



AV Tactical Plan Update & Automated Transit Cluster Economic Development Strategy

Shagithya Deivendran, June 3 2020

Automated Vehicles Tactical Plan - Adopted October 2019

- [City Council](#) adopted this item on October 29, 2019 without amendments.
- This item was considered by the [Infrastructure and Environment Committee](#) on October 17, 2019 and adopted without amendment. It will be considered by City Council on October 29, 2019.

City Council consideration on October 29, 2019

IE8.7	ACTION	Adopted		Ward: All
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Automated Vehicles Tactical Plan and Readiness 2022

City Council Decision

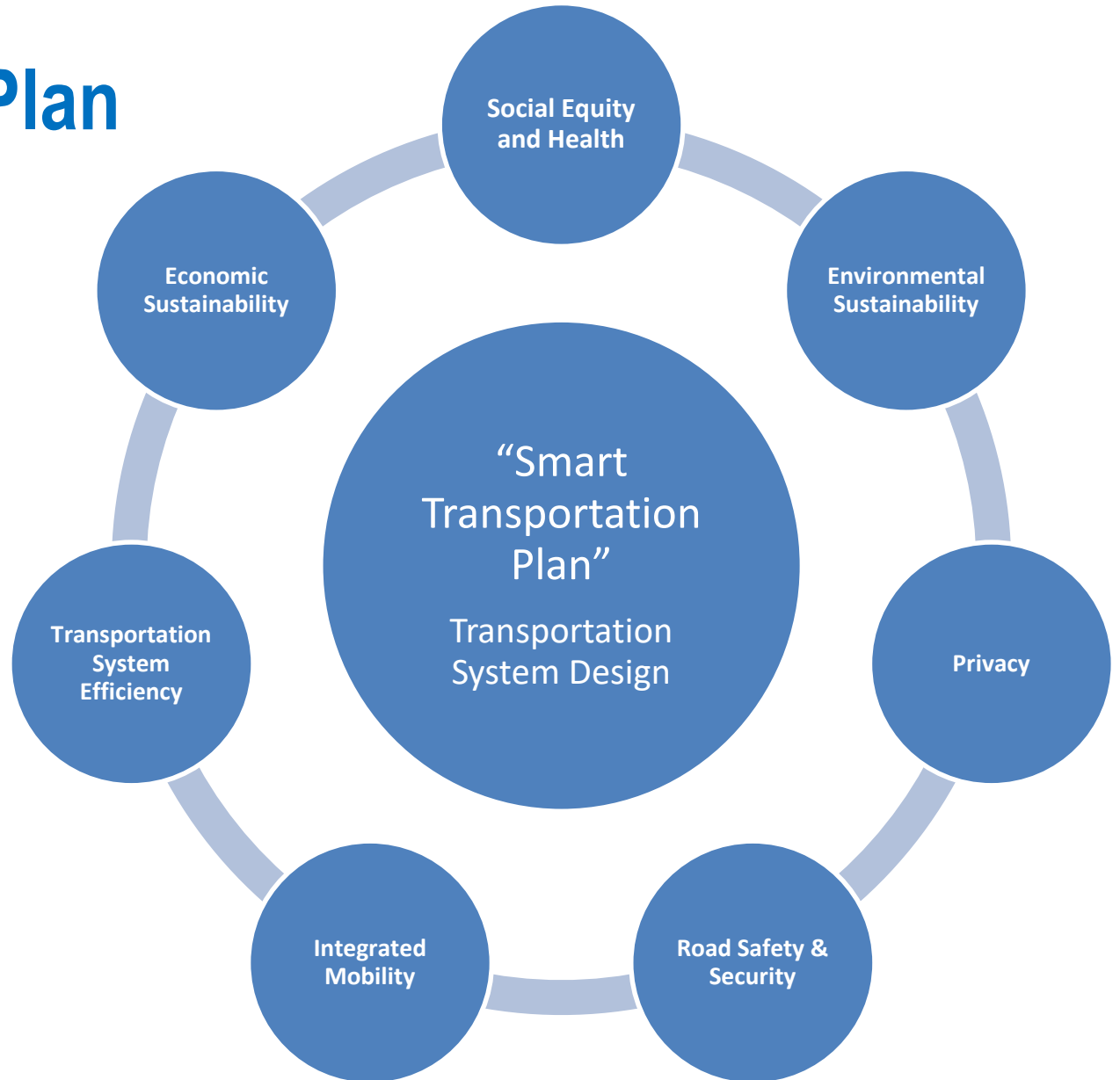
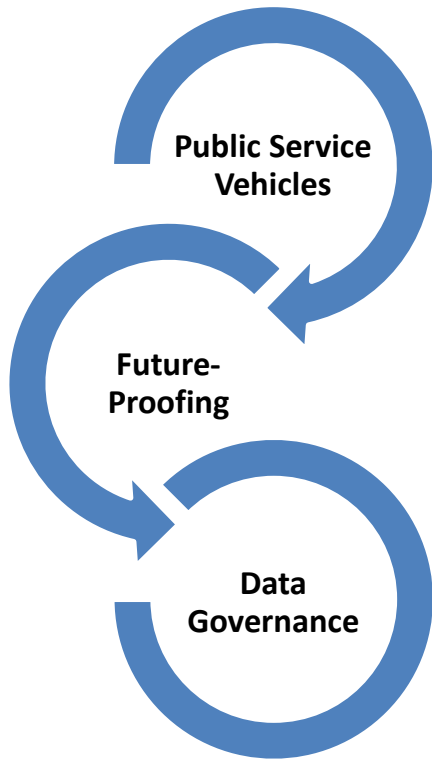
City Council on October 29 and 30, 2019, adopted the following:

1. City Council adopt the Automated Vehicles Tactical Plan as contained in Attachment 1 to the report (October 2, 2019) from the General Manager, Transportation Services as the framework for guiding future policy decisions related to automated vehicles in Toronto and City Council request the General Manager, Transportation Services and other relevant Division Heads to report to the appropriate committee where additional authorities are required in order to implement the tactics as necessary.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.IE8.7>

AV Tactical Plan

City Operations



AV Tactical Plan: Structure

Existing Policies, Plans, Strategies (e.g. Official Plan)

Direction

2050 Goal

Tactic

Progress by 2022 (Three-year Work Plan)

Key Proposals: “AV Readiness 2022”

1. Automated Shuttle Trial

- Undertake and complete an automated transit shuttle proof-of-concept pilot project.

2. Transportation Innovation Zones

- Establish a process and locations for “transportation innovation zones” in the City of Toronto.

3. Testing Response & Incident Preparedness (TRIP)

- Develop a “Testing Response and Incident Preparedness” system, including the submission of AV TRIP Plans by testers.

4. Human Learning

- Create an information hub for public learning and engagement on AVs.

5. Research & Development Program

- Foster research and development to solve current transportation-related challenges.

Automated Transit Cluster Economic Development Strategy

- The City of Toronto's Economic Development & Culture, and Transportation Services Divisions hired MaRS as a consultant to **develop a strategy to increase the attractiveness of the Toronto Region as a global hub for an Automated Transit Cluster**
- The funding for this strategy came from Transport Canada's Program to Advance Connectivity and Automation in the Transportation System (the ACATS Program), in association with the Automated Shuttle Trial that is being jointly led by the City of Toronto, Metrolinx & TTC



Recommended Vision for the Toronto Region

MaRS's recommended vision for the Toronto Region is to **build a global profile** and receive recognition as being a global hub that:



Successfully **leverages local assets** in terms of talent, products, and services in the automated transit sector to **increase export volume** and **create high-quality jobs**

