

## Committee of the Whole (2) Report

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**DATE:** Tuesday, March 19, 2024

**WARD(S):** ALL

**TITLE: ENHANCING INDEPENDENT INDOOR NAVIGATION FOR PEOPLE WITH VISION-RELATED DISABILITIES IN CITY FACILITIES**

**FROM:**

Nick Spensieri, City Manager

Michael Coroneos, Deputy City Manager, Corporate Services, City Treasurer and Chief Financial Officer

**ACTION:** FOR INFORMATION

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**Purpose**

This report informs Council of a wayfinding and accessibility pilot in partnership with the Canadian National Institute for the Blind (CNIB), aimed at improving independent navigation for people who are blind or partially sighted in City facilities.

**Report Highlights**

- The City of Vaughan is dedicated to fostering an environment where every citizen has access to City services and facilities. The City is committed to ensuring our facilities are accessible to all, particularly individuals with disabilities.
- For people who have vision-related disabilities, navigating unfamiliar or complex indoor spaces can be challenging. Effective wayfinding technology can offer greater independence for these people with vision-related disabilities.
- Vaughan is launching an innovative pilot project in partnership with the Canadian National Institute for the Blind (CNIB) to facilitate the deployment of GoodMaps, a free indoor navigation app that provides step-by-step guidance to key points of interest for people with vision-related disabilities.

## **Recommendations**

1. THAT Council receive this report for information.

## **Background**

***The City of Vaughan is committed to fostering an accessible and inclusive environment for all individuals, regardless of their abilities.***

Over 54,000 people in Vaughan, which is more than one-fifth of the city's population, have disabilities, according to the Canadian Survey on Disability (CSD). Vaughan has the highest amount of people with disabilities among the nine municipalities in York Region. The 2022 CSD found that 27% of the Canadian population over the age of 15 have disabilities.

***For those experiencing sight loss, navigating through unfamiliar or complex indoor spaces can be a challenge.***

Technology can provide equitable access for people who are blind or partially sighted, but only when it is accessible, available, and affordable. New wayfinding technology solutions provide greater independence for people with vision-related disabilities. Mobile navigation and wayfinding apps on smartphones enable individuals to pre-plan trips, gain access a variety of facilities, and identify important landmarks like elevators, information desks, emergency exits, and more.

***To support Vaughan's growing and aging population, especially those with disabilities, it is crucial to enhance accessibility within the built environment.***

Introducing an indoor navigation solution at City facilities can foster independent and active living, ensuring people with disabilities can fully participate in all aspects of community life.

## **Previous Reports/Authority**

[Multi-Year Accessibility Plan 2023-2027](#), Community of the Whole (1), October 31, 2023

[Multi-Year Accessibility Planning: Stakeholder Engagement Report \(Attachment 2\)](#), Community of the Whole (1), October 31, 2023

## **Analysis and Options**

***Vaughan is partnering with Canadian National Institute for the Blind (CNIB) to deploy a two-year pilot (2024-2025) for the GoodMaps wayfinding solution.***

Staff will work with CNIB to implement the GoodMaps across six facilities, including Vaughan City Hall, Vaughan Public Libraries and recreation centres. The CNIB indoor wayfinding pilot is a key action from the Council-approved 2023-2027 Multi-Year Accessibility Plan (MYAP) which aims to create an accessible and barrier-free environment for all the City's residents, visitors and businesses.

***As the largest organization of its kind in Canada, CNIB Access Labs offers lived experience accessibility testing services, making it uniquely positioned to partner with the City of Vaughan to pilot an indoor wayfinding solution.***

CNIB Access Labs is CNIB's social enterprise supporting businesses, organizations, and government institutions to ensure all Canadians with disabilities can benefit from barrier-free communities and workplaces. With a focus on user-centric design and Lived Experience Accessibility Testing services, CNIB Access Labs is an accessibility consultancy dedicated to transforming digital experiences and built environments. In addition, 100% of proceeds are reinvested into CNIB to support innovative programs and advocacy that empower people who are blind or low-vision to live their dreams and tear down barriers to inclusion. As the largest organization of its kind in Canada, CNIB Access Labs offers lived experience accessibility testing services, making it uniquely positioned to partner with the City of Vaughan to pilot an indoor wayfinding solution.

CNIB Access Labs will offer guidance to Vaughan for piloting an indoor navigation and wayfinding solution within City buildings. CNIB recommends GoodMaps as an opportunity to create a more inclusive environment at City of Vaughan facilities. The mobile app solution can empower residents and visitors to navigate the City's indoor facilities easily and effectively.

***CNIB has recommended GoodMaps, an accessible mapping and navigation technology, as an opportunity to create a more inclusive environment at Vaughan's facilities.***

GoodMaps is a free mobile navigation app that gives users a complete audio-guided picture of a building as they move through it. Once the user arrives at a facility, the GoodMaps mobile app inform them where to locate points of interest through verbal instructions and step-by-step directions. When a sighted person sees signs for meeting

rooms, welcome desks, elevators, and emergency exits, people who are blind will hear announcements of directions and distances to those points of interest.

