Data Factsheet

TfC's Maintained Transit Database

Quarter 3 – 2022 Data Factsheet v1.0   Date 8/4/2022

1   Scope

The geographic area is the whole of the Greater Cairo Region (with Built-up area estimate of 2,000 km2 and Population of 20 million inhabitants). The fieldwork scope includes All intra-city public transport services originating and ending within Greater Cairo Region; including eight New Desert Cities 'NDC's: El-Sheikh Zayed City, 6th of October City, New Cairo, El-Obour City, El-Shorouk City, Badr City, 10th of Ramadan City and 15th of May City.

The geographic coverage of the spatial database compared to the urban built up area of the GCR is estimated around 54%.
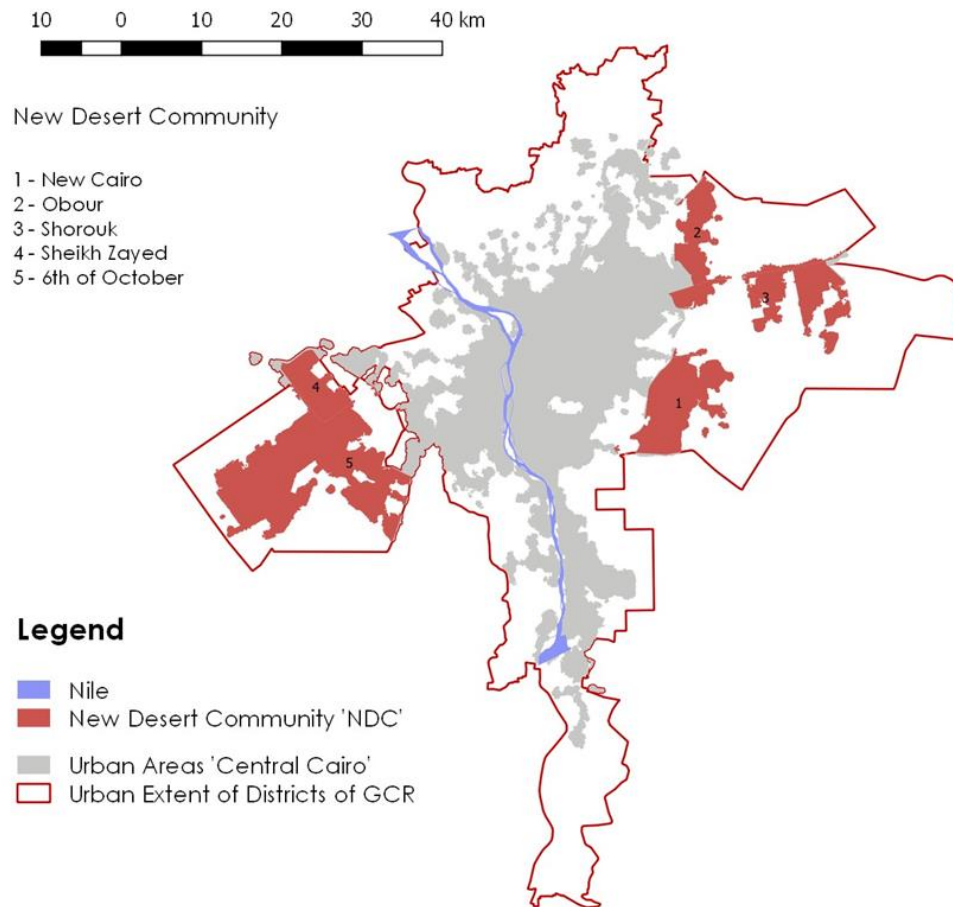