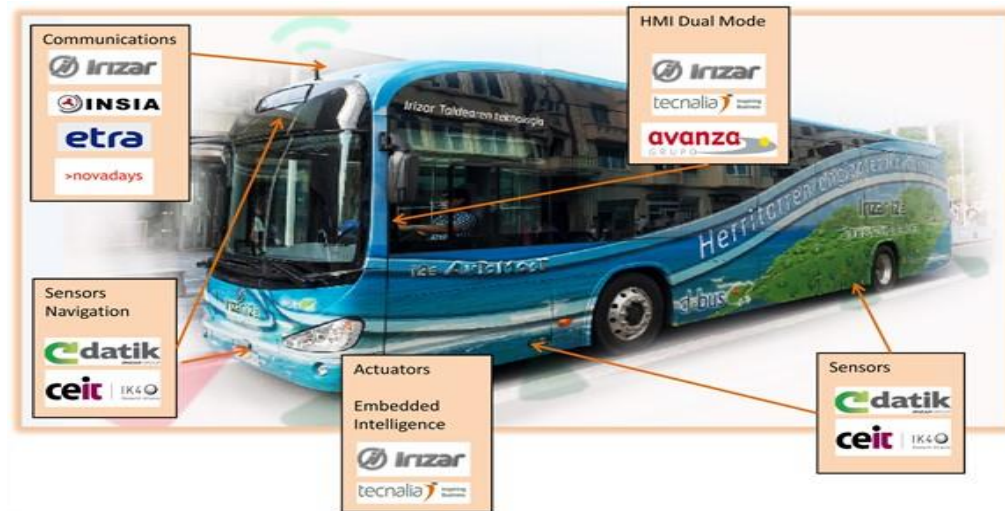


Is the **location of choice for leading automated transit and related AV technology suppliers**, nationally and internationally, looking to rapidly test and deploy their products in the transit market



Benefits from **safer, sustainable, and equitable connectivity** as a result of the integration of AVs and related technology to support the existing transit system

Global Example












Spain, AutoMOST

Centre for Industrial Technological Development created an ambitious project to develop a **dual-mode transit bus for use in the city**. The pilot utilized dedicated routes to pilot these new technologies with its partner organizations, **testing in real-time the interactions with mixed-use traffic and pedestrians**. The initiative sets out to prove the technology and systems, but also the administration challenges that accompany transitions to new transit modes.





Key Insights for Consideration

Establish dedicated spaces within the city to allow partners to test the feasibility and viability of new technologies and any potential rules and regulations, within a defined area.

Assessed Conditions for an Automated Transit Cluster in the Toronto Region

Factor	Importance	Toronto Region Status
 Regulatory Conditions	Critical	Flexible for AV testing province-wide; city by-laws re: AV testing lack clarity
 Talent	High	Strong, particularly in technology and manufacturing
 Incentives	High	Average
 Existing Business Activity	High	Abundant in tech; existing automotive supply chain; minimal in automated transit
 Local Market Demand	Medium	Has potential, but has to prove it
 Physical Infrastructure	Medium	On par with other metropolitan areas
 Digital Infrastructure	Medium	Meets status quo for general connectivity, but requires additional investment prior to deploying automated transit vehicles
 Networking Opportunities	Least	Abundant
 Public Opinion	Least	Will become clearer as AV tech is widely deployed

Proposed Economic Development Strategy

	 Starting and growing local business	 Attracting businesses from outside the region	 Branding & Communication	 Automated transit technology development
Objective	Increase number of local, scaling, AV-related companies with applications in transit and shared mobility	Increase the number of AV anchor companies in transit and shared mobility operating in the region	Increase awareness of Toronto Region as one that can support automated transit technology development with sound policy and infrastructure	Enable local transit agencies to have viable procurement options that support local technology developers and communicate the intent to adopt innovation in transit.

Consultant Recommendations

Generating economic growth through engaging technology developers and stimulating local transit market demand



Amplify existing programs and opportunities



Facilitate novel testing and procurement methods



Provide a clear path for companies to scale



Foster relationships between network organizations, industry, and academia



Provide support for occupations in the automated transit and shared mobility sector



Questions?



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