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1-22-2020

Webinar: Assessing the Impacts of New Mobility on Cities

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Assessing the impacts of new mobility on cities

January 22, 2020 | NITC WebinaR

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Urbanism Next Center Program Director





4.2 Billion Trips in 2018



38 Million Rides
*(in first year)



Level 4 Automation
*(ordered 82,000 vehicles)

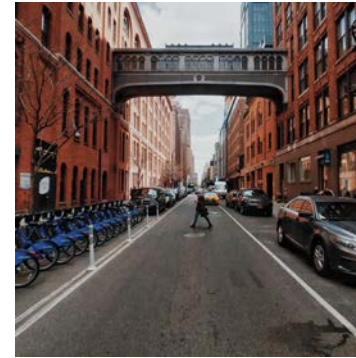


16 Billion E-Commerce Packages Delivered in 2018
118 Packages/Household... One every three days...

Multi-level



Parking



Street/curb
space
challenge



Congestion
VMT



Delivery



Walk
Bike
Transit



Trends in retail

**CHANGE IS HAPPENING
NOW.**

Approach



Workshops

- October 2018 Workshop with city staff
- February 2019 workshop with city staff
- August 2019 workshop with city staff



Policy Scan

- External
 - 10 cities with strategies
- Internal:
 - Comprehensive plans
 - Strategic plans
 - Transportation system plans
 - Climate plans
 - Economic plans



SCYP classes

- 8 classes
- 147 students
- 4 disciplines
- Various methods

SCYP Classes



Budgeting
Fall 2018
Lewis



Industrial
Ecology
Fall 2018
Skov



Growth
Management
Fall 2018
Lewis



Transportation
Winter 2019
Brown



Public
Administration
W/S 2019
Clark



Public
Management
Spring 2019
Clark



Landscape Design
Studio
Spring 2019
Ribe



Land Use
Policy
Spring 2019
Yang

SCYP Classes

Class	Focus	Method
Budgeting	Transportation revenues	Revenue analysis
Industrial Ecology	Household travel decisions	Cost analysis; benefit analysis
Growth Management	Comprehensive plans + e-commerce & AVs	Content analysis; case studies
Transportation Planning	Parking and micromobility policy	Data analysis; policy analysis
Public Administration	Data management policy	Interviews; policy analysis
Public Management	New mobility policy	Case studies; policy analysis
Design Studio	Re-design streets with new mobility	Design analysis
Land Use Policy	Accessibility of non-auto means	Case studies

Urbanism Next

- Emerging Technologies and Cities: Assessing the Impact of New Mobility on Cities Final Report (January 2020)
- Navigating New Mobility Final Report (October 2019)
- SCYP Class Reports



Emerging Technologies and Cities: Assessing the Impacts of New Mobility on Cities

Rebecca Lewis, Ph.D.
Rebecca Steckler

New mobility policy topics

1. Safety (and health)
2. Social equity
3. Active transportation
4. Congestion and vehicle miles traveled
5. Sustainability and environmental impacts
6. Design and management of the right-of-way
7. Land use and metropolitan footprint
8. Informed decision making
9. Managed innovation
10. Fiscal impacts and new mobility revenue

Policy Scan

- **City of Gresham:**

- Transportation System Plan (2014)
- Active Transportation Plan (2018)
- Comprehensive Plan

- **City of Eugene:**

- Eugene 2035 Transportation System Plan (2017)
- Eugene Vision Zero Action Plan (2019)
- MoveEUG: Eugene's Active Transportation Strategy (2017-2021)
- Envision Eugene Comprehensive Plan (2017)
- Draft Community Design Handbook (2007)
- Community Climate and Energy Action Plan for Eugene (2010)
- Regional Prosperity Economic Development Plan: Eugene, Springfield, Lane County (2010)

Policies applicable to New Mobility and e-commerce

- Both cities had many supportive policies
- Opportunities
 - Prioritizing active transportation/low-carbon modes
 - Efficient freight may look different in the future as more retail purchases go online.
 - Parking: Opportunities for shared parking
 - Opportunities to reduce conflicts between modes
 - Collect and report data...