Figure 1: Boundaries of the Greater Cairo Region

2 Content

2.1 GIS Data

<table>
<tr><td>

1650

Trips
</td><td>

930

Routes
</td></tr>
<tr><td>

32,032

Kilometers in Total
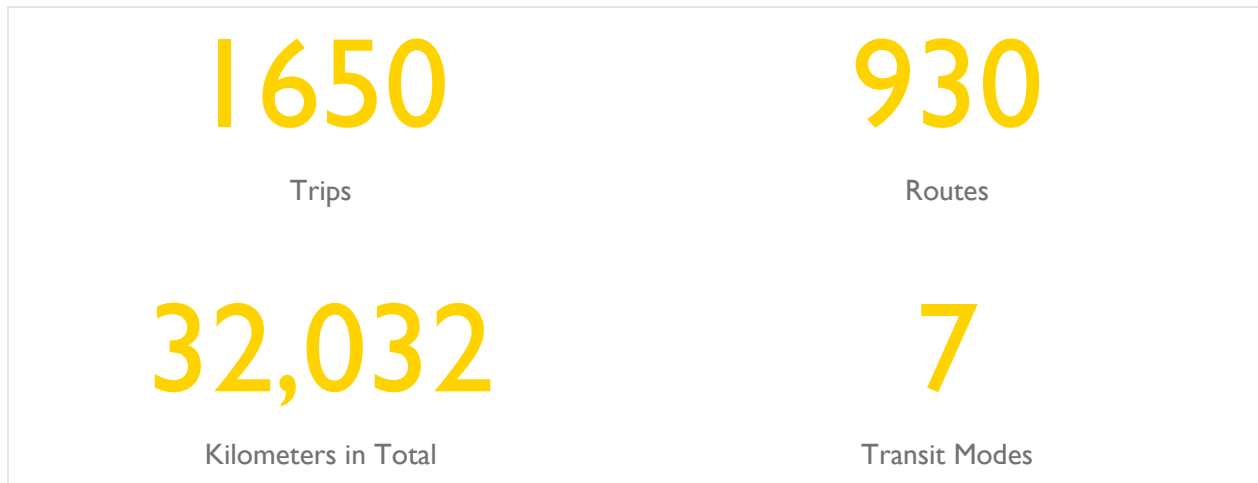</td><td>

7

Transit Modes
</td></tr>
</table>

Table 1: Transit GIS Data Summary Stats

2.1.1 Trips

The Trips layers are divided into **raw** and **processed** layers, where each route is composed of two trips, an outbound trip and a return trip.

Raw Trips layer contains the traces gathered by the TfC team from the field. Routes were mapped multiple times for accuracy. Raw trips are constituted of around 3 million GPS points that are used in travel time estimates and modelling congestion patterns.

