Integrating the User Perspective in Planning for Smart Cities

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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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- Intercity transportation
- Local urban transportation
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.
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