Policies applicable to New Mobility and e-commerce

- Gaps
 - Update equity issues to include geographies, pricing, smart phone access, unbanked, etc.
 - GHG reduction strategies that explicitly address new mobility and e-commerce
 - Need to rethink design and allocation of uses in the ROW
 - Management of the curb in areas of highest demand
 - Compact urban form and reduction in parking requirements
 - Collect information about usage from companies
 - Regional collaboration on new mobility and e-commerce
 - Fee structure for new mobility or e-commerce services

Putting it all together

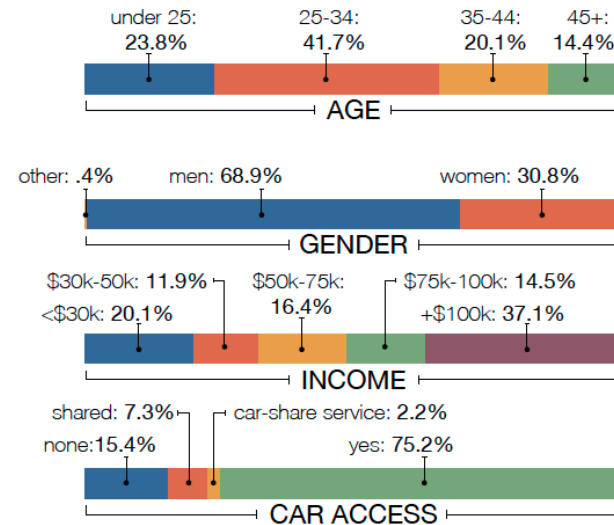
Bias for known
transportation
modes



Putting it all together

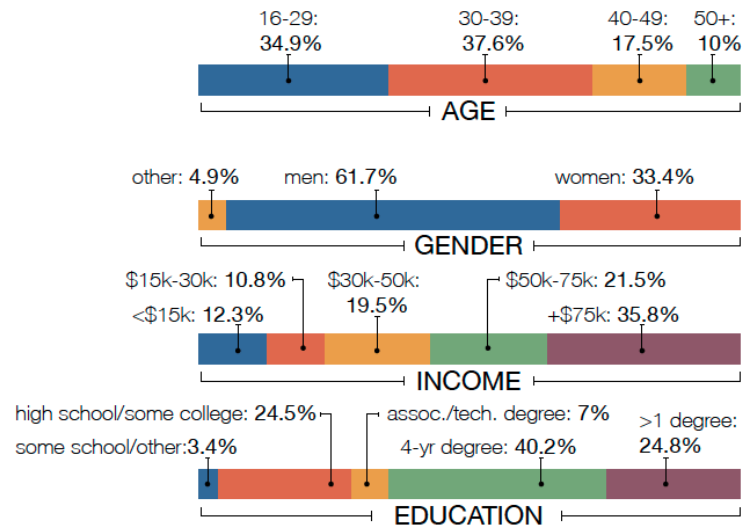
Who are new mobility services designed for?

Fig. 5: Santa Monica Ridership Demographics, 2018



Data Source: Shared Mobility Device Pilot Program User Survey Results. Santa Monica, 2019

