Integrating the User Perspective in Planning for Smart Cities

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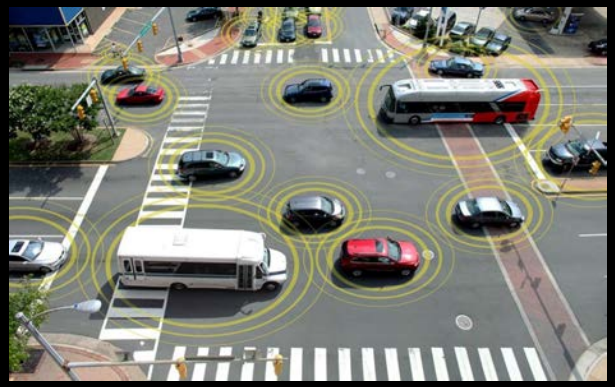
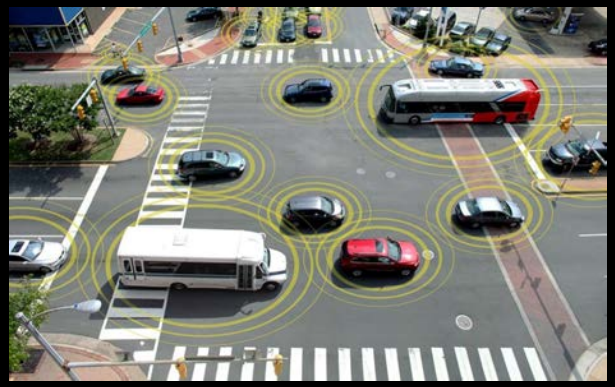
Carnegie

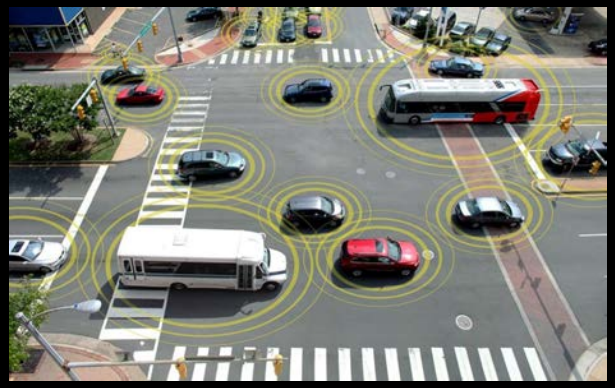



Carnegie

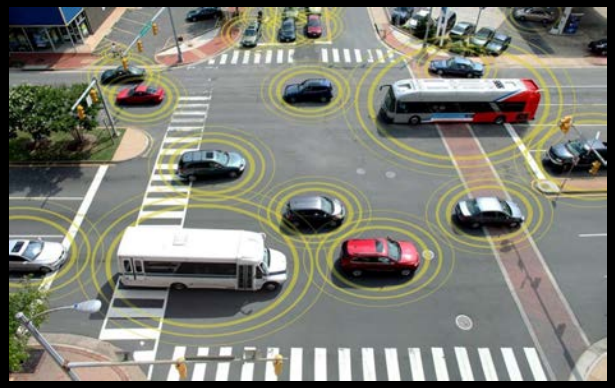



38 GEARY
Ocean Beach


FiOS TV
IS



How does technology map to behavior?



How do you make transportation decisions today, and how might that change in the future?

