

MobileScapes Frequently Asked Questions - Canada

Data and Parameters

Questions/Topics	Answers/Descriptions
Which data providers are used?	MobileScapes uses five combined sources of permission based, de-identified mobile movement data. These mobile data are sourced from trusted suppliers who meet data quality and privacy compliance standards.
What time period can I get data for?	Data pulls are available from January 1 st , 2018. Data are updated daily. A single extract will be limited to a maximum of 2 years of data.
Unweighted vs. weighted data	Weighted data will be the default. Weighting is to Household Population 15+. Users will have a setting option to retrieve unweighted data. A differentiated weighting is applied to each of the population classifications, Unique Visitors, Workers and Residents. Weighting allows you to produce population estimates of visitors to geofenced areas. In addition to total visitors, weighted estimates are also created for visits to produce foot traffic estimates.
Is there any way to discern margin of error with relation to weighted estimates?	Mobile movement data are based on what we refer to as “Big Data”. The concept of a margin of error —that researchers are familiar with in sample surveys—does not apply to this type of data. The frequency of pings and number of devices with location services turned on require weighting and normalization. EA data scientists have spent several years in R&D to understand the coverage and bias—both spatially and temporally—and they have developed routines using best practices to remove outliers, understand the bias and weight data to general population. It’s not possible to provide a statistical margin of error such as would be associated with a sample survey. In several real-world tests, our normalized and weighted data provide results closer in line with reality than what resulted from using raw ping data.
Ping observations	We capture a single ping per day, and that ping is the first ping of the day. For example, if we see pings at 10:00 AM and 2:00 PM on the same day, we only count one ping for the day and for daypart purposes it will be attributed to the 9AM – noon daypart. We take the first ping because we want to display when the device first arrived in the geofence.

	<p>When multiple geofences are aggregated in a single extract, it only captures the first observation in the first geofence visited.</p> <p>Multiple geofences can be viewed independently in a single extract. There is an “Individual” option when selecting multiple geofences.</p>
Are the data privacy compliant?	<p>Yes. EA MobileScapes data is modeled from permission-based data collected by our trusted suppliers, using location-enabled apps. The data are de-identified by our suppliers before it is sent to Environics Analytics. The data are used as inputs to models that normalize and weight to the general population. EA’s expert methodologists address bias and small sample size issues using best practices, external controls, and advanced modelling techniques.</p>

Geofences

Questions/Topics	Answers/Descriptions
How can I create geofences for my extracts?	<p>Geofences can be hand-drawn on a map in the MobileScapes Data Extract tool or you can also import spatial area polygons (When importing, turn on the Geofence toggle). We have also created an EA Geofence Library, a layer of pre-defined geofences, that can be accessed within the ENVISION MobileScapes Data Extract tool.</p>
Geofence size limitation	<p>The max geofence size limit is 5 million square feet. This limit only applies to your hand-drawn or imported geofences. The limit will not apply to EA geofences.</p> <p>Multiple EA geofences can be selected for a single extract. For user-defined geofences, you are still limited to one geofence per extract.</p>
EA Geofence Library	<p>EA has undertaken a large-scale effort to build a vast layer of polygons for Canadian commercial, institutional and recreational locations. The polygons can be used as geofences for destination-based mobile movement extracts both within ENVISION and for project deliverables. In ENVISION, the library can be accessed using the Geofence Explorer within the MobileScapes Data Extract tool. The geofences are not available for sale outside of the MobileScapes products.</p> <p>EA relied on our industry knowledge, large team of analysts and many relationships with partners to identify and classify locations. All data used to validate our process and to fill in gaps were used with permission.</p>

What is the difference between shared and unique geofences?	<p><u>Unique</u>: Locations that can be spatially distinguished from other locations have their own geofence, which can include multi-story or single-story buildings.</p> <p><u>Shared</u>: Locations which are within a multi-story or multi-use location (i.e. commercial and residential), the geofence type is categorized as shared.</p>
How do you deal with multi-floor geofences?	MobileScapes cannot distinguish between different levels within multi-tiered buildings. The MobileScapes Extract outputs will capture data from all levels within the desired geofence due to the absence of altitude capture.
How will the data be backfilled if a geofence undergoes a banner change? For example, what would happen to the estimates if Tim Horton's changed to a Starbucks midway through 2023?	The count of visits is based on the geofence boundary lines and not what banner it belongs to. The banner name in the geofence library will reflect any changes that were identified, but visits will be pulled going back to Jan 2019 for the geofence, even though it belonged to another banner at some point in the past.

