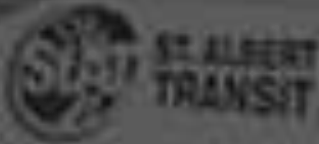


# Cleaner Technologies in Greater Cairo

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NOVEMBER 2019

**UN**  **HABITAT**  
FOR A BETTER URBAN FUTURE



Transportation constitutes

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**55%**

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of Egypt's carbon emissions  
with Cairo alone contributing to  
40% of that percentage

\*UNDP 2016

# Emissions are reducing our quality of life.

They negatively impact

Air  
Quality

Health

Climate  
Change

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# 43,000

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Egyptians die annually from  
diseases related to air pollution

\*WHO 2012

versus

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**34,000**

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Egyptians dying annually from  
diseases related to tobacco

\*WHO 2012

# How do we decrease our emissions?

Avoid

Shift

Improve

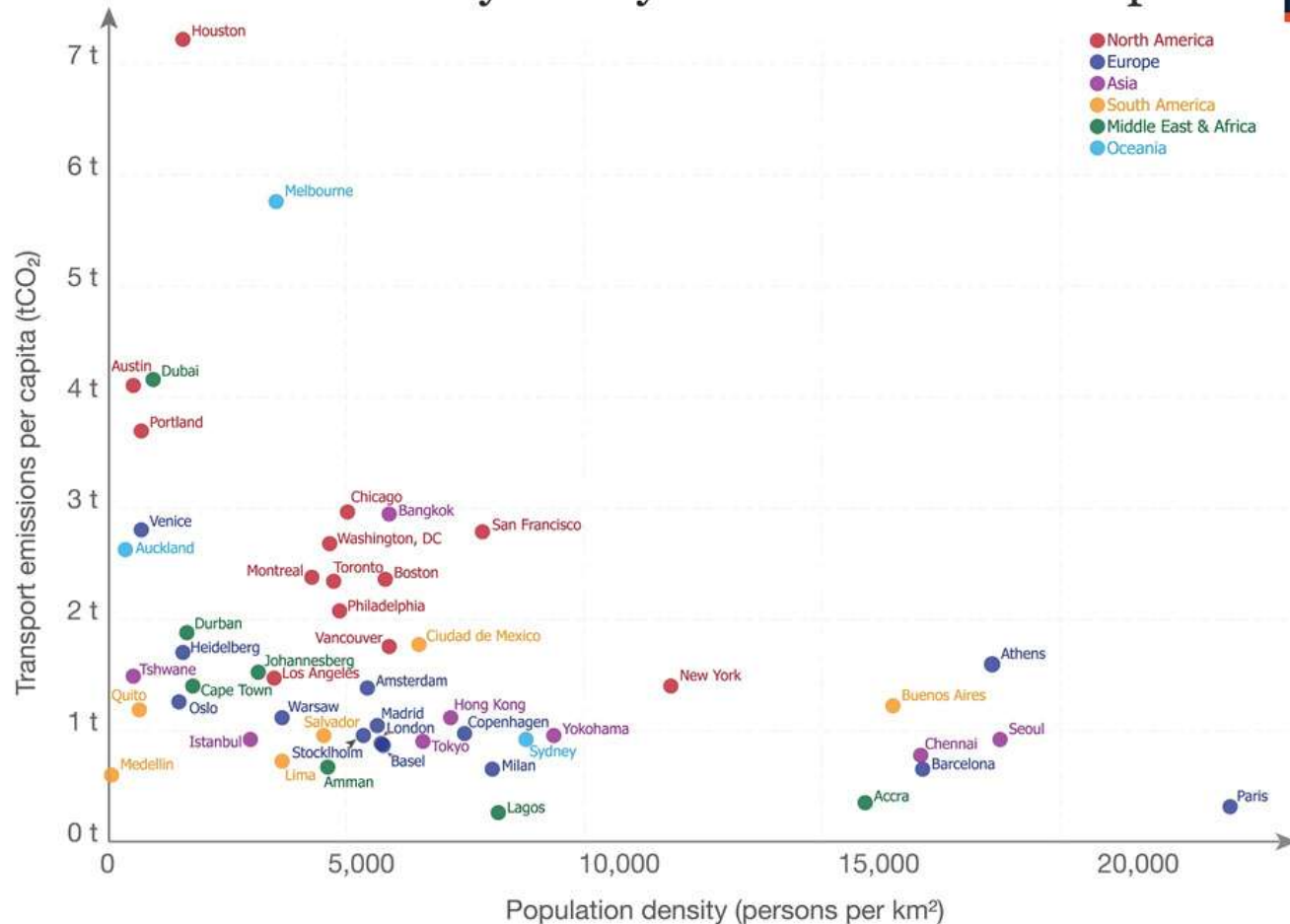


# Which translates to

Drive  
Less

Move  
Cleaner

# Dense cities: could they be key to a low carbon footprint?



Data source: C40 Cities Climate Leadership Group (2017).

Licensed under CC-BY-SA by the authors Hannah Ritchie & Max Roser.

## Take advantage of cities

Emissions per capita decrease in cities with higher density  
because people drive less



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# Land Use Matters.

As shown by Atlanta vs. Barcelona

