Urbanism Next
Understanding the Impacts of Emerging Technology on Cities

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CONSUMPTION SPREADS FASTER TODAY

PERCENT OF U.S. HOUSEHOLDS

100%
80%
60%
40%
20%


TELEPHONE  AUTO  RADIO  ELECTRICITY  REFRIGERATOR  CLOTHES DRYER  CLOTHES WASHER  DISH WASHER  AIR CONDITIONING  VCR  COLOR TV  COMPUTER  INTERNET  MICROWAVE  CELL PHONE  TELEPHONE  AUTO  RADIO  ELECTRICITY  REFRIGERATOR  CLOTHES DRYER  CLOTHES WASHER  DISH WASHER  AIR CONDITIONING  VCR  COLOR TV  COMPUTER  INTERNET  MICROWAVE  CELL PHONE

SOURCE: MICHAEL FELTON, THE NEW YORK TIMES
CONSUMPTION SPREADS FASTER TODAY

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Source: Michael Felton, The New York Times

AUG 2016
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60%

40%

20%


SOURCE: MICHAEL FELTON, THE NEW YORK TIMES

URBANISM NEXT – (WHEN?)
Consumption spreads faster today

Percent of U.S. Households

- 100%
- 80%
- 60%
- 40%
- 20%

Source: Michael Felton, The New York Times

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URBANISM NEXT – (WHEN?)

CONSUMPTION SPREADS FASTER TODAY

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TELEPHONE AUTO RADIO TELEVISION ELECTRICITY REFRIGERATOR CLOTHES WASHER DISH WASHER COOKING MICROWAVE COLOR TV AIR CONDITIONING COMPUTER INTERNET VCR INTERNET CELL PHONE

SOURCE: MICHAEL FELTON, THE NEW YORK TIMES

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CONSUMPTION SPREADS FASTER TODAY

PERCENT OF U.S. HOUSEHOLDS

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%


TELEPHONE  AUTO  RADIO  ELECTRICITY

REFRIGERATOR  CLOTHES DRYER  CLOTHES WASHER

STOVE  COLOR TV  AIR CONDITIONING

MICROWAVE  DISH WASHER  VCR

INTERNET  CELL PHONE  COMPUTER

SOURCE: MICHAEL FELTON, THE NEW YORK TIMES

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URBANISM NEXT — (WHEN?)

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SOURCE: MICHAEL FELTON, THE NEW YORK TIMES

AUG 2016  OCT 2016  JUN 2017  NOV 2017  JAN 2018  DEC 2018

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DEPLOYMENT WILL BE STEPPED (NOT GRADUAL)
AVs already exist in our cities, they just have drivers
(In 2018)

4.2 BILLION TNC TRIPS IN US.
36% of people
51% of millennials
19% in rural areas

(In 2018) Pew, 2019
NEW MOBILITY SERVICES AND MAAS

New Mobility Services

- Public transportation
- Buses
- Taxis
- Ridesharing
- Personal vehicles
- Bicycles
- Scooters
New Mobility Services

- TriMet
- Sound Transit
- BART
- MUNI
- CTA
- MTA
- uberPOOL
- LYFT LINE
- VIA
- VAN
- chariot
- TransLōc
- Uber
- Lyft
- Waymo
- Wingz
- Zipcar
- ReachNow
- CAR2GO
- MAVEN
- Turo
- vRide
- JUMP
- Lime
- Gotcha
- Pace
- Motivate
- Mobike
- Spin
- Scoot
- Razor
(In 2018) 36 MILLION BIKE SHARE TRIPS IN US.
84 Million Trips on Shared Micromobility in 2018

- **Scooter share**
- **Dockless bike share**
- **Station-based bike share**

Source: NACTO
(In 2018)

38+ MILLION E-SCOOTER TRIPS IN US.
New Mobility Services

- Tram
- Bus
- Minibus
- Car
- Bicycle
- Electric scooter
NEW MOBILITY SERVICES AND MaaS