Outputs

Questions/Topics	Answers/Descriptions
Mobile movement insights delivered with each extract from ENVISION	<p>Daily Visits, Worker Visits and Resident Visits, along with Unique Visitors, Workers and Residents will be returned along with the Common Evening Location (CEL), Common Daytime Location (CDL), days, dayparts and months.</p> <p>Visit metrics can be represented as an “estimated Household Population 15+” weight. They can be thought of as total foot traffic for the geofence over the time period selected.</p> <p>Visitor metrics can also be represented as an “estimated Household Population 15+” weight. They filter out multiple visits to give a true indication of unique population identified within the geofence over the time period selected.</p>
International devices	<p>International devices will not appear when pulling a Canadian mobile movement extract within ENVISION.</p> <p>International devices are available via custom work outside of ENVISION.</p>
Methodology for assigning Common Evening Location (CEL) and Common Daytime Location (CDL)	Common Evening Location (CEL) is where a device is most commonly observed between 6PM and 8AM and the Common Daytime Location (CDL) is where a device is most commonly observed between 9AM and 5PM.

	<p>A common location is defined by a 100m x 100m cell (third decimal latitude and longitude point) which has the highest score over each monthly date range. Monthly updates use the observations of the given month, plus the 15th onward of the previous month. For example, the date range for the May 2020 CEL/CDL is April 15, 2020 to May 31, 2020.</p> <p>To establish a monthly CEL or CDL, we look at the number of unique hours a device is seen in a cell multiplied by the number of unique days that the device was observed. For example, if a device was observed each hour between 9am and 5pm over the course of 15 days during the respective monthly date range, then this device would receive a score of (8 unique hours) X (15 unique days) = 120. The minimum score to establish a CEL or CDL is 100.</p> <p>CEL and CDL are then assigned to the closest postal code. Lat/long's for the CEL and CDL postal code will be assigned.</p>
Methodology for assigning Visitors, Workers and Residents counts	<p>Unique Visitors are those observed who have neither their CEL or CDL within the geofence Workers are those observed who have their CDL within the geofence. Residents are those observed who have their CEL within the geofence.</p> <p>Instances where those observed have both their CDL and CEL within the geofences will be counted in both worker and resident categories. Overlap between classifications can occur for all categories of observed populations and should be considered when doing analysis.</p>
Why is the Total less than the sum of Visitors, Workers and Residents?	<p>Total represents the total unique count of observed population within the geofence, and removes any duplication found across categories. Visitor, Worker and Resident categories are not mutually exclusive.</p>
Why is the Total Visits less than the sum of Visits, Worker Visits and Resident Visits?	<p>Total Visits represents the total unique count of visits made by all observed population within the geofence, and removes any duplication found across categories. Daily Visits, Worker Visits and Resident Visits are not mutually exclusive</p>
Why do I have quantified values for visitors and residents associated with one device?	<p>Quantified estimates in multiple categories could occur if a device changed CEL or CDL within the time period selected for the extract. Only the most current CEL and CDL are reported for a device, however all associated device visits are captured.</p>
Can I calculate overlap between categories?	<p>Yes, category overlap can be quantified at the visitor or visit level by subtracting the individual counts from the total.</p> <p>For example, a geofence has 10,000 total visitors made up of 9,000 unique visitors, 500 workers and 1,000 residents. The overlap would be quantified at 500 individuals among the categories.</p>

<p>Are Worker Visit or Resident Visits available for day or week, daypart or monthly breakdowns?</p>	<p>No, Worker Visit or Resident Visit breakdowns are not available. Day of week, daypart and month breakdowns are only available for visits associated with Unique Visitors.</p>
<p>Why are there records with a weight of 0 in my extract?</p>	<p>Records with weights of 0 represent devices observed in the geofence on a given day that have a low level of observations on that day (low level is defined as a device observed for less than ten 30 minute intervals on the day and is calculated for each day of your query request). We've maintained these records in the extract to allow you to understand the movement of these low-quality devices for any additional ad-hoc analysis you wish to complete.</p>
<p>Why are there records without a postal assignment?</p>	<p>This may be blank due to a device not having a sufficient historical CEL/CDL assignment in the database. These devices were not observed frequently enough within the CEL or CDL assignment window to appropriately assign the device to a location.</p>
<p>How can I calculate weighted visits per weighted visitors?</p>	<p>You can divide weighted visits by weighted visitors per record. Due to the bias within the underlying data, it will have a slight positive bias to it. This is due to visitors who only visited once as they may be undercounted.</p>
<p>Will I receive a notification if the sample size for a MobileScapes extract is low?</p>	<p>Yes, if the number of unique devices for a MobileScapes extract is below 450, you will be notified via an onscreen alert in ENVISION. A total record count below 450 does not meet our minimum recommended sample size for reliable segment profiling. If you receive the alert, please consider increasing the date/time range for the affected geofence(s), or aggregating multiple geofences, to increase the record count; or consider limiting your profiles to the Target Group, Social Group or Lifestage Group level.</p> <p>To discuss the implications of using geofences with low sample sizes, please contact your Environics Analytics account representative.</p>
<p>How can I prevent low sample warnings?</p>	<p>Low sample warnings appear when either a location does not get a lot of foot traffic, when the area being analyzed is too small, or when the timeframe chosen is too short. Increasing the area, you are looking at or increasing the timeframe will often reduce the likelihood of these warnings. Utilizing MobileScapes for single-event analysis, such as monitoring foot traffic during specific sporting events at stadiums or venues on particular dates and times, is discouraged. This is mainly because longer date ranges yield richer data sets, enhancing the accuracy of our estimates, while shorter durations result in smaller sample sizes. Furthermore, it is advisable for users to allow a 5–8-day window to ensure comprehensive data capture, accounting for any potential delays from our data providers.</p>