Processed Trips layer contains the unique trips after being digitized to match the road network.
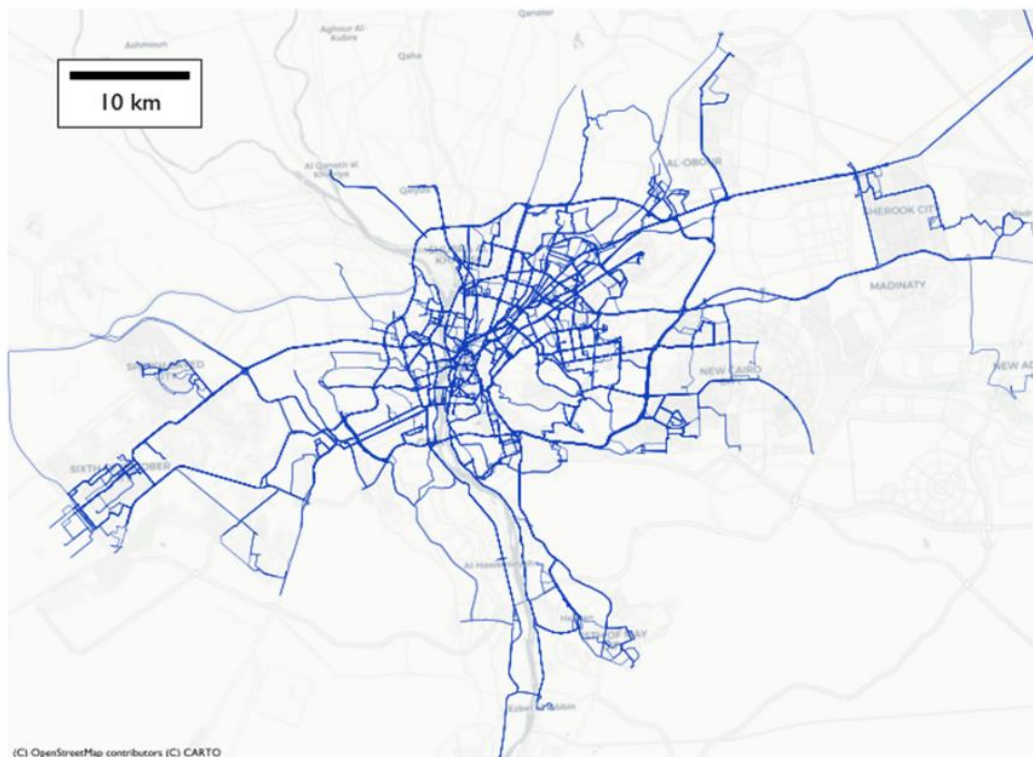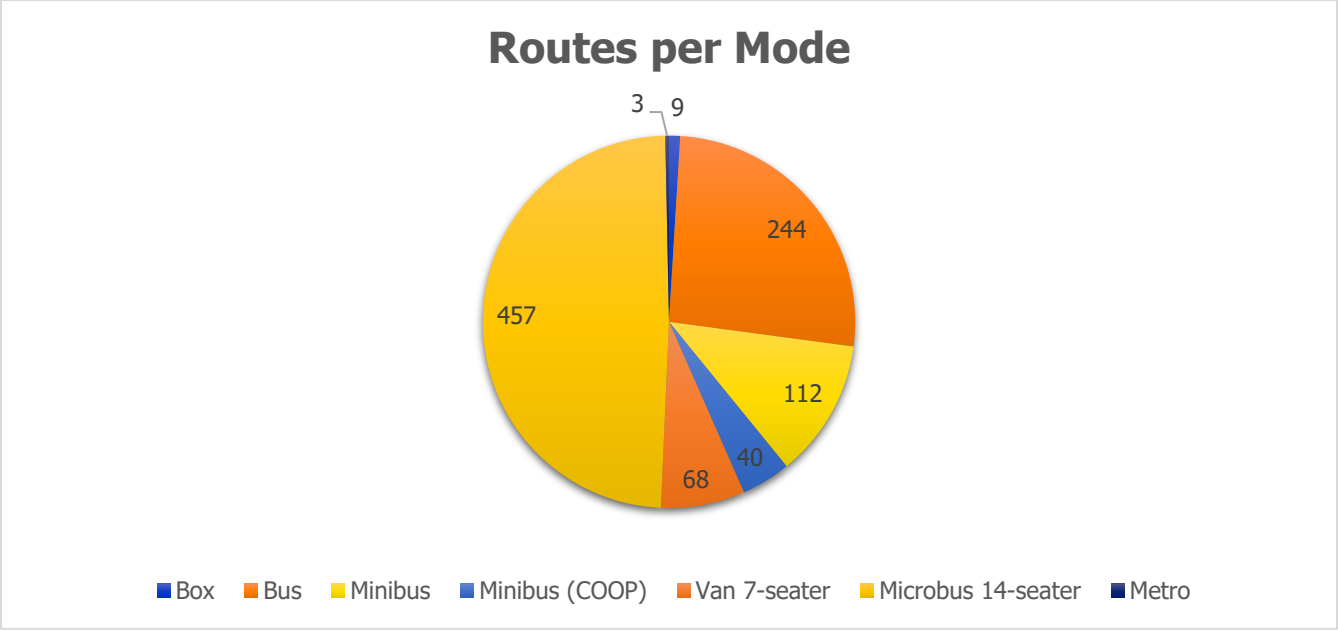

Figure 2: Sample data from the Processed Trips layer

Routes per Mode

Legend: ■ Box ■ Bus ■ Minibus ■ Minibus (COOP) ■ Van 7-seater ■ Microbus 14-seater ■ Metro

2.1.2 Stops

The stops layers are divided into raw and processed layers, where the raw layers carry actual boarding and alighting information collected during the fieldwork, and the processed layer corresponding to a hypothetical network of stops determined using statistical and urban design methods.