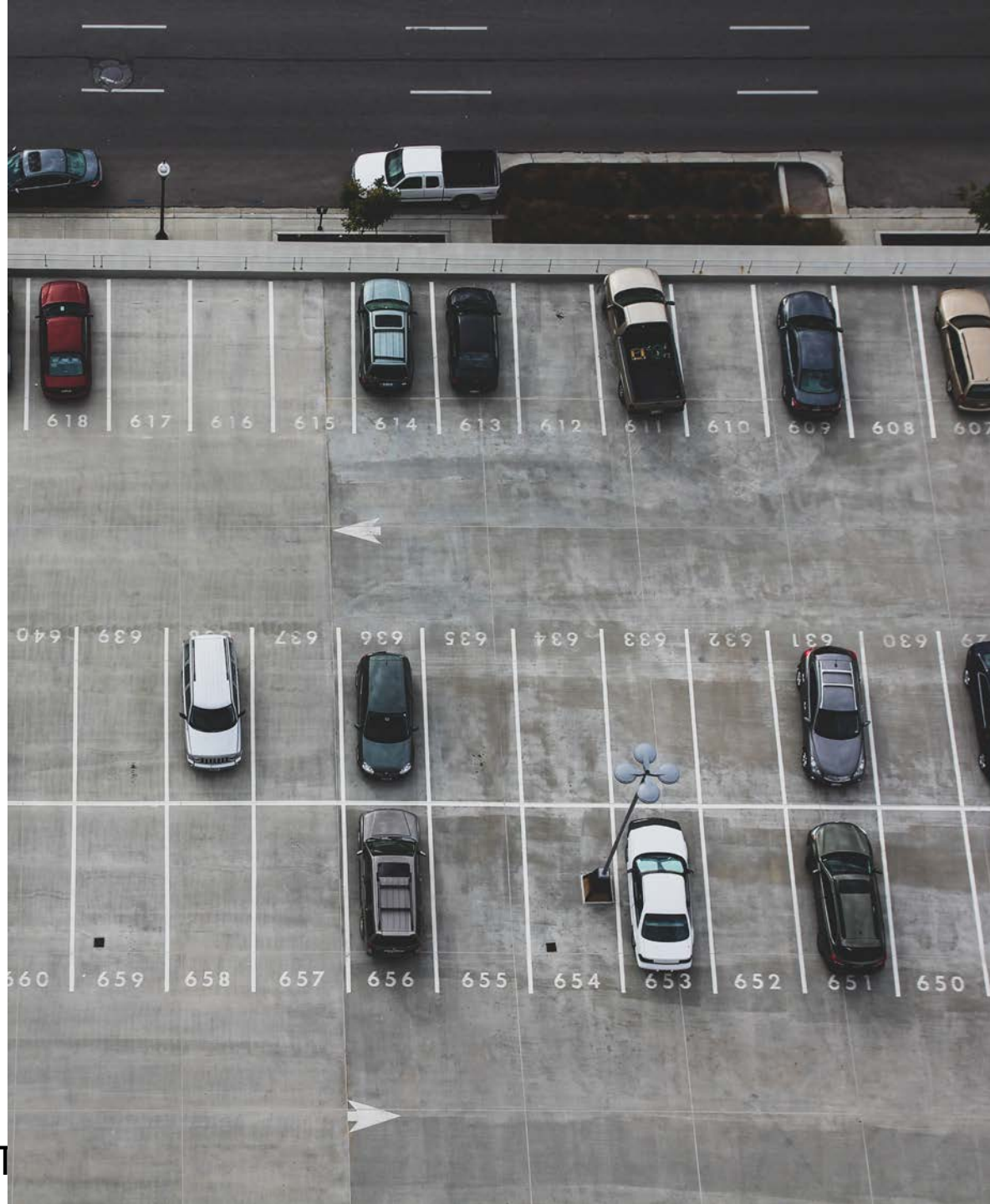
Fig. 6: Portland Ridership Demographics, 2018



Data Source: 2018 E-SCOOTER PILOT User Survey Results. PBOT, 2019

Putting it all together

Prepare for land use changes related to parking...



Putting it all together

Prepare for land use
changes related to
parking...
delivery...



Putting it all together

Prepare for land use
changes related to
parking...
delivery...
lockers...



Putting it all together

Prepare for land use
changes related to
parking...
delivery...
lockers...
and warehousing



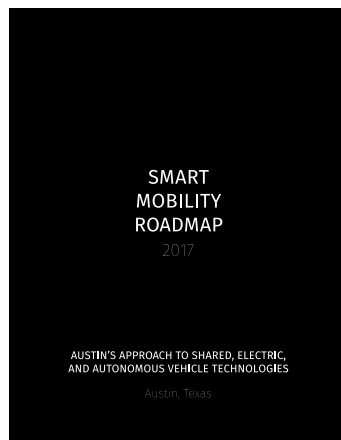
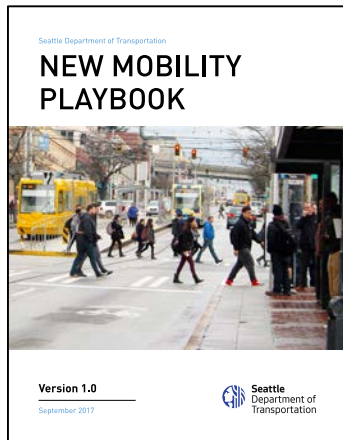
Putting it all together

