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RE: Toronto 360 Wayfinding Project - Hackathon Project Brief

## BACKGROUND

Wayfinding enables people to orient themselves and navigate from place to place with ease. Wayfinding is more than signs - working together with other elements of the public realm, it includes intuitive wayfinding through names, landmarks, conventions, maps and new media. It contributes toward making a city more “legible” for residents, commuters, and visitors alike.

A wayfinding system typically consists of various components that provide handoffs to one another to ensure a connected network. Wayfinding information can be communicated via physical signage (e.g., vehicular destination signs, cycling route signs, and fingerposts), handheld maps (e.g., Visitor Map), or through the use of digital technologies (e.g., phone applications).

In 2011, the City of Toronto launched the TO360 "TO360" Wayfinding Project. TO360 provides consistent information across modes and environments through a unified signage and mapping system delivered by the City of Toronto and project partners. The strategy is comprised of pedestrian, vehicular, cycling and transit wayfinding.

As part of the first two project phases, the following have been completed:

### Phase One:

- Overall wayfinding system strategy adopted by City Council

### Phase Two:

- Multi-modal wayfinding strategies: cycling wayfinding strategy, vehicular destination signage, pedestrian strategy and transit mapping pilot
- Pilot project in Toronto's Financial District in advance of 2015 Pan Am & Parapan Am Games
  - Consultation and user testing

- Final sign design suite
- Final map graphic specification
- Evaluation of pilot project and updated business case
- Development of placement guidelines
- Consultations on proposed system roll-out

City staff will report to City Council in December of this year with the results of the project phases and a recommendation to roll out TO360 city-wide, including the development of a map asset and on-street signage. Further information on the City's wayfinding strategy can be obtained at:

[www.toronto.ca/wayfinding](http://www.toronto.ca/wayfinding)

## TO360 MAP ASSET

Underlying the communication of wayfinding information is a map asset. A map asset includes all of the relevant topography and content necessary to produce a set of maps. The data is verified for accuracy and adapted in order to meet the desired graphic look, feel and content. The map asset retains the core information in a single location, while allowing flexibility of scale, content and styles to support the needs of different end-users and product families at all stages of the wayfinding process – from system planning to end-user information.

There are two levels of map asset information:

- Base Layer: Includes general authoritative information such as neighbourhood names, transit stops, road names, addresses, building outlines and sidewalks. The GCC already has much of the data necessary to develop the base layer.
- TO360 Layer: Includes more detailed information and features in a particular area such as hospitals, major retail locations, civic buildings, sports arenas and PATH entrances. The development of the TO360 layer will involve extensive local stakeholder consultation and the integration of non-authorized data as required.

Development of the map asset is critical to delivering TO360. The map asset will allow consistent and reliable wayfinding products delivered by city divisions and government agencies such as such as Transportation Services (Public Realm and Cycle Infrastructure), TTC, Metrolinx, Parks & Recreation, Economic Development (BIA Office and Visitor Services), Bike Share, and the Toronto Parking Authority, along with third parties through Open Data.

Staff will recommend to City Council that the City fund and manage the development of the map asset to ensure the accuracy and integrity of mapping information remains high and the public has confidence in the quality and reliability of the information. Specific recommendations include:

- Development of the Base Layers in Year 1
- Strategic development of the TO360 Layers in Year 1-3 and beyond

## HACKATHON PROBLEM STATEMENT

The Hackathon problem statement is as follows:

*A methodology is required to inform the incremental development of an accurate and reliable Toronto 360 Wayfinding Project map asset that maximizes the use of limited city funding resources and targets data upgrades where this information is needed the most.*

The development of the map asset requires accurate and reliable data across a city that is approximately 630 square kilometers in size and includes millions of data points that are constantly being updated. The base layer mapping available through the GCC provides an excellent foundation for TO360 products, but must be further developed and field verified to provide the detailed information required.

Due to the size and complexity of the City's dataset, it is not possible or desirable to develop the map asset across the city in a single effort. Consequently, a phased approach is required.

An initial map asset and sign implementation strategy has been proposed by City staff and their consultant team. The strategy targets data upgrades where information is needed most – in areas of the city where signs, handheld maps or other wayfinding products are expected to be required in the near term.

In determining where wayfinding products are required, a number of factors were considered:

**Existing Need** - The implementation strategy prioritizes areas where a need for wayfinding currently exists based on:

- having high densities of visitors who are unfamiliar with the City,
- having high pedestrian volumes,
- having changes in mode of travel (e.g., transit stations),
- being on a main street,
- being an area that is difficult to navigate,
- being close to hospitals, colleges or universities, and
- being close to a city centre (e.g., Scarborough Town Centre).

**Available Funding** - Further, certain areas may be prioritized as project partners come forward with funding to implement the scheme. Potential project partners include:

- transit agencies
- Business Improvement Areas
- universities and health care campuses
- attractions
- city divisions
- tourism organizations

**Data Requirements** - The level of data provision has also been considered. As the TO360 base map layers drive a number of wayfinding products (eg cycle map, visitor map, apps, parks/trails map, pedestrian context map) the development of a city-wide base map layer has been identified as a priority for the City in year one of the city-wide rollout.

**GCC Update Cycles** - A TO360 map asset implementation plan will also be influenced by the GCC's data update cycles.

Notwithstanding, Transportation Services and GCC have in interest in exploring a more data-driven methodology to determine the timing and geographic distribution of the required TO360 map asset upgrades. The Hackathon provides an opportunity for the City to gain valuable insights into the development of the map asset and novel approaches to this data problem.

Sincerely,

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