores
- Ramps
- Roof
- Systems
- Floor height
- Future configuration
- Etc…!
Street Capacity

Present

Future

Source: NACTO, Blueprint for an autonomous future
WILSHIRE BLVD CROSS SECTION - EVOLVED
Who Pays For Roads Once Electric Vehicles Defund The Gas Tax?

Jeff McMahon  Contributor
Jun 4, 2018, 12:01am  •  12,005 Views  •  #UnderTheHood

Ben Affleck is seen in Los Angeles filling his tank and paying a heap of gas taxes. What will happen to those taxes when Ben drives an electric car? (Photo by BG004/Bauer-Griffin/GC Images)
AVs ARE NOT A TRANSPORTATION ISSUE.
E-COMMERCE IS NOT A RETAIL ISSUE.
CITIES THAT THINK AHEAD, STAY AHEAD.
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**A Prospective Timeline in Four Phases**

1. **2017-2022**
   Automated features continue to improve and become less expensive, while car ownership declines.

2. **2022-2027**
   Fully autonomous vehicles are on the market, but AV and legacy vehicle mix results in uneven traffic improvements.

3. **2027-2040**
   Autonomous conversion of light-duty vehicle fleets increases from 15 percent in 2030 to 75 percent in 2040.¹

4. **2040 and beyond**
   Land use planning is permanently altered to make way for pedestrians, cyclists, and public spaces, in both urban and suburban streets.