JOINING THE AV CLUB

Lessons for cities on the future with autonomous vehicles

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THE ORIGINAL REPORT on this scenario planning exercise, held at the American Planning Association Research Symposium, appeared in Mobility Express under the pen name “Mobility Momma.” A hundred planners, engineers, and researchers gathered to understand the impacts of autonomous vehicles (AVs) and crowdsourced how to plan for them. This “memo,” which has been updated, sets the stage for the crowdsourcing strategies and resources. The “city manager’s response” reflects our research and practice since the symposium.

TO: CITY MANAGER
FROM: CONCERNED CITY COUNCILMEMBER
RE: MINI METROPOLIS — UNDER THE EIGHT BALL

No matter whom I talk to—new businesses, our financial advisers, the state DOT, concerned citizens—it seems like we are way behind! No one agrees on anything except that driverless cars, buses, shuttles, and maybe even riderless scooters are here now.

Waymo’s gone into production with a factory in Detroit. Dozens of cities will soon have shuttles with cute names like Milo, Olli, and Marlon, some operating on the sidewalk, in special lanes, and even in the middle of downtown traffic. (There is a big federal grant I would love to tap into for the university). Taxi drivers are still mad about Uber and Lyft.

Some say that AVs will siphon off ridership from transit, eliminate jobs, and lead to the bankruptcy of our bus system. The GM tells me that we need to learn from these new technologies now. The real estate developers say they are saddled with expensive parking spaces that won’t be needed in an AV world.

University researchers claim that the vehicles will be roaming the streets empty and people will “drive” longer and longer distances. Plus, we won’t be able to support the UPS distribution center without a real digital infrastructure. We don’t even have good broadband internet access.

And then these advocacy groups say we’re going to convert streets and parks, widen the sidewalks, and add protected bike lanes.

We are promoting ourselves as an innovation hub, but how is it innovative if 75 percent of our citizens still say they’re scared to ride in AVs?

I would sure like to know what all the infrastructure is going to cost and how we’ll pay for it. Can you pull together some level-headed experts and figure out what Mini Metropolis should do?

TO: CONCERNED CITY COUNCILMEMBER
FROM: CITY MANAGER & DIRECTOR OF PLANNING
RE: MINI METROPOLIS — A CHANCE TO SHINE

Thank you for your patience, Concerned City Councilmember. There’s lots of speculation about when and whether we will switch over to autonomous vehicles. Let’s figure out how Mini Metropolis can get ready for AVs and shape this mobility revolution. Here you go:

Community or low-speed AVs travel at 10–35 miles per hour and include small robotaxis, pods, large shuttles, and retrofitted vehicles like golf carts and vans. See how some communities are piloting AV tech now:
1. **MONEY TALKS:** Focus on economic development, job loss and creation, and revenue loss.

Start by understanding the economic impact. Expanded and improved mobility choices and innovation are drivers of economic vibrancy and the ability to attract and keep jobs. Look at the impacts of AVs (what some people call “self-driving vehicles”) on revenue. And look at the impact of jobs creation and retention and increased autonomy for those who do not drive. Greater fuel efficiency and shifts to electric vehicles will accelerate the downward spiral of gas tax revenues. Changed ownership models also may undercut personal property tax. Decreased demand for parking may cut into parking revenues.

2. **UNDERSTAND EQUITY.**

AVs can dramatically improve opportunities for blind, older, and younger riders—if we consider those travelers in the planning and design. You need only try to find your Lyft or Uber at night in a crowded row of restaurants and shops to appreciate that we need to pay attention to the last 50 feet from home or restaurant to your ride. Also, let’s make sure that shared vehicles are universally designed starting with wheelchair access. You would think this would be a no-brainer, but look around to see who has a ramp and a way to fasten wheelchair riders in securely. Meanwhile nationally, job and wage losses could hit transit and taxi drivers, delivery drivers, truckers, bus operators, and Lyft/Uber drivers disproportionately; we need to connect these workers to new jobs.

3. **WHAT TO WORRY ABOUT:** Favor safety gains, and protect against cyber dangers.

There are indeed real reasons to be worried about the vulnerability of automated vehicles to cyberattack. Address that risk, so as not to let it hijack automated technologies that protect occupants and people in the path of AVs, such as pedestrians, bicyclists, and people at bus stops. The sooner we start adopting automated technologies, the more lives will be saved—some of the 37,000 lives that are currently lost to human-caused crashes each year. Most traffic crashes are attributable to human error; from pilots of AI-fueled technology at Sound Transit, we now can help protect pedestrians and reduce less dangerous but still costly incidents.

4. **THE INTERSECTION OF NEW MOBILITY AND LAND USE:**

**Mobility-Oriented Development**

We’ve worked on making places where people can live, work, play, and prosper. How might they change our affordable and workforce housing? Is there a new paradigm for mobility-rich hubs that also include shared-AV drop-off areas, electric charging stations, and rich networks of walking and bike paths? Scenario planning with the stakeholders and the community is one way to explore how AV deployment could impact the city and what policy and planning tools we need to achieve our goals. Pilots of accessible, automated, connected, electric, and shared vehicles are another way to learn how to harness this disruptive set of technologies.

Conclusion: There are still many ways to maximize the safety and environmental benefits of AVs while guarding against increased congestion, sprawl, job loss, and the further weakening of public transit. Start by understanding AVs, and then move out with low-speed pilots that serve communities safely.

Let’s start now, working with the community to define what the technology revolution will look like on the streets where we live.

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