



Office of the Commissioner  
Transportation Services Department

## MEMORANDUM

To: Members of Committee of the Whole

From: Paul Jankowski  
Commissioner of Transportation Services

Date: September 19, 2019

Re: York Region Readiness for Transportation Technology Advancements

---

This memorandum provides an update on transportation technology advancements and York Region's readiness to support new transportation technologies, including the introduction of Connected and Autonomous vehicles (CAV) on the Regional Transportation Network.

### **In April 2018, Council approved a coordinated action plan to ensure the Region's transportation planning and practices continue to appropriately integrate with technological advancements**

On [April 5, 2018](#), staff reported to Council on Transportation Services initiatives to prepare York Region for advancements in transportation. Technology advancements are changing the way residents, travellers and goods will move across York Region. Council approved the coordinated action plan to support the adoption of transportation technology advancements in the Region. The plan included engaging in research with academia, developing partnerships with government agencies, municipalities and industry leaders and pilot testing new technologies in the field.

Over the course of 2018 and 2019, staff has advanced work with researchers, government partners and industry to better understand and prepare for new transportation technology through information sharing, guideline development workshops, pilot testing and implementation of new technology in the field and into existing operations.

## **The Region continues to adopt and integrate new technology to improve current operations**

Staff has undertaken a number of projects that adopt innovations in transportation technology to enhance ongoing operations and service delivery. Attachment 1 summarizes the transportation technologies the Region is implementing to improve current operations. Monitoring and evaluating the outcomes of the technology projects provides valuable insight into ongoing operational efficiencies and service reliability. Examples of outcomes include shorter travel times and the ability to minimize transit vehicle hard stops, which provide users with a smoother ride, improves fuel consumption and decreases greenhouse gas emissions.

Communication and real-time data exchange between vehicles and infrastructure within Regional corridors is required to successfully implement these technologies into existing operations. These projects help demonstrate the Region's ability to ensure vehicle-to-vehicle and vehicle-to-infrastructure communications and operations are well coordinated, which will be essential to support emerging technologies including CAVs.

## **The Region continues to prepare for accommodation of new technology being developed and introduced by others**

The introduction of new transportation technologies will bring challenges and new opportunities for the Region to deliver transportation services. Although industry and market forces are leading the pace and direction of technological change, other government agencies are already preparing for advancing transportation technologies and the adoption of connected and autonomous vehicles.

In January 2019, the Ministry of Transportation Ontario updated the Highway Traffic Act and released new legislation that extends testing of vehicles that requires no driver or steering wheel. Attachment 2 presents some applications of Connected and Autonomous Vehicles being tested across Ontario as a result of new emerging technology. This change in Provincial legislation applies to autonomous vehicles on all public roads in Ontario and will most certainly impact the delivery of transportation service across York Region.

Advancements in transportation are not limited to vehicle technology. There is increasing demand from the telecommunications industry to install communication devices directly on hydro infrastructure within the Region's rights-of-way, to enable vehicle-to-vehicle and vehicle-to-infrastructure connectivity. YorkNet, a Region-owned corporation that builds and manages York Region's high-speed, open-access fibre communications network, is a strategic partner to provide cost-effective and unrestrictive connectivity to support the deployment of advanced transportation technologies in York Region. Timing and readiness of the telecommunications sector to deploy 5G networks that are required to support the amount and speed of communications necessary between vehicles and roadway infrastructure is still unknown.

Municipalities, including the Region, may be challenged to secure funding to implement CAV-enabled roadside infrastructure on Regional rights-of-way.

### **The Region continues to plan for the impacts of more long- term, disruptive technologies through research, partnerships and pilot testing**

Staff continues to partner and pursue collaboration opportunities with public and private sector organizations that allow for sharing knowledge and experience in implementing transportation technology advancements. Current partnerships, pilot testing and research initiatives that staff is participating in are summarized in Attachment 3. By continuing to engage in research with academia, developing partnerships to leverage shared resources and knowledge, and testing new technologies and innovations in real-world situations, the Region will be ready to respond to the potential impacts and opportunities that transportation technologies may have on York Region's communities, residents, travellers and movement of goods.

Staff will continue to update Council annually on York Region's progress and accomplishments towards supporting new and disruptive transportation technologies.

For more information, please contact Brian Titherington, Director Transportation and Infrastructure Planning at 1-877-464-9675 ext. 75901. Accessible formats or communication supports are available upon request.

---

Paul Jankowski  
Commissioner of Transportation Services

---

Bruce Macgregor  
Chief Administrative Officer

Attachments (3)  
9558083