GETTING THERE:
THE TRANSITION TO AUTONOMOUS, ELECTRIC, AND RIDE-SOURCING VEHICLE TECHNOLOGIES & HOW WE WORK TOWARD POSITIVE OUTCOMES

CAMILLA DARTNELL AND BRYAN GRAVELINE
KITTLESON & ASSOCIATES, INC.
Camilla & Bryan
Emerging Technologies are ACES... AUTOMATED CONNECTED ELECTRIC SHARED
Travel Behavior and Mode Choice

Less car ownership & more multimodal decisions

Sprawl, congestion, and decrease in transit
Parking and Curb Space

Reduced need for parking

Need for pick-up & drop-off space
Funding

Potential to implement new transportation fees

Decrease in transportation revenue

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Safety

Long term: improved safety performance

Insufficient detection of vulnerable users
How should we prepare?
Solutions: Start Big Picture

- LRTP
- Goals & priorities - inform the technology providers
- Policy & design support goals
- Portland’s proposed modal priorities:
  1. Walking
  2. Biking
  3. Transit
  4. Taxi/commercial transit/shared vehicles
  5. Zero-emission vehicles
  6. Other single or zero-occupancy vehicles
Funding

- Infrastructure costs, environmental costs, congestion costs, space costs, etc.
- Road usage charges
- Congestion pricing
- Curb pricing
Data

• Data will allow better decision making
  – Street usage and conditions
  – Curb occupancy
  – Parking conditions
  – Modal choices
  – Congestion

• Variety of different data sources
  – City collection
  – Private companies
Parking

- Policy: reduce or eliminate parking minimums
- Design: make structured parking able to be converted
Curb Space

• Policy:
  – Flexible curb space
  – Designated pick-up & drop off areas
  – Designated bicycle/scooter parking

• Design:
  – Pick-up/drop-off with amenities
Site Plan
Pick-up & Drop-off

- Design the pick-up space with benches, art, and good lighting to improve the experience of waiting passengers.
- Install plug-in charging at parking locations near development.
- Keep some parking behind developments.
- Maintain a simple and well-marked route from drop-off area to automated parking.
- Locate zones close to development entrances to allow quick and easy access.
- Provide a staging area to give pick-up vehicles a convenient place to wait for passengers without blocking traffic in the pick-up zone.
- Streamline access between drop-off and pick-up zones to allow vehicles to progress from dropping off arriving passengers to picking up departing passengers.
- Define separate drop-off and pick-up zones to smooth traffic flow.
- Create easy inflow and outflow between street and drop-off/pick-off zones.
Plan Proactively

Consider other emerging transportation technologies:

- e-scooters
- bikeshare
- delivery bots

Photo: James Martin/CNET
Questions?