2796
Processed Stops

272
Terminals

24
Bus Garages
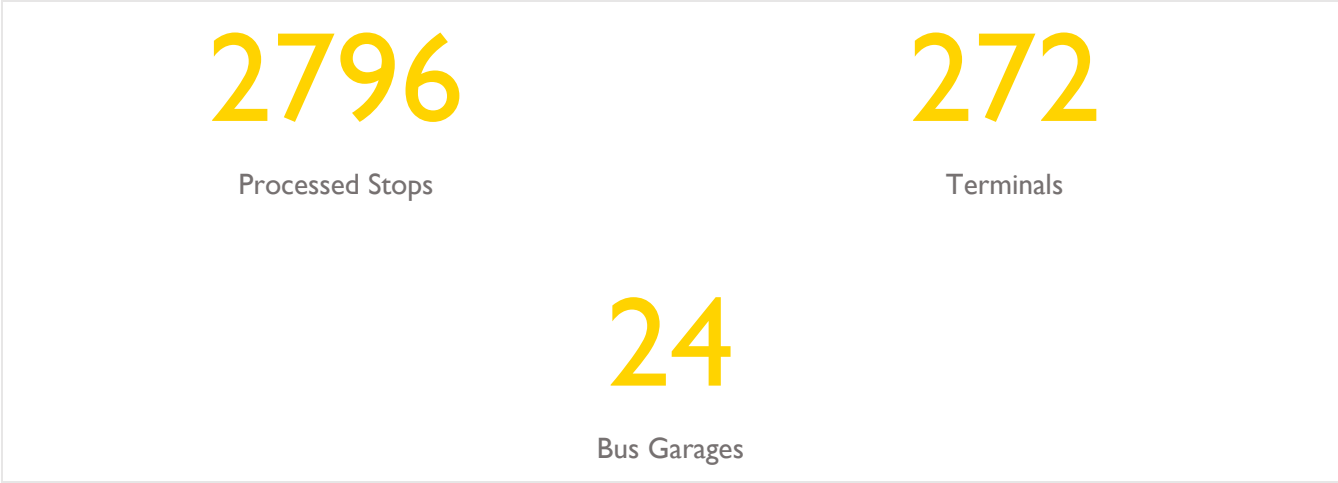
2.1.3   Project Register

Project register is an up-to-date spatial database of public transit projects that are under construction or planned, covering rail project, High speed rail, Monorail, LRT, New Metro lines and extensions and BRT.

The register is built from an aggregation of multiple sources including paper maps published by government officials, news sources, and/or published reports.
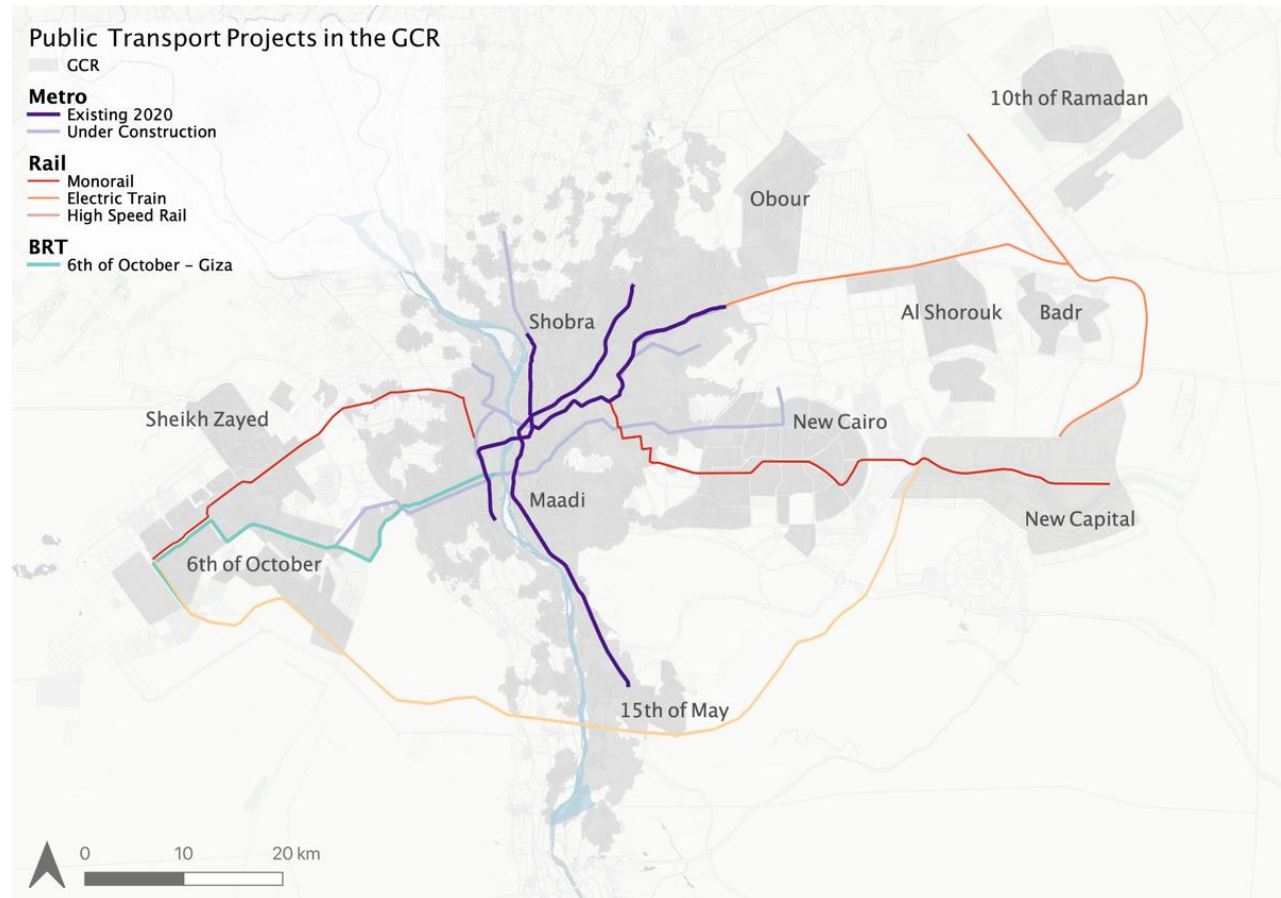

