Transit in the Age of Autonomy
Introductions

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Go
Possible game outcomes (it's complex)
Deep Mind’s AI, AlphaGo played a 5-game series with one of the world’s best go players. Shortly into game two, AlphaGo surprised the world with its “Move 37”
“AlphaGo’s moves were so surprising they overturned hundreds of years of received wisdom, and have since been examined extensively by players of all levels. In the course of winning, AlphaGo somehow taught the world completely new knowledge about perhaps the most studied and contemplated game in history.” – Deep Mind
Technology adoption graph
Plus an additional 2,700,000,000 (2.7 billion) simulated miles driven
Mobility as a Service (MaaS)

Current car ownership & operation

$0.60 – $0.70 per mile

MaaS Model

$0.10 – $0.20 per mile
Smart Cities, transportation technology, mobility options, and all the others - these are all part of an expanding menu of tools available in our toolbox.
But remember, a tool is a means to an end, and is only as useful as the job it’s intended to do.
Our toolbox is expanding…
Start the app
Similar to current ridesharing services, the app will use GPS to identify the user's location and calculate which route stop is closest to his or her location.

Rider selects their pickup and drop-off location and confirms with a mobile app payment
Users will confirm their pickup location and identify their drop-off location among one of the predetermined stops along the route. They will confirm the trip through a mobile application payment system built into the app.

Rider goes to the nearest pickup location
The app will tell the user how much time they have to get to the pickup location once the ride is requested. The AV's management software will deploy vehicles based on demand, and calculate which vehicle will be best able to serve the user in the system at any given time.

Rider boards the shuttle
Once the shuttle arrives at the predetermined pick-up location, the rider can board and begin their trip. The shuttle may pick up other passengers and will calculate if one of the shortcut routes will be used.

Rider arrive at their destination
The shuttle will make stops that are requested for either pick-up or drop-off locations. Once a rider reaches their destination, the doors open and they exit the vehicle.
**Loading Area / Turn-Out (4 stops)**
Areas with existing loading areas or turn-outs are an opportunity to use the existing roadway and curb configuration as pick-up and drop-off locations for the autonomous microshuttles. Each zone has different regulations, so there may be times of the day where a pick-up or drop-off is not allowable or feasible. In those instances, the app will not include that stop as an option.

**Traffic Lane (4 stops)**
Some areas in Downtown have a curb that meets the street without on-street parking present. These areas are proposed for stops within traffic lanes in situations where passing lanes exist, and where traffic is slow.

**Transit Stop (6 stops)**
Where existing, transit stops already used by the StarTran system should be utilized. Several exist along the proposed route and provide an excellent opportunity to transfer to and from existing bus lines, and to use the facilities already constructed.

**Parking Area (10 stops)**
Removing parking to provide for a microshuttle stop should be a last option. Several areas provide no other opportunity to incorporate a stop, so parking must be considered. In general, less parking will be affected if parallel spots, rather than head-in angled spots are used. Only one stop proposed on the map uses angled head-in spots.
2018 MAYORS CHALLENGE
CHAMPION CITY
LINCOLN, NE
Blurred Lines
One exciting thing about AV technology, is it can open the possibilities for what mobility can be…
How should we start to look at transit?

Is it a commodity?
Or is it a service?
Baker who does not travel.
His business still depends on mobility.
If it’s a service, does he have any incentive to pay?
If it’s a commodity, should he have a vested interest?
What should transit agencies be doing?

1. Pilot
What should transit agencies be doing?

1. Pilot
2. Scale
What should transit agencies be doing?

1. Pilot
2. Scale
3. Institutionalize
Thank You

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