Planning for Autonomous Vehicles

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Began discussing autonomous vehicle technology with Minnesota GO Vision

- Part of the vision for Minnesota’s transportation system is to be “flexible and nimble enough to adapt to changes in society, technology, the environment and the economy”
Self-Driving Cars

OR

Driverless Cars
If a human must be in the vehicle…

- Safety improvements
  - Probably significant reduction in crashes
- Increased throughput
  - Reduced need for capacity expansion
- Longer commutes?
- May not need quite so forgiving design standards
- May extend driving for aging population

- Less “disruptive” as a technology
IF DRIVERLESS: Cars that pick you up/drop you off
If human doesn’t have to be in vehicle at all times

- More dramatic changes are possible
  - Dramatically reduced need for parking
    - Do houses need garages? Do businesses need parking lots?
  - Smaller vehicles?
    - Narrow lanes?
  - More congestion? Less congestion? - unclear
  - Accessibility for seniors, persons with disabilities, possibly children
  - Transit implications?
IF DRIVERLESS: No more truck driver shortage?
CAUTION
TRANSITION AHEAD
First generation may not handle WINTER well
Experience with Airline Industry Raises Human Factors Concerns
When do we start assuming autonomous vehicles in our plans/designs?

When do hit the inflection point? 2025? 2030? 2040?

Discussing 3-5% of on-road fleet as a decision threshold
Thank you

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