Smart City and Infrastructure Components

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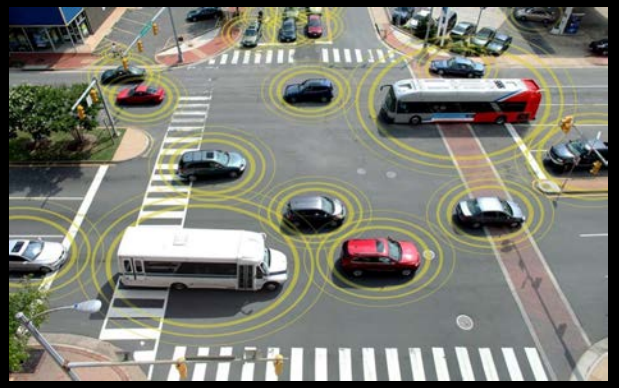
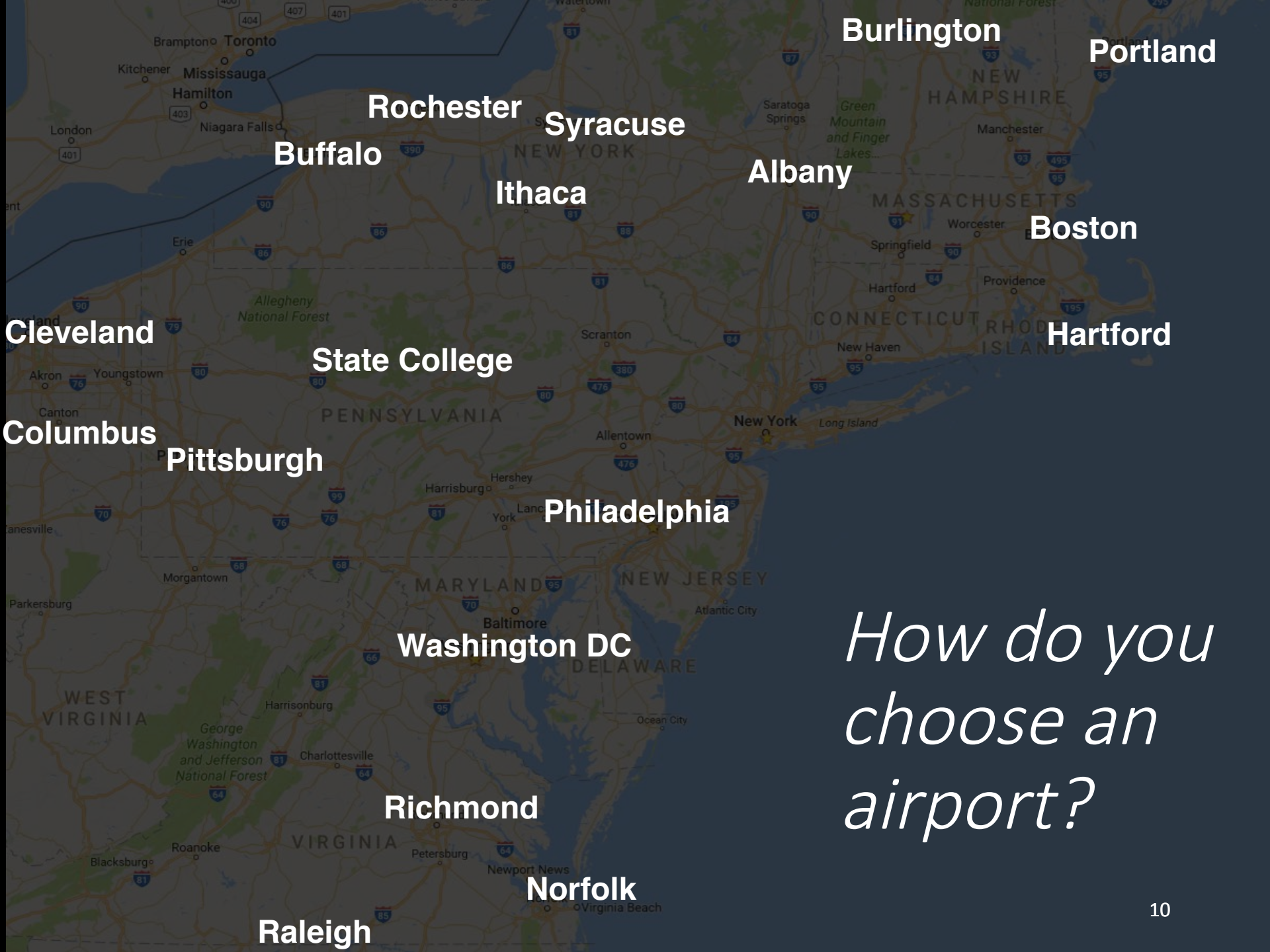


Integrating the User Perspective in Planning for Smart Cities

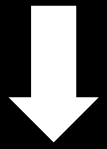
- Intercity transportation

- Local urban transportation


Burlington
Portland
Rochester
Syracuse
Buffalo
Albany
Ithaca
Boston
Cleveland
State College
Hartford
Columbus
Pittsburgh
Philadelphia
Washington DC
Richmond
Norfolk
Raleigh
How do you choose an airport?