New demands for
space



New Mobility Strategy

1. Start with community values and goals
2. Coordinate with regional partners
3. Develop a data privacy and management plan
4. Track research and other efforts
5. Inform decision-makers and public about impacts



Policy
recommendat
ions

Safety



Policy | Social equity recommendations

Greenlining Institute: Equitable Mobility Framework

Goal #1 Increase Access to Mobility

1. Affordability
2. Accessibility
3. Efficiency
4. Reliability
5. Safety

Goal #2 Reduce Air Pollution

6. Clean Air and Positive Health Benefits
7. Reduction in Greenhouse Gases
8. Reduction in Vehicle Miles Traveled

Goal #3 Enhance Economic Opportunity

9. Connectivity to Places of Employment, Education, Services, & Recreation
10. Fair Labor Practices
11. Transportation-Related Employment Opportunities
12. Inclusive Local Business & Economic Activity

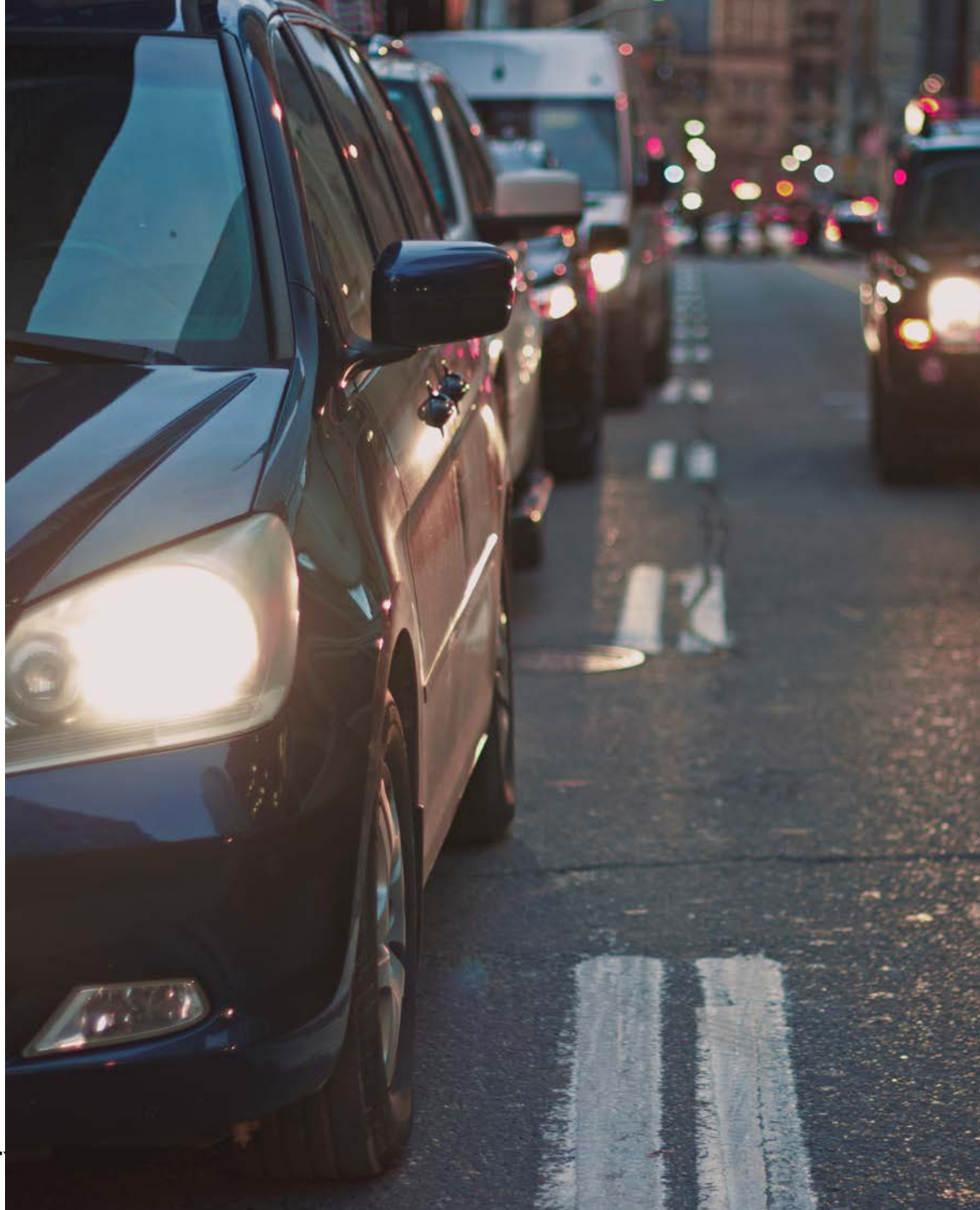