New Mobility Services

MaaS Platform

User Experience

Unified
Simple
Seamless
NEW MOBILITY SERVICES AND MAAS

New Mobility Services

MaaS Platform

User Experience

Unified
Simple
Seamless
VERTICALLY INTEGRATED MAAS?

uberPOOL
LYFT LINE
motivate
lyft SCOOTERS

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E-COMMERCE: BRICK-AND-MORTAR SLIDE CONTINUES – 12% DROP IN STORE TRIPS THIS PAST HOLIDAY

A recent article in the Wall Street Journal documents the continued rise of e-commerce coupled with the inevitable slide of brick-and-mortar stores. A few key numbers:

- Overall, online holiday sales increased by 11% over the previous year while brick-and-mortar sales increased only 2.7%.
- JC Penny brick-and-mortar sales dropped by nearly 1% while its online sales grew by double digits.
- Amazon was the clear leader in online sales with 38% of all online revenue.

### Rise of E-Commerce

<table>
<thead>
<tr>
<th>Month</th>
<th>Sales</th>
<th>Traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov 2017</td>
<td>-9.0%</td>
<td>-7.7%</td>
</tr>
<tr>
<td>Nov 2018</td>
<td>-4.1%</td>
<td>-8.3%</td>
</tr>
</tbody>
</table>

The Rise of E-Commerce in the United States

E-Commerce sales as a percentage of total retail sales in the United States

- Total retail sales 2018: $5,315b
- E-commerce sales 2018: $514b

Source: U.S. Census Bureau

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U.S. Retail Stores’ Planned Closings Already Exceed 2018 Total

The New York Times

APRIL, 2019
RISE OF E-COMMERCE
RISE OF E-COMMERCE


Small = 5-9.99 acres, large = 50-500 acres

Source: CoStar, CBRE Research • Created with Datawrapper
ROLE OF TRANSIT

BUST A COMMUTE.
Redeem up to $50 in FREE Lyft credit now.
Use code FASTLAP

DOWNLOAD & RIDE

URBANISM NEXT CENTER
at the University of Oregon
INDIVIDUAL RIDES OR POOLED RIDES
Impacts on Municipal Budgets

Transportation Fiscal Impacts

- Gasoline Taxes: $697 Million
- Vehicle Registration Fees: $677 Million
- Traffic Citation: $593 Million
- Vehicle Impounding Fees: $81 Million

25 Largest US Cities, FY16, Governing.com
Impacts on Municipal Budgets

Transportation Fiscal Impacts

- Gasoline Taxes: $697 Million
- Vehicle Registration Fees: $677 Million
- Traffic Citation: $593 Million
- Vehicle Impounding Fees: $81 Million
- Parking Fees and Citations: $2.8 Billion

25 Largest US Cities, FY16, Governing.com
SF: Average Const. Cost/Unit = $550/gsf
SF: Average Const. Cost/Stall = $130/gsf
= 24% burden on unit costs @1.5 spaces/unit

Gerry Tierney, Perkins + Will
Impacts on Street Design

- Buildings/Street Relationship
- Pick Up/Drop Off
- Separation by Speed, Not Mode
- Lane Width / Prioritization
AVs AND MaaS ARE NOT TRANSPORTATION ISSUES
E-COMMERCE IS NOT A RETAIL ISSUE
CITIES THAT THINK AHEAD, STAY AHEAD
New Mobility Impacts to Transportation
Leah Treat, Nelson/Nygaard

E-Commerce Impacts on Land Use
Rick Stein, Urban Decision Group
Jason Sudy, HDR
Kelly Rula, City of Seattle

Making Better Decisions with Data
Kelly Rula, City of Seattle

Fiscal Implications of Emerging Technologies
Rebecca Lewis, University of Oregon

Planning for an Uncertain Future
Becky Steckler, Urbanism Next Center, University of Oregon
NATIONAL URBANISM NEXT CONFERENCE 2019
HOW TECHNOLOGY IS CHANGING OUR CITIES

May 7–9, 2019
Oregon Convention Center
Portland, Oregon

urbanismnext.uoregon.edu
urbanismnext.com
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