Drive

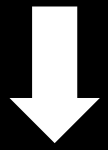
Access car



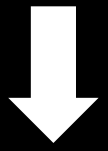
Drive to destination

Flight

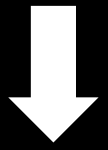
Access airport



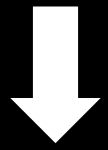
Security and wait at gate



Fly on plane



Deplane and wait for luggage



Travel to destination

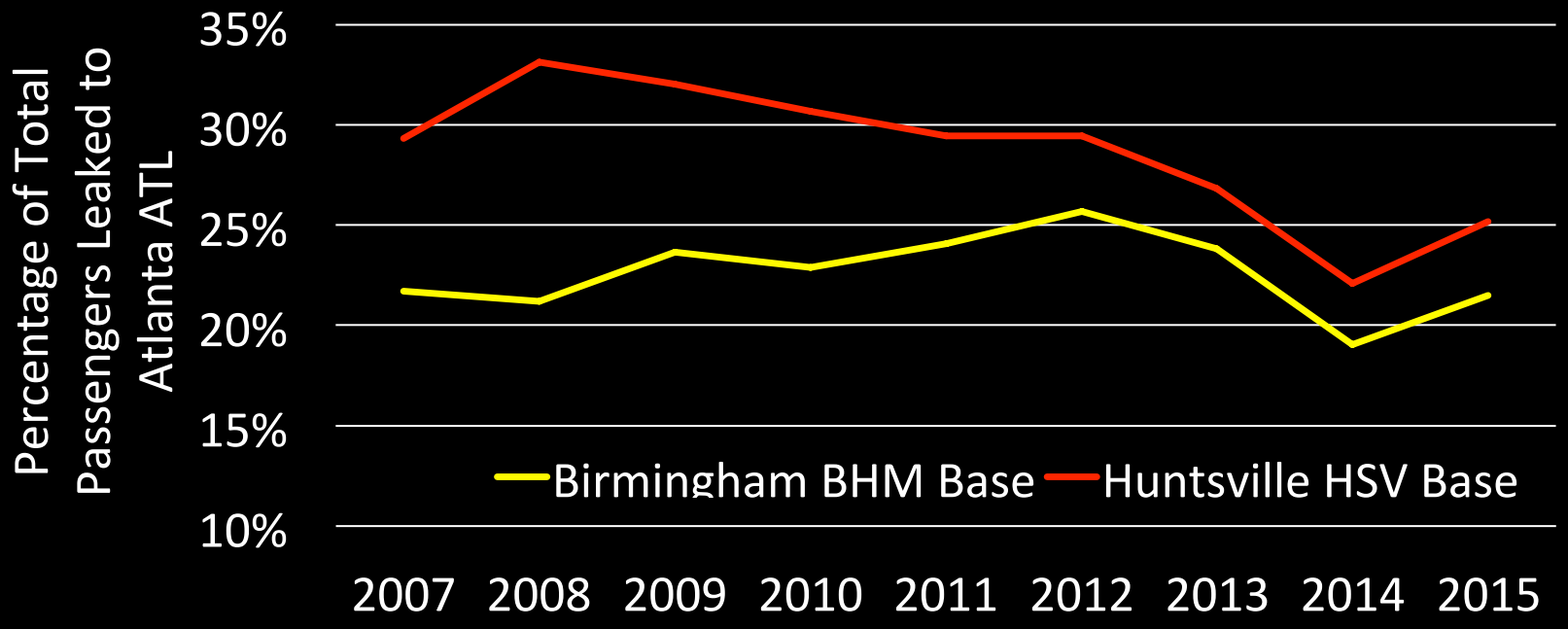
Flexibility

Productivity

Predictability

Autonomous Vehicles

Even today, without smart infrastructure, passengers don't use their home airport



