

**Infrastructure and Environment Committee
City of Toronto**

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Preamble

- Thank you Councillor Pasternak and the committee for providing me with this opportunity to speak to you on the release of the “Automated Vehicles Tactical Plan”.
- I am Dr Judy Farvolden, the Executive Director of the University of Toronto Transportation Research Institute, which we refer to as UTTRI.
- UTTRI aims to make transportation research at the University of Toronto meaningful and useful to our partners in government and industry. I’m proud to represent the work of researchers from across UofT, in many disciplines, and we are proud to count the City of Toronto among our government partners.

The AV Tactical Plan

- The first sentence of the AV Tactical Plan has three important words – plan, actionable and prepare. We have to prepare for the advent of automated vehicles on our roads so we can steer towards the good outcomes they can provide and away from the bad outcomes they may result in. For that the City needs to be armed with a plan. A plan defines actionable steps, milestones and measures of progress, all of which I found in the AV Tactical Plan.
- As revolutionary as automated vehicle technology might be, they should not change the way we run our cities. Planners still need to plan the city we want to live in, professional staff need to plan and deliver services and infrastructure, and elected officials need to make important decisions about those services, that infrastructure, and those plans.
- So, it should give us confidence that the Tactical Plan doesn’t create a new vision. It is organized around seven directions drawn from existing plans and guidelines that reflect the City of Toronto’s strategic vision. The goals describe what success would look like in 2050. The Plan defines tactics to achieve progress towards those goals. The goals are linked to the tactics by key performance indicators that will measure how well AVs support the City’s goals. We are fond of saying you can’t manage what you can’t measure. The Tactical Plan provides a framework that can be used to measure, and therefore manage, the successful adoption of AV technology in the City.



- The promise of automated vehicles is that they will take us further, faster, in more comfort and more safely than we travelled before and that's exactly what we were told when the automobile was introduced in the last century. Indeed, the advent of the automobile created unprecedented GDP growth, logistics networks that brought a multitude of products to our doorsteps and let us hit the road for fun. It worked really well until it didn't. And then congestion began to eat away at those economic gains and reduce upon our economic opportunities, the transportation sector became the single largest source of greenhouse gas emissions, and unequal access to opportunities, like jobs, created gaps.
- The transportation sector is being disrupted, and maybe that is a good thing, because can we agree that "business as usual" is not working, and the situation will worsen as our population grows? Simply taking the driver out of the vehicle does not change the fact that a car is still a car and travelling alone in a personal automobile without a driver is still travelling in a single occupancy vehicle. More of them generating more vehicle-kilometres travelled will not improve our mobility.
- That's why it is important that the Tactical Plan promotes "space efficient" and active modes of travel. The Tactical Plan will measure how well automated vehicles complement, rather than compete with, transit, shared and active mobility. Maybe, if properly implemented, automated vehicles can provide an effective solution for the first-mile/last-mile problem, and maybe they can help us to achieve seamless, integrated mobility.
- Being a for-profit company in the new mobility space has its challenges, but generally speaking, a day-in-the-life of a for-profit company is simple: run your company to grow the bottom line. Whereas, a-day-in-the-life of running the City is one of complex decision making in the interests of diverse stakeholders, addressing critical needs, in the face of uncertainty, with limited financial resources. The AV Tactical Plan will guide the City through this complex decision making, in its allocation of scarce resources, to develop policies that harness AVs for public good.
- The Tactical Plan also addresses city operations in terms of public service vehicles, future-proofing and data governance. Under future proofing of its various plans, like the Congestion Management Plan, the Tactical Plan underscores the need to understand the impacts of automated vehicles on travel demand.

History of UofT Expertise in Modelling, Simulation and Data

- UofT has a long history and extensive expertise in modelling, simulation, data and analytics in support of evidence-based decision-making. We are exceedingly well positioned to support the City in understanding the impacts of automated vehicles on travel demand.
- We are the home of the Data Management Group which has administ **with limited financial resources** ered the Transportation Tomorrow Survey since 1986 and the developers of the

GTAModel travel demand forecasting models that City Planning has used for all strategic transportation planning studies over the past 20+ years.

- Apropos AV, we have a current research collaboration precisely to investigate and quantify the impacts of AVs under various alternative future scenarios with the explicit goal of helping policy and decision makers to prepare for the pervasive impacts and disruptions of AVs.

Recommendations

- **Preserve access to data.** UTTRI aspires to support our government partners with evidence in support of decision making. Where is evidence-based decision making without data? So, while protecting privacy, it's important that the City has access to the data it needs to understand the transportation and mobility needs of its residents, and the demand new mobility service providers are placing on our public infrastructure, on the roads and at the curbside.
- **Continue to take a leadership position.** I believe the AV Tactical Plan will be one of the definitive references of what is known and understood to date about AV technology and preparedness and provides a robust plan that many jurisdictions will consult for guidance in drafting their own plans.
- **Continue to create opportunities for partnership and collaboration.** The AV team is well known and respected for its contributions and productively exploiting opportunities for pilots and partnerships. UTTRI is grateful to be among those partners and to be supporting those pilot projects.

Closing

- UTTRI has been involved with the City's AV initiatives since the initial workshop in March 2015, producing the discussion paper "Driving Changes" and workshops in 2016. We look forward to continuing to support the City through our various research programs.
- Thank you, Councillor Pasternak and thanks to the committee for allowing us this opportunity to speak on behalf of our colleagues at UofT.