Policy
recommendat
ions

Active transportation



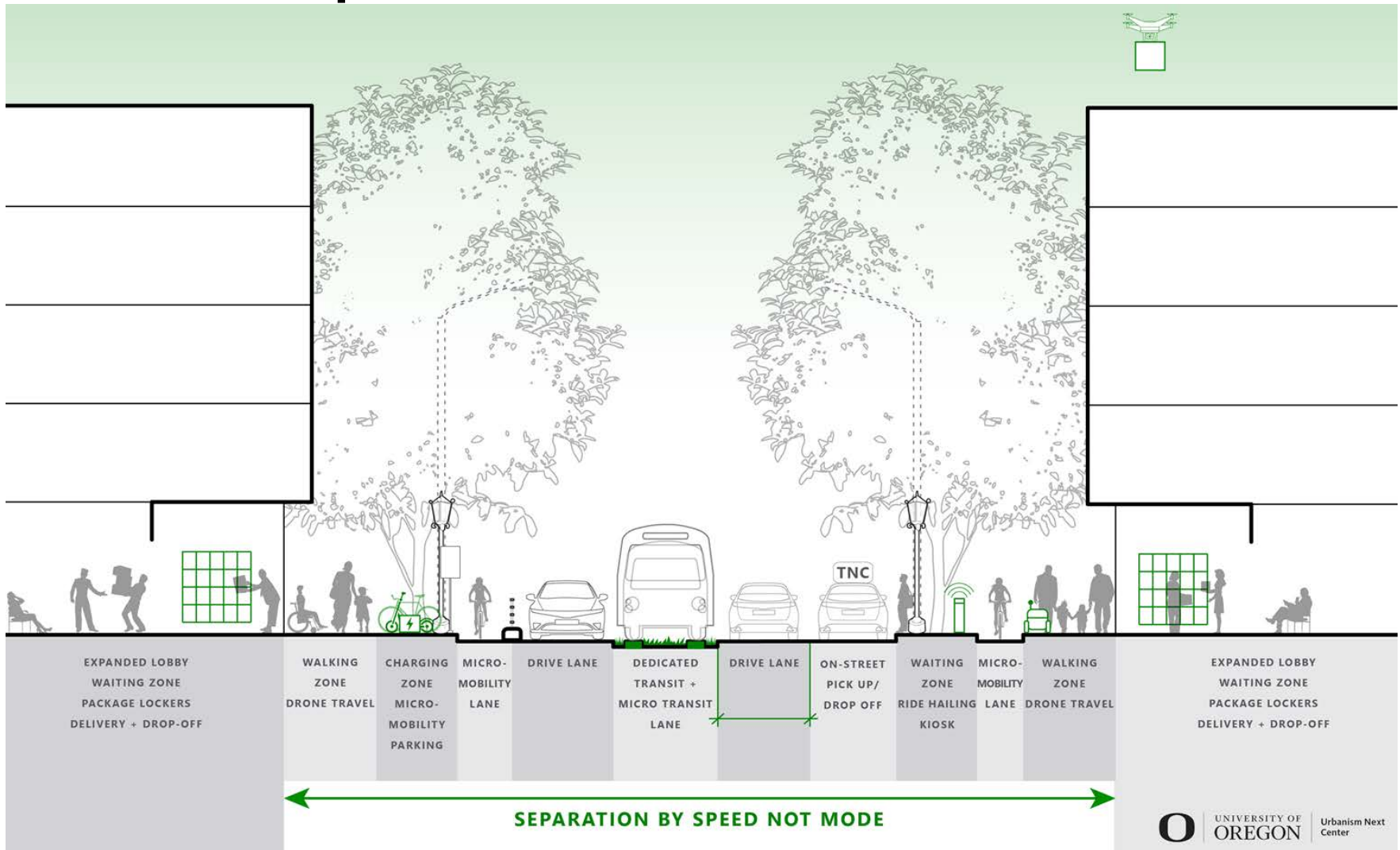
Policy
recommendat
ions

Congestion
and VMT

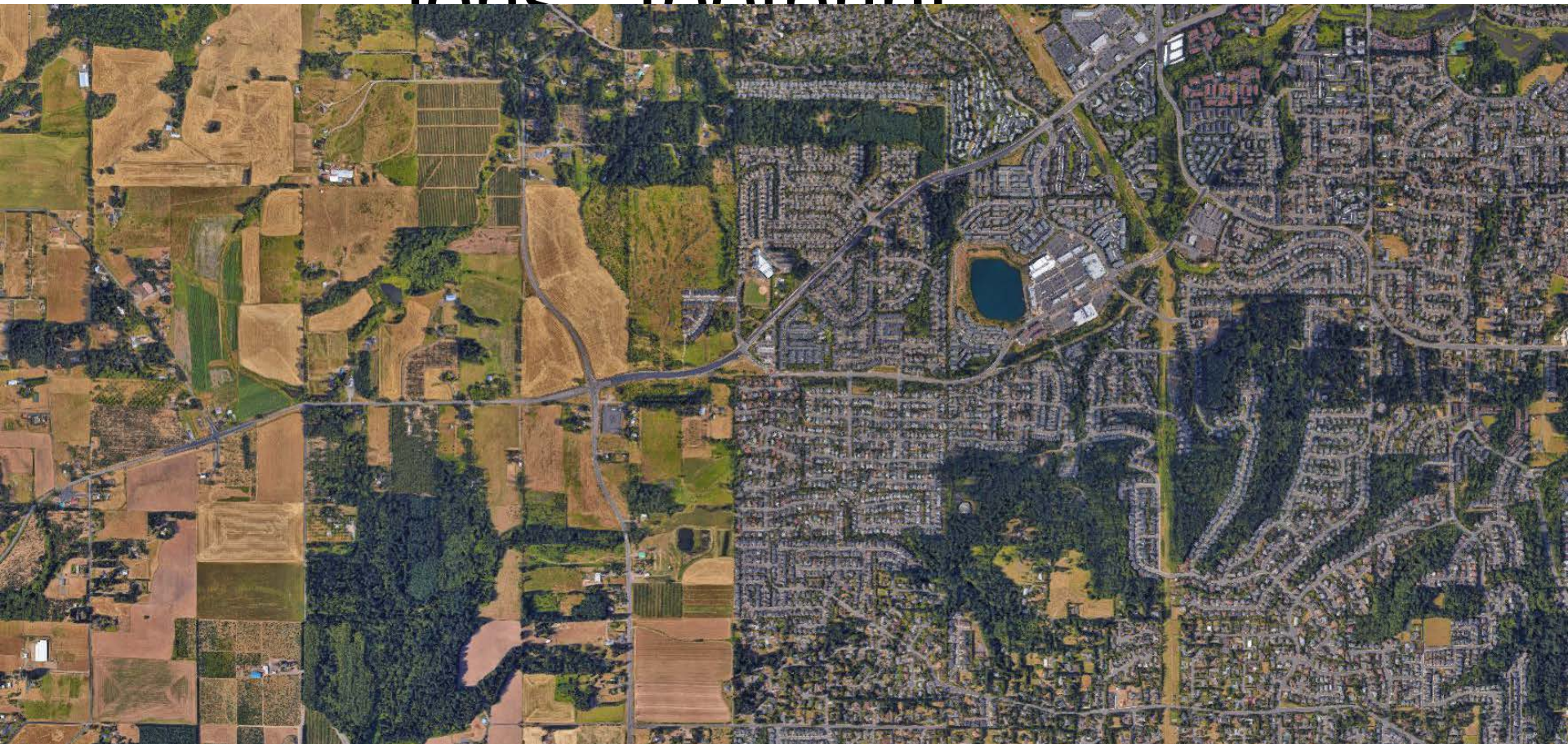


Policy recommenda

Right-of-way design and management

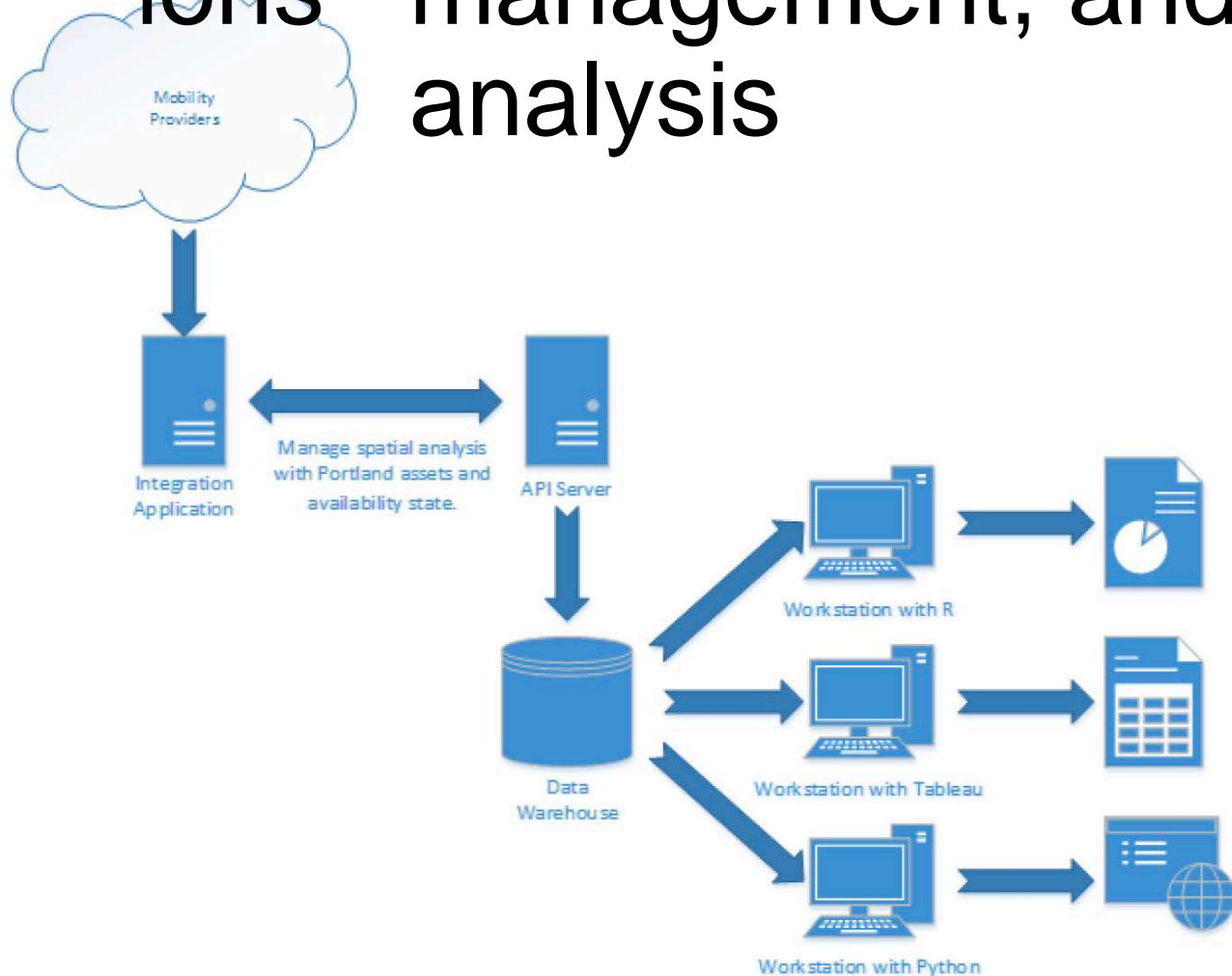


Policy | Land use and recommendat | metropolitan ions | footprint



Policy
recommendations

Data requirements,
privacy,
management, and
analysis

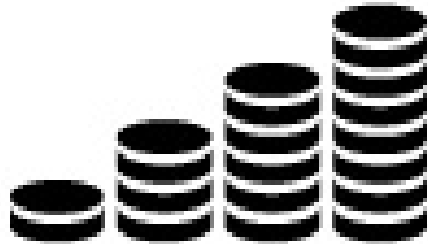


Policy
recommenda

Manage Innovation



Policy recommendations



Fiscal impacts and opportunities

1. Charge fees to manage and enforce program
2. Fees to pay for infrastructure
3. Pricing to manage congestion in districts, curb, special events
4. Price for goals (equity, GHG emissions reductions, etc.)


Key | Medium sized cities takeaways

1. Regional approach
2. “Wait and See”
3. Educating elected officials and staff
4. Values drive decisions
