Emerging Trends in Mobility
Transportation + Technology

Jean Crowther, AICP New Mobility Group Lead
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Emerging Technologies

Connected/Autonomous Vehicles

Shared Mobility

Electric Vehicles

Mobile Technologies
Navigation
Mode Choice

[Images of a mobile application interface showing transportation options such as public transport, taxi, Lyft, Uber, car, zipcar, motorbike, and bicycle.]
Implications of Transportation Technology Trends

Atlanta Regional Commission: Regional Transportation Technology Policy Document (2016)
What Planning Departments are saying

“Just need “the Basics.” …. But how can technology help do it better?”

“Which cities are doing the best work?”

“I know what I have today and I know driverless cars are coming… but I have NO clue what to wake up and start on tomorrow.”

“I don’t know what to ask for – send me something”

“How will any of this subtract traffic?”
Bike Share Growth in the US

Source: NACTO
Volume + Market Share
Dockless bikes are moving into many American cities. Who gets to regulate them? // Edgar Su/Reuters

A New State Preemption Battlefield: Dockless Bikesharing

JOSH COHEN FEB 13, 2019

Florida lawmakers are weighing a bill that would override a city’s ability to regulate the new private bikesharing companies.
Uber is piloting a bike-sharing service with JUMP

Posted Jan 31, 2018 by Megan Rose Dickey (@meganrosedickey)
Studies are increasingly clear: Uber and Lyft congest cities

MAPC/Boston:
More than 40 percent would have taken public transit if Uber or Lyft had not been available, and 12 percent said they would have walked or biked.
 Expanded Mobility

Affordable senior transportation.

Use Lyft or Uber without a smartphone. 24/7 operators monitor rides & offer support. Text alerts keep families in the loop.

Call 1 (855) 464 - 6872 or GO-USA
Zhang @ Georgia Tech

• 18% of households could reduce vehicle ownership, which would reduce total rates of vehicle ownership by 9.5%

• VMT generation in metro area will rise by 13.3%

Model assumed 1) no change in travel, 2) vehicles only shared by households (not shared between households); 3) 100% market penetration 4) also assumes that the family members are not going to share their trips
Will Autonomous Vehicles Be Accessible to People with Disabilities?

By Tim Frisbie | October 31, 2017 | News
Complete Streets 3.0

- On-Street Parking: Smart, App Enabled, Price Managed
- Car Sharing: Permanent and preferential stalls
- Bike Valet: Employer sponsored services, self serve bike parking
- Green: Infrastructure Parklets and stormwater management
- B-Cycle: Seamless bike share connections
- Protected Bicycle Lanes: World class bicycle accommodation

Street Amenities: Info booths, Food trucks, public seating
Drop-off: Kiss and ride drop off
Crosswalks: Connections to the city
Taxi/TNC Loading: Formalized loading, kiosk-based ride ordering
Transit Priority: Bus priority lanes
Transit Stations: Enhanced station amenities
Complete Networks
First/Last Mile
Transit-linked P3

Launching March 17, 2018

Join us this St. Patrick’s Day, Saturday, March 17, 2018, as we roll out our community’s new set of wheels, and celebrate the launch of GoMonrovia - a program designed to give Monrovians more options to get around town!

9 AM - WELCOME
10 AM - COMMUNITY BIKE RIDE!
Choose to take a free ride on a LimeBike, or bring your own bike! Must be 13 years or older to ride a LimeBike, and children under 18 years old must wear a helmet.

$0.50/ride anywhere in the Monrovia service area

$1.00 for 30 minute ride
TNCs or $10m Parking Garage?
Trail Access
Campus Mobility
Public Services

SOURCE: TEAGUE
Freight
Driving Hard to Secure Last-Mile Logistics

By Patrick J. Kiger
February 5, 2018
First/Last 500 Feet
First/Last 500 Feet

MIT Technology Review
Competition: Atomized Travel
“Need a new pair of shoes? Summon the mobile shoe palette and try on different sizes as you travel from here to there.” The Verge, January 8, 2018
Transportation Driving Land Use
Planning Transitions

WHAT DO WE HAVE?
- Community Values
- Inventory & Baseline Assumptions
  - What are trends?
  - What are uncertainties?
  - How could things change?

WHAT DO WE WANT?
- Community Engagement
- Forecasts
- Goals & Metrics
  - What is probable or likely?
  - What's in our control?
  - How do we compare?
  - What is preferred?

HOW DO WE GET THERE?
- Objectives & Policies
- Programs & Budgets
- Projects
  - How can we test & scale?
  - When do we intervene?
  - How do we integrate into programs?
“The irony in transportation is we tend to plan 25 years ahead, ... the only thing we know about 25 years from now is it will be nothing like today.”

Stephanie Pollack, Secretary of Transportation for the Massachusetts DOT
How Do We Handle Transitions?

Cars
- Existing: owned
- Trending: electric, carshare
- Emerging: point-to-point, round trip, subscription
- Future: owned fleet

Shuttle
- Existing: private
- Trending: employer, on-demand microtransit
- Emerging: driverless with operator
- Future: driverless without operator

Parking
- Existing: traditional lots, traditional meter
- Trending: smart parking
- Emerging: autonomous garage
- Future: summons from remote spaces
How Do We Handle Transitions?

Existing ➔ Trending ➔ Emerging ➔ Future

**Existing**
- private & public

**Trending**
- private on-demand microtransit

**Emerging**
- driverless - operator segregated lane assigned routes/stops

**Future**
- driverless without operator

**Tipping Points for approving microtransit**
- successful pilot & subsidies
- ridership metrics
- number of transit feeds
- financial projections

**Tipping Points for limited AV shuttles**
- successful pilot - private lanes
- safety protocol
- ridership goals

**Tipping Points for full scale AV shuttles**
- pilot - scaled, on-demand safety protocol
- congestion metrics
- equitable service metrics
- financial projections
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