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### **INTELLIGENT TRANSPORTATION SYSTEMS (ITS) CANADA NATIONAL AWARD FOR YRT/VIVA TRANSIT MANAGEMENT SYSTEMS**

**The Transportation Services Committee recommends the adoption of the recommendation contained in the following report dated May 26, 2011, from the Commissioner of Transportation Services.**

#### **1. RECOMMENDATION**

It is recommended that this report be received for information.

#### **2. PURPOSE**

The purpose of this report is to advise Regional Council that York Region has received a national award for the application of technology in public transit.

#### **3. BACKGROUND**

**ITS (Intelligent Transportation Systems) Canada is a national organization that leads the promotion and advancement of intelligent transportation systems and services to benefit Canadians**

ITS Canada is a professional non-profit society, with the inter-related goals of fostering ITS applications, promoting government-industry cooperation and strengthening the ITS industry.

The Regional Municipality of York is a sustaining corporate member of the ITS Canada organization. A Regional staff representative currently holds a seat on the 16-member Board of Directors that leads the organization.

**The ITS Canada annual awards program was put in place to recognize excellence in ITS projects or programs**

The ITS Canada annual awards program was established in order to recognize excellence in ITS projects or programs across the country. Awards are presented in the following four categories:

1. Distinguished ITS Canada Member of Year Award
2. ITS Project/Program Award – Larger Metropolitan Areas, Provincial or Federal

3. ITS Project/Program Award – Smaller Metropolitan Area or Rural Application
4. New Canadian Commercial ITS Technology/Innovation/Research and Development

The Regional Municipality of York has been awarded the ITS Project/Program Award for larger metropolitan areas for our ITS program in York Region Transit/VIVA. The award was presented to Regional staff at the ITS Canada Annual General Meeting and Conference on June 14th, 2011.

#### **4. ANALYSIS AND OPTIONS**

**The Regional Municipality of York is spearheading the implementation of intelligent transportation systems (ITS) on Viva (bus rapid transit service), York Region Transit (conventional transit service) and Mobility Plus (paratransit service)**

York Region continues to be recognized as a national, North American and world-wide leader in the implementation of technology in public transit. Systems installed to date include; computer aided dispatch applications, automatic vehicle location and numerous traveller information services.

These systems provide real-time monitoring and tracking of buses from a control centre as well as schedule adherence and dispatch-related functions. Each system component is designed to enhance customer service, improve passenger and driver safety, optimize operational performance and provide real-time bus arrival information at stops and terminals.

**Technology on YRT/VIVA creates operational efficiencies and improves the customer experience**

The cornerstone of the YRT/VIVA technology applications is the computer-aided dispatch and automatic vehicle location (CAD/AVL) systems. These systems allow staff to track bus locations using Global Positioning Systems (GPS), monitor schedule adherence and communicate with operators.

The data from the GPS systems are used to provide passengers with real-time next bus arrival information at VIVA stops and terminals as well as next stop information displays and announcements in the vehicle.

The destination signs on the front, rear and side of the buses are controlled automatically by an on-board computer depending on the route assigned to a particular bus. Automated passenger counters are used to track the number of customers loading and unloading at each transit stop, which allows service-planning staff to recommend service adjustments that improve efficiency and reduce costs.

Transit Signal Priority has been installed on all Viva buses to facilitate the movement of Viva buses through busy signalized intersections. This system reduces travel time and delay and improves services reliability. Signal priority is automatically provided to any approaching bus that is behind schedule.

Traveller Information is provided to customers through variable message signs at Viva stops and terminals, telephone information systems and web- or email-based systems. Real-time bus arrival information is now available at all YRT/VIVA stops by sending an email to [nextbus@york.ca](mailto:nextbus@york.ca) with the stop number in the subject line.

The YRT and Google Trip Planner are both available as tools for customers to plan their transit trips by entering desired start and end points. YRT shares all transit schedule information with Google so that customers can plan transit trips around the Greater Toronto Area using multiple transit services.

**The ITS Canada Program award recognizes our continued efforts to use technology to improve the experience of our customers**

Customer feedback on the application of technology on the YRT/VIVA system has been very positive. Many YRT/VIVA customers are very technology savvy and have come to expect immediate real-time information when and where they want it. Customers access traveller information systems from their own hand-held devices while they are on-board a YRT/VIVA bus or while they are waiting at stops.

Regional staff continue to explore new opportunities to use ITS technologies to create operational efficiencies and enhance the customer experience.

**5. FINANCIAL IMPLICATIONS**

There are no financial implications associated with this report.

**6. LOCAL MUNICIPAL IMPACT**

Residents of York Region benefit from the technology innovations on YRT/VIVA including next-bus arrival information at transit stops, transit signal priority and schedule adherence systems.

The continued use of technology as a tool to help provide a reliable and safe transit system is key in our continued efforts to grow ridership.

## **7. CONCLUSION**

York Region, Transit Management Systems staff have been recognized by ITS Canada for their leading efforts on the application of technology in transit systems. The Transit Management Systems team will continue to explore and implement new technology as a tool to achieve operational efficiencies and improve customer service.

For more information on this report, please contact Steven Kemp, Director, Traffic Management and Intelligent Transportation Systems at Ext. 5226.

The Senior Management Group has reviewed this report.