

# About our COVID-19 data

[transitapp.com/coronavirus](https://transitapp.com/coronavirus)

We hope our data about how the coronavirus pandemic has impacted demand for public transit is helpful. We've put together this guide to help you understand the data we make available. If you need to contact us, please reach out:

- To request a dataset, please fill out this form: <https://forms.gle/spfd1xbGu1tcyALi8>
- If you have additional questions, please do not hesitate to contact [partners@transitapp.com](mailto:partners@transitapp.com)

## CITING THE DATA

When utilizing or citing these data, attribute the source as "Transit app" and note that the data measures demand for public transit based on millions of app opens. It does not represent transit ridership, which are statistics that can only be released by transit agencies.

## DATA SUBJECT TO CHANGE

The data provided are subject to change and are updated on a regular basis. Agencies, metro areas, and countries may be added or removed. As of April 2, 2020, data are available for 6 countries, 68 metro areas, and 139 transit agencies.

## WHAT NOT TO DO WITH THE DATA

- The data provided are non-additive, meaning that summing or averaging values corresponding to different entities would lead to inexact results. For example, the usage profile for Canada and the US combined is not the average of their respective values.
- Similarly, for example, the average of all agencies within the San Francisco Bay Area is not the same as the value for the San Francisco Bay Area.
- The data are normalized according to an agency's, region's, or country's projected peak usage — the values are not measures of total activity. Since values are relative, they should not be used to compare total activity or demand between agencies or regions.

## OUR TWO TYPES OF DATA

Both datasets summarize activity in the Transit app, measured by active sessions (i.e., app opens). These data are corrected to account for spikes in app usage caused by riders opening push notifications, which we regularly send with updates about coronavirus-related public transit service changes.

Normal usage is defined as app sessions observed on the same day of the week one year ago, averaged over three weeks and corrected for yearly growth in the corresponding agency, region, or country. For example: the normal value for Tuesday, March 31, 2020, is based on activity from March 26, April 2, and April 9, 2019, all Tuesdays. Activity from these three days is then averaged and adjusted for year-over-year patterns.

### 1) Hourly app usage

The dataset is provided in the following format:

- *name*:
  - a transit agency, with the corresponding region in parentheses, or
  - a metro area (e.g., New York City), or
  - a country
- *day*: the day corresponding to actual and normal values
- *time*: the time of day, in hours, using the local time zone of the corresponding entity. 1.5 represents the hour from 1 AM to 2 AM.
- *actual*: app usage, as a percentage of peak normal usage projected for that day
- *week\_ago*: app usage 7 days before day, as a percentage of peak normal usage projected for that day
- *normal*: expected app usage without the pandemic, as a percentage of the projected peak for that day

name	day	time	actual	week_ago	normal
The Ride (Ann Arbor)	2020-03-16	0.5	1.6%	0.6%	1.6%
AC Transit (SF Bay Area)	2020-03-16	0.5	3.5%	5.5%	6.0%
...	...	...	...	...	...

## 2) Daily reduction in app usage

While hourly data are presented as a percent of peak expected activity for that day, daily values are simply the ratio of total actual activity to expected activity (this is not an average of the hourly data, but a calculation based on the whole day's number of sessions). As with hourly data, these values are not additive across agencies or regions.

- *entities*: the data are divided into three tables, for three entity categories:
  - Transit agencies
  - Metro areas
  - Countries
- *dates*: the corresponding day
- *reduction*: the reduction in app usage from its expected value, expressed as a percentage (actual / expected - 1)

name	2020-03-31	2020-03-30	2020-03-29	...
New York City	-71%	-69%	-67%	...
Montreal	-84%	-81%	-82%	...
...	...	...	...	...