ENVIRONICS ANALYTICS

MobileScapes EA Geofences Library

Frequently Asked Questions – Canada

Utilize this section to answer any EA Geofences-related questions that you may have.

Product Overview

What is an EA geofence?

EA has undertaken a large-scale effort to build a vast layer of geofences for Canadian commercial, institutional, and recreational locations. The geofences can be used for destination-based mobile movement extracts both within ENVISION and for project deliverables. **The geofences are NOT available for sale outside of the MobileScapes products and we are unable to release a database of addresses attached to the geofences outside of the ENVISION software.**

How are the geofences created?

EA geofenced the building footprint to ensure it best represents the location of interest.

In cases where a building is mixed used, we used the type and primary flags to help users understand whether visitors are frequenting a location for multiple reasons (additional details below).

How accurate are location data and geofences?

The licensed geofences are created as accurately as possible based on the satellite imagery at the time of the geofence creation. Results are an approximation and should be interpreted directionally.

At present, the EA Geofence Product is the most comprehensive and accurate database of points, geofences, addresses, location names and categories that can be used to monitor changes in movement and behaviour in Canada. The geofences were drawn and then quality checks were done to ensure the most accurate drawing of geofences.

Are results generated from a specific business location, or are they generalized to the nearby neighbourhood?

Results for the EA Geofences Product are generated from a specific business location as the geofence represents the specific locations. The mobile movement data represents device postal codes and are weighted to represent the neighourhood.

How is a geofence created?

Referencing satellite imagery, geofences were digitized by a team of geographers and spatial specialists.

What is primary vs. non-primary?

Locations that share the same building footprint are classified as either primary or non-primary locations, and the geofences are flagged to represent that classification.

A classification of primary (Flag = True) is given to the main location, or location that more accurately represents the visitors' purpose or main reason for visiting the geofence. The non-primary classification (Flag = False) is given to the location that represents a visitor's secondary purpose in the geofence. For instance, if a Walmart location also has a McDonald's in its footprint, the Walmart is classified as the primary location (Flag = True) and the McDonald's will be classified as non-primary (Flag = False). Visitors to this geofence have the primary purpose of shopping at Walmart.

How do you geofence businesses within a multi-story mall? A one-story mall?

Anchor locations within shopping malls that can clearly be spatially distinguished from other locations have their own geofences (this includes multi-story anchors or single story). These are classified as Type = Unique, and Primary flag = True geofences. For the remaining locations within malls, and for multi-story malls, because visitors cannot be distinguished for an individual store, the entire mall geofence is used. Because altitude is not captured, there is no way to distinguish visitors on the first floor of the mall from those on the second floor.

Double-counting will occur if users aggregate MobileScapes results for a mall anchor and a mall OR a mall anchor and another location within the mall. To avoid this double-counting, it is recommended that when users are selecting multiple geofences and using the Aggregate option. Similar to primary locations, we have indicated this within the 'Name' field – for example "Sterling Mall including Guardian".

If the location of interest is within a multi-story location with multiple uses (i.e.. commercial and residential), can the tool distinguish between visitors, employees and residents?

Any device that has a home or work location (common evening or common daytime location) within the geofence is removed. However, if there are multiple uses within a building footprint, none of which are workplaces or residential, then the visitors to each of these cannot be distinguished. When *Type*='shared', can help users to identify scenarios when a geofence represents multiple locations and therefore visitors to multiple locations.

Can I distinguish between devices in the retail on ground floor compared to devices in apartments above and/or below?

At this time, altitude is not factored into the product. However, any device that has a home or work location (common evening or common daytime location) within the geofence is removed.

My geofence of interest has opened a temporary and/or seasonal extension (e.g. a patio); will this be included in the geofence?

Temporary and/or seasonal extensions are not included in the product; extensions are only drawn if they are a permanent structure. For instance, patios in parking lots during COVID-19 are not permanent and are not included.

My geofence of interest has a parking lot. How does this impact my visitor data?

Parking lots are not included within geofences. Note about Auto Dealerships: we do not consider auto dealership lots 'parking lots' as they are the sales floor and include merchandise for these locations; as such, these lots outside the building footprint are included within auto dealership geofences. For auto dealerships that have separate/adjacent buildings for different brands and are sharing a parking lot, parking lots are split using judgment and best practices.

My geofence of interest has a drive-thru and/or walk-up service; how does this impact my visitor data?

Only the pickup/pay area of a drive-thru is included in the geofence, and not the entire drive-thru lane or path. This ensures that the geofence is not inadvertently capturing any car/foot traffic not necessarily frequenting the business location of interest.