<p>How are credits consumed?</p>	<p><u>Aggregate</u>: If multiple geofences are selected for an aggregated extract, each group of 20 geofences counts as 1 query. Example: 100 geofences count as five queries. (Note: Queries will always round up; for example, 21 geofences in an aggregate extract will use two queries).</p> <p><u>Individual</u>: This option allows you to save time from having to run a separate extract for each unique geofence. If multiple geofences are selected for an individual extract, each geofence counts as 1 query. Example: 100 geofences count as 100 queries.</p>
<p>Why should I avoid using just numbers, the "&" sign, or "/" backslash, when naming extracts?</p>	<p>Sticking to letters, underscores, and dashes is highly recommended when naming extracts. Users might encounter an issue caused by extra spacing or special characters in the extract name, which hinder running reports related to the extract, such as the MobileScapes Data Extract Summary Tool report. The issue can only be resolved by re-running the data extract with the recommended naming convention. Each time you run an extract; it will be counted against your total queries.</p>

Usage Scenarios

Questions/Topics	Answers/Descriptions
<p>Where can the mobile movement extract be found in ENVISION?</p>	<p>Mobile movement extracts are found in the “Customers” section of My Data.</p>
<p>When selecting multiple geofences during an extract process, why choose to aggregate them into a single polygon?</p>	<p>When you aggregate multiple geofences, ENVISION will automatically deduplicate the file so you can analyze true unique visitors, workers and residents. If your use case is to understand the true unique observed population with no overlap or duplication of devices, this is the best option to choose.</p>
<p>When selecting multiple geofences during an extract process, why choose to treat them as individual geofences?</p>	<p>This option allows you to save time from having to run a separate extract for each unique geofence. However, when analyzing these types of extracts, such as creating a profile or running a MobileScapes Trend report, we recommend you use the filter to select a single geofence at a time, and then run your analysis. If you create a profile or run a MobileScapes Trend report using multiple geofences from a single extract, you risk introducing duplication into your results due to possible double counting of devices seen in multiple geofences.</p>

<p>When I select multiple geofences during an extract process, and then select the individual option, can I create a profile or MobileScapes Trend report for the entire extract?</p>	<p>In this scenario we recommend using a filter to select a single geofence for each profile you create, or each MobileScapes Trend report you run. This will prevent double counting of devices that may be seen in multiple geofences. If you create a profile or run a MobileScapes Trend report using multiple geofences from a single extract, you risk introducing duplication into your results.</p>
<p>If I want to understand unique visitors only for a specific day, daypart or month when running a weighted extract, what is the best way to achieve that?</p>	<p>In this scenario, we recommend selecting the “aggregate geofence” extract option, then selecting the specific day, daypart or month during the extract process.</p> <p>If you wish to understand visits for a specific day, daypart or month, you could run an entire timeframe for an “aggregate geofence” extract, and then when creating a profile of the extract in ENVISION, select the specific day, daypart or month fields for the aggregated geofence. You will get a profile of visits in this case.</p> <p>Specific day, daypart and month breakdowns are only available for visits associated with Unique Visitors.</p>
<p>I want to PRIZM profile visitors and workers to understand potential audience for mass marketing, can these counts be summed together?</p>	<p>As there is potential overlap across unique visitors, workers and residents, it is best practice to look at any PRIZM profiles individually or side-by-side. Overlap is most likely to occur between workers and residents, and additional caution should be paid to those categories.</p>
<p>What if my location is open during the night, can I select hours that span between two days? For example, 10 PM to 2 AM Friday/Saturday.</p>	<p>When creating your data extract, you have the flexibility to choose any time period that falls within a single day. For instance, if you select a time frame of 4PM-10PM, the extract will include all observations made during that time on every day you've chosen.</p> <p>However, it's important to note that you can't select a time range that spans across two different days. For example, if you try to create an extract of just four hours from 10PM to 2AM that covers both Day 1 and Day 2, it won't be possible. Instead, you will need to keep your selection within a 24-hour period.</p>
<p>I have noticed a difference in visit counts between FootFall and MobileScapes, which one should I use?</p>	<p>There may be some differences in the reported visit count between FootFall and MobileScapes for the same geofence and timeframe. FootFall captures foot traffic once a week using the latest available data, While MobileScapes updates daily. Any discrepancies in counts are due to delayed data delivery by one of our MobileScapes providers, resulting in FootFall capturing data before all potential devices are accounted for in MobileScapes.</p>

