THE FUTURE OF WALKING

Considering New Mobility’s Influence on Walking and Walkability
Alta’s New Mobility Leadership Team

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Link to TRB Forum 2018 White Paper: https://altaplanning.com/resource_categories/industry-resources/
TRB Forum Website: http://www.trb.org/TRBAVSMForum/AVSMForum.aspx

Making New Mobility Work for Your Community | Equity, Access, Safety, and Street Design
What is New Mobility?

Transportation services that are enabled, defined, or redefined by digital technology.
Characteristics of New Mobility

- Smart phone enabled
- Real-time
- Point-to-point
- On-demand
- Multimodal
- Shared
- Electric

Source: Adam Coppola, for the Green Lane Project
NEW MOBILITY TRENDS

#Shared Mobility
#New Uses of Sidewalks
#Mobility Hubs

#Big Data
#Autonomous Vehicles
#Setting and Signaling Priorities
Shared Mobility – Expanded Choice

- e-bikes
- bikesharing
- e-scooters/NEV
- scooter sharing
- carsharing
- ridesharing
- ridesourcing/hailing
- microtransit

Taxonomy: [https://www.sae.org/shared-mobility/](https://www.sae.org/shared-mobility/)
Shared Mobility – Evaluating Outcomes


Source: https://research.chicagobooth.edu/-/media/research/stigler/pdfs/workingpapers/27thecostofconvenience.pdf
New Uses of Sidewalks – Making Room

Source: FedEx
New Uses of Sidewalks – New Principles

Complete Streets 2.0

- Prioritized Uses
- Safe by Design
- Point-to-Point Trips
- Multimodalism
- Complete Networks
- Digital Infrastructure
- Adaptability
- Outcomes Based
Mobility Hubs – Walking Access

- **ADD WAYFINDING AND INFORMATION FOR ALL TRANSIT CONNECTIONS**
  Even neighborhood transit connections are important; these should be just as navigable as more regional connections.

- **FOCUS ON CONNECTING TO PRIMARY SERVICE CORRIDORS**
  Connections to high-capacity, high-frequency routes are more likely to encourage multimodal travel and contribute to regional mobility than connections to neighborhood-serving routes with lower frequency.

- **PROVIDE AMENITIES AT TRANSIT STOPS**
  Ensure bike storage, waiting areas for system users, access to e-scooters, and additional amenities included in a given mobility hub typology.

**TRANSPORT NETWORK CONNECTIVITY**
- MOBILITY HUB
- TOD
- HIGH-SERVICE TRANSIT ROUTE
- NEIGHBORHOOD-SERVING TRANSIT ROUTE
- COMPLETE STREET OR GREENWAY
- MULTIMODAL CONNECTIONS
Mobility Hubs – Community Place

POTENTIAL DESIGN FEATURES

- All of the features from Level 1, in addition to:
  - Loading zone for ride-sourcing (e.g., Uber, Lyft), freight, and autonomous vehicles
  - Establishing private shared mobility pick-up and drop-off areas allows for curb pricing policies to be established and monitored locally.
- Seating and tables
- Real-time transit information
- Including information on whether or not the on-vehicle bus racks are full
Big Data – Expanding What We Know

Massachusetts Cities Tackle Pedestrian Safety with Data
Cambridge and Somerville are investing in traffic analytics technology to assess how and why pedestrians and cyclists are under increasing risk of an accident on their streets and what can be done to improve safety.

BY SHIP DESCANT · MARCH 26, 2018

SMART CITY PDX

HIGH TECH FOR SAFER STREETS:
The Traffic Safety Sensor Project

When it comes to designing safer streets for all users, accurate information is crucial. The engineers and safety experts who design the streets need to know how people use the streets, including where people typically walk, bike and drive. They need to know how fast people are driving and where pedestrians typically cross the street.

But now thanks to new sensor technology, it has become much easier to gather these insights into how people are traveling on our streets and where the danger spots are. With the information provided by these sensors, traffic and safety engineers can produce better street designs!

The Smart City PDX Traffic Safety Sensor Project will equip the city’s traffic surveillance system with sensors on three of Portland’s most dangerous streets: 12th Ave, Hawthorne and Division.

PBOT staff will use the sensor information to make recommendations about future changes to make it easier for people to travel safely along these and other Portland streets.

Source:
Autonomous Vehicles

Technology has come a long way - but there are still some important developments being made.

• **Detection Problem:** AV’s do not see and anticipate people walking and bicycling as well as they do vehicles.

• **Communication Problem:** Currently pedestrians, bicyclists and drivers make eye contact to communicate intent - especially at a 4-way intersection scenario.

• **Paradox of Safe Crossings:** AVs that stop for pedestrians at any time/location may lead to impaired traffic flow or, in response, physical restrictions to pedestrian access or further criminalizing jaywalking.

Source: https://www.theverge.com/2018/7/30/17622540/drive-ai-self-driving-car-ride-share-texas
“[Uber] expects it will be a long time before one of its biggest investments, self-driving cars, is ready for wide-scale deployment”

Chief Scientist at Uber Advanced Technologies Group on April 9, 2019


Setting and Signaling Priorities
PRINCIPLES FOR NEW MOBILITY

We envision a city by and for the diverse, dynamic people who call Seattle and the region home. As we work to integrate new mobility options into the city we love, our core principles will guide us:

- Put people and safety first
- Design for customer dignity and happiness
- Advance race and social justice
- Forge a clean mobility future
- Keep an even playing field

Source: City of Seattle https://newmobilityseattle.info/
THE FUTURE OF WALKING

More choice
New investments
Expanded user information
New focus on UX

Data-driven, outcomes-based
Test, evaluate, repeat
Local leadership

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