My geofence of interest is located on the ground floor of a tall building. Considering the lean of tall buildings, how accurate is my visitor data?

The footprint of a building was drawn, and not the lean, in cases with large 20+ story buildings where there is often a lean/angle from the satellite image as well as shadowing.

There is a road or railroad that runs through my geofence; does this impact the accuracy of my visitor data?

When a greenspace geofence intersects with major roads and highways or railroads, buffer sizes ranging from 10-22 metres were assigned according to road types. For all other sub-categories, where a road or railroad runs through the geofence, these could not be separated from the use itself and therefore presents some risk that noise from the road/railroad could be introduced.

What is and is not included in fuel & convenience geofences?

Included:

- Main Building (i.e. where customers pay)
- Gas Pumps
- On-site and Same Banner
    - Laundromats
    - Restaurants
    - Oil Change Stations
    - Car Washes
    - Air Pump Stations
    - Vacuum Stations

Excluded:

- Cardlock Locations - unmanned fuel stations with 18 wheel access that are specifically made for businesses

How should users query for the "Fuel", "Fuel and Convenience" and "Convenience" subcategories

"Fuel" and "Convenience" Subcategories

To identify fuel-only or convenience-only locations, it is possible to do so by filtering to the "Retail: Fuel" and "Retail: Convenience" Category and searching via the "Name" or "Banner" field in ENVISION.

Note: stand-alone mum & pop fuel or convenience shops are not included within the database.

"Fuel and Convenience" Subcategory

Major Banner Co-Locations

To identify major Fuel and Convenience banners that co-locate (share the same geofence), it is only possible to do so by filtering to the "Retail: Fuel and Convenience" Category and searching via the "Location Name" field in ENVISION *(see E.g. 3 below).*

Mum & Pop and Major Banner Co-Locations

To identify a major Fuel and/or Convenience banner that is co-located with a mum & pop shop (share the same geofence), it is only possible to do so by filtering to the "Retail: Fuel and Convenience" Category field in ENVISION (*see E.g. 4 below).*

Examples

No.	*Example Description*	*Field Names*			
		Name	*Category*	*Banner*	*Location Name*
1	Fuel-only Esso location	Esso (126 Circle Lane)	Retail: Fuel	Esso	Esso
2	Convenience-only Circle K location	Circle K (23 Thompson Dr)	Retail: Convenience	Circle K	Circle K
3	Co-located Esso and Circle K location	Esso (45 Shipley Rd)	Retail: Fuel and Convenience *(Major banner co-location)*	Esso	Esso Circle K
4	Co-located Esso and mum & pop convenience location	Esso (222 Bank Rd)	Retail: Fuel and Convenience *(mum & pop co-location)*	Esso	Esso

Why may a power centre geofence include an auto dealership lot, drive thru window, or patio area and not just the building footprint?

For some businesses in our EA geofence library, customers may only visit an area external to the building footprint for that business. For these identified businesses, these external components were included within the geofence to ensure visitors to the business are being captured with the geofence.

What does the modification code mean and how do I interpret it?

Modification Codes	Geofence Implications
- First character = Name change 0 = no change 1 = change	**First Character:** No Implications
- Second Character = Descriptive field change 0 = no change 1 = Location Name, Banner Name, or Parent Company Name change	**Second Character:** No Implications
- **Third Character = Geofence fields** 0 = no change 1 = Geofence shape adjustment 2 = Geofence relocation	**Third Character:** If you run the geofence with old versus new geofences, results will differ
- Fourth Character = Primary Status Change 0 = no change 1 = change	**Fourth Character:** No Implications
- Fifth Character Change = Geofence Type Change 0 = no change 1 = change	**Fifth Character**: No Implications
- **Sixth Character Change = Category/Sub-Category Change** 0 = no change 1 = change	**Sixth Character:** No Implications

I. Category Definition

How were criteria established for the categories, subcategories and banners that have been included within the product?

EA relied on our industry knowledge and a large team of analysts to identify and classify locations.

Major categories of interest were identified from a business point of view, using North American Industry Classification System (NAICS 2017) codes and business acuity. These categories are meant to be a group of goods and services with common supply and demand drivers and were identified based on their relevance and importance within the Canadian business landscape.

Categories have subcategories to provide greater granularity. Subcategories are meant to be a logical subgrouping within a category with similar goods, services and market characteristics that enable a horizontal analysis by customers (e.g. how many visitors are going to retailers by city?).

Appropriate banners were selected based on a set of business rules (e.g. 5+ locations, being mindful of the business objectives and use cases for clients. The aim is to capture the key players and drivers within a category or subcategory of interest).

A detailed table can be found in the **MobileScapes Geofence Library – Category List file**.