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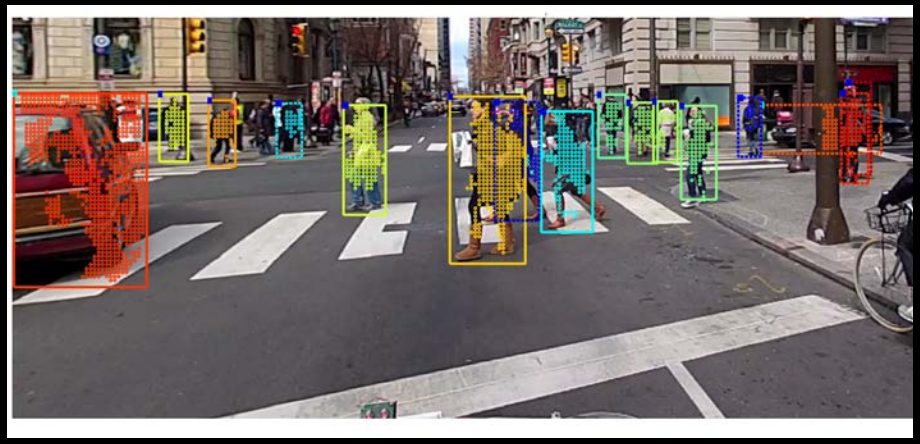
Flickr/808armada, Flickr/seeminglee

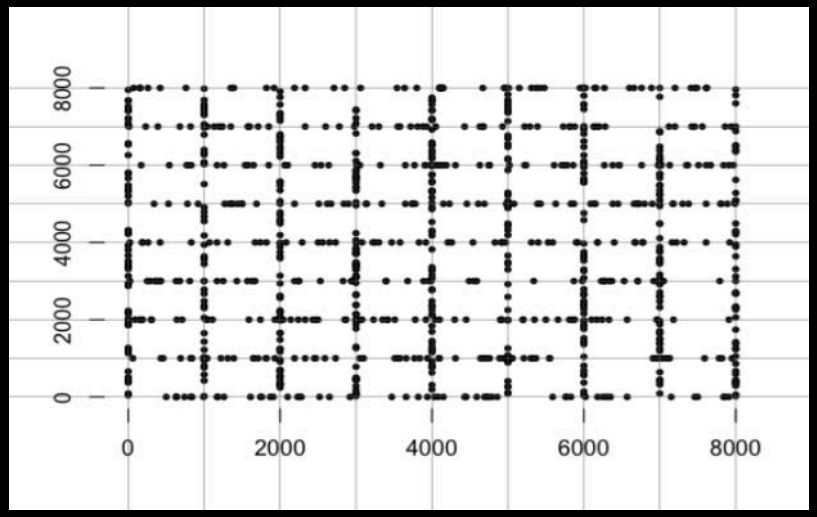
Will Autonomous Driving be Safe for Pedestrians and Cyclists?

- Will people walking or biking change the way they cross streets or use bike lanes because of autonomous vehicles?
  - Two sides of this question:
    - Will the autonomous vehicle sense pedestrians and cyclists?
    - Will pedestrians and cyclists change their macro and micro behaviors with autonomous vehicles?

Pedestrian Sensing Vehicles and Predicting Pedestrian Behavior

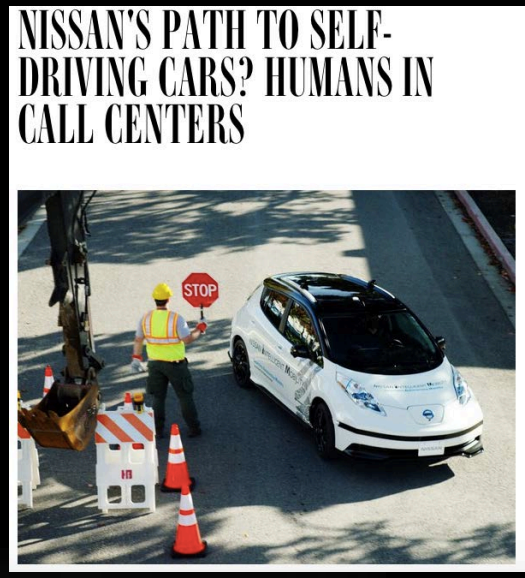


Pedestrian Impact on the Network with Connected Vehicles



Pedestrian and cycling impact on the distribution of vehicles

Remote piloting for urban conflicts



Are our infrastructure planning processes ready for intelligent infrastructure?

New runways across the U.S.

Disjointed urban infrastructure

Mobility21

DoT National University Transportation Center

Penn Engineering

Carnegie Mellon University

School of Design

University of Pennsylvania

PennDesign

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