Figure 3: Sample data from the Register Database

2.2   GTFS

All of the aforementioned data has been processed into a functioning and fully compliant 'General Transit Feed Standard' GTFS feed. The GTFS was originally designed for the sole purpose of supporting on-line transit trip planners. Static data types covered by the standard include route and stop locations (for modes with fixed routes), headways and/or frequencies, and fares.

Category	Data Point	Description	Related data
Spatial	Stops & Stations	Bus Stations generally have physical infrastructure, where Bus Stops refer to areas where a bus stops to alight passengers during the trip.	• Stop Name • Stop Infrastructure • Wheelchair • Stop Description • Transfer Times
	Routes	Each Bus Route consists of multiple trips.	• Route Name • Bus kind & capacity • Whe elchair access • Route Description • Route Fares [1] • Trip Head-sign • Stops passed
Temporal	Frequency	Route Frequency refers to how often a bus passes, i.e. how many minutes pass in average between a bus and the other.	
	Trip Duration	Duration between each stop-pair from trip origin to destination.	
System Adequacy	Wheelchair Accessibility	Index of Adequate Urban Mobility[2]	
	Safety	Measures defined by TfC	

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[1] Collected over years 2018, 2020, and 2022
[2] The 'Index of Adequate Mobility' was created by Takween for integrated Community Development and TfC, and includes information on Affordability, Accessibility, Comfort, Safety, Security and Sustainability.

3   Currency

Dates of Data Collection
Per Trip

Sum of Trips
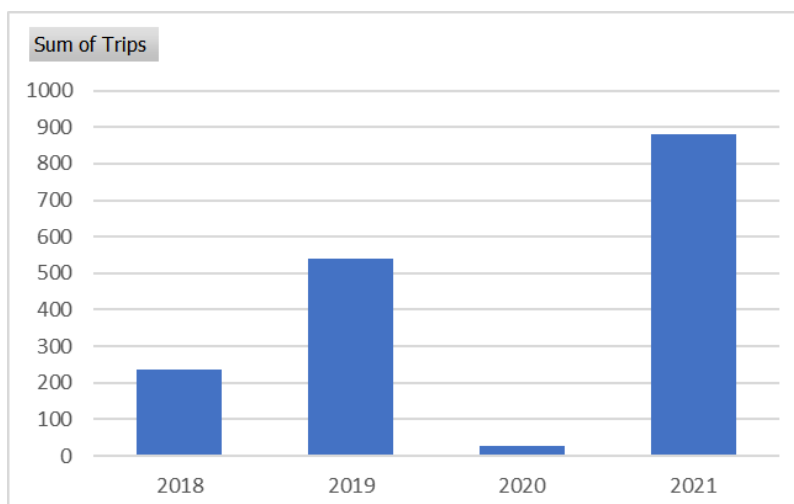
Update routes collected during 2018 and 2019 were confirmed for their existence through field work.

About Transport for Cairo

Transport for Cairo (TfC) provides data, tools and research to improve urban mobility in emerging cities, primarily in Africa. Rapid Urbanization, economic and population growth in times of the climate crisis forces us to tackle the complexity and ever-changing urban mobility scene in developing cities. TfC is a disruptive transport consultancy that optimizes existing transport systems and develops flexible and sustainable mobility solutions for our future.
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