GoodMaps uses camera-based positioning technology that does not require the installation of any hardware or beacons. Main features include:

- Provide auditory, turn-by-turn directions to their destination for an accurate navigation experience
- Use of immersive and interactive maps to explore a venue through the augmented reality (AR) view for a distinctive visual mapping experience
- Keep up with changes in building layout via real-time updates
- Alert users of amenities such as bathrooms or elevators
- With increased precision, users can save time wasted on searching for specific locations
- Provide the ability to independently navigate the space, thus eliminating the need to plan their schedule around another person's availability
- Available to download free on both iOS and Android devices

GoodMaps brings all the information a user would get from an outdoor GPS app to the indoors. GoodMaps is a camera-based positioning system paired to a user's smartphone device, which uses audible messaging to assist individuals in navigating inside a building. By utilizing LiDAR and image recognition, GoodMaps offers fast, high-accuracy positioning and obstacle detection to assist with mapping indoor environments and provide reliable navigation instructions.

***The CNIB indoor wayfinding pilot is a key action from the Council-approved 2023-2027 Multi-Year Accessibility Plan (MYAP), which outlines the City's strategy to improve accessibility and inclusion for everyone in Vaughan.***

The [2023-2027 Multi-Year Accessibility Plan Stakeholder Engagement Report](#) highlighted the need for supporting people with vision loss and blindness. The City's commitment to "Fostering an inclusive and accessible City" includes a pilot project with Canadian National Institute for the Blind (CNIB) to assess a technology solution for improving navigation of City facilities.

### **Consultation**

***In November 2023, CNIB introduced the wayfinding pilot and sought input from the Vaughan Accessibility Advisory Committee (AAC).***

During the presentation, staff and the CNIB team outlined the GoodMaps app's capabilities and pilot project to the AAC. The project received positive feedback and was supported by the Committee, recognizing the potential impact to enhance

accessibility of City facilities. CNIB recommends GoodMaps as the preferred solution for the City of Vaughan due to its accessible indoor mapping capabilities, precise positioning, and positive feedback from live users.

***To enhance the pilot project, staff will leverage on the partnership with CNIB and internal departments.***

Throughout the pilot, staff will continue to collaborate with CNIB, engaging in joint activities like on-site demonstrations, promotion efforts, and educational events. Additionally, staff will coordinate with the Communications, Marketing, and Engagement department to execute marketing and outreach activities.

The GoodMaps technology will undergo user testing to ensure it provided a seamless and independent navigation experience for all users. After the launch, the City will continue to engage the disability communities to gather feedback, assess the solution and analyze app usage. If the pilot is successful, staff will consider extending the solution to other City facilities, giving priority to sites with highest usage among seniors and people with disabilities.

## **Financial Impact**

The two-year pilot project with CNIB is \$80,000 which includes upfront scanning costs and continuous support throughout the project. Funding will be sourced from the existing budget.

## **Operational Impact**

***The GoodMaps solution will be piloted across six city facilities, including City Hall, libraries and recreation centres.***

Staff selected the following facilities for the pilot based on an audit for accessibility and inclusion which considered diverse usage measures and ensured equitable representation across all five wards.

1. Vaughan City Hall
2. Civic Centre Resource Library
3. Pierre Berton Resource Library
4. Chancellor Community Centre & Ansley Grove Library
5. North Thornhill Community Centre & Pleasant Ridge Library
6. Dufferin Clark Community Centre & Dufferin Clark Library

Staff will be coordinating with GoodMaps team to scan the selected facilities. The resulting images and data are processed to create accurate maps and added to the indoor venues list; then Vaughan residents and visitors can download the GoodMaps mobile app and begin navigating.

This pilot project is a collaboration between Economic Development, the Diversity, Equity, and Inclusion (DEI) team, and Facility Management. Staff from Vaughan Public Libraries and Recreation Services are also collaborating on this pilot.

### **Broader Regional Impacts/Considerations**

Staff will share this initiative with our regional partners and neighbouring municipalities to foster knowledge-sharing, promote alignment of regional accessibility initiatives, and strengthen collective impact.

### **Conclusion**

This pilot represents an innovative approach to enhance accessibility for indoor navigation and wayfinding. This effort underscores the City of Vaughan's commitment to fostering an inclusive community where City services are accessible to all, regardless of ability. This pilot not only aims to improve accessibility of City spaces, but also sets a precedent for equity, ensuring all individuals have equal opportunity to navigate and enjoy public spaces independently.

**For more information**, please contact: Raphael Costa, Director, Economic Development, Ext. 8891.

### **Attachments**

N/A

### **Prepared by**

Kitty Yung, Program Manager, Smart City, Ext. 8548

**Approved by**



Michael Coroneos, Deputy City  
Manager, Chief Financial Officer &  
Treasurer



Nick Spensieri, City Manager