5. Updating regulations
6. Fiscal case
7. Access to best practices

Urbanismnext.org

NITC
NATIONAL INSTITUTE FOR TRANSPORTATION AND COMMUNITIES

Final Report 1249
January 2020



**Emerging Technologies and Cities:
Assessing the Impacts of New Mobility on Cities**

Rebecca Lewis, Ph.D.
Rebecca Slenker

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NATIONAL INSTITUTE FOR TRANSPORTATION AND COMMUNITIES nitc-utc.net

UNIVERSITY OF OREGON

**NAVIGATING NEW MOBILITY:
POLICY APPROACHES FOR CITIES**
JULY 2019 | FINAL DRAFT



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CITY OF GRESHAM, OR | CITY OF EUGENE, OR

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National Science Foundation Planning Grant


**MULTILEVEL IMPACTS OF EMERGING
TECHNOLOGIES ON CITY FORM AND
DEVELOPMENT**
JANUARY 2020



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**NEW MOBILITY IN THE
RIGHT-OF-WAY**
MARCH 2019




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POLICY BRIEF
AVS IN THE PACIFIC NORTHWEST:
REDUCING GREENHOUSE GAS
EMISSIONS IN A TIME OF AUTOMATION
MARCH 2019




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**AVS IN THE PACIFIC NORTHWEST:
REDUCING GREENHOUSE GAS EMISSIONS
IN A TIME OF AUTOMATION**
BASELINE REPORT | AUGUST 2018



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URBANISM NEXT | RESEARCH

**RETHINKING THE STREET IN AN ERA OF
DRIVERLESS CARS**

Global citizens get few moments to rethink streets and make decisions that will not leave the basic purposes of transportation and address urgent challenges the climate change, rising obesity, social isolation and conflict — all while expanding opportunities for general happiness throughout society. Such a pivotal moment to grow up, as autonomous vehicles represent a potentially disruptive technology that can reshape the city for good or for ill. City planners, policy makers and community residents have a unique and immediate opportunity to rethink their streets with purposeful and creative consideration about how the critical public good may best serve the public for generations to come.

Marc Schlossberg, Ph.D.
William (Billy) Higgs, Ph.D., ACR, LEED AP
Adam Millard-Ball, Ph.D.
Elizabeth Sheg, Ph.D., ACP
January 26, 2018

APRU

SCI
Sustainable Cities Institute

www.urbanismnext.org

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NEXT
AUGUST 2017

**THE IMPACTS OF
AUTONOMOUS VEHICLES AND E-COMMERCE**
on Local Government Budgeting and Finance

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Emerging Tech and Cities

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MAY 13, 2020 PRE-CONFERENCE WORKSHOPS

MAY 14-15, 2020 CONFERENCE SESSIONS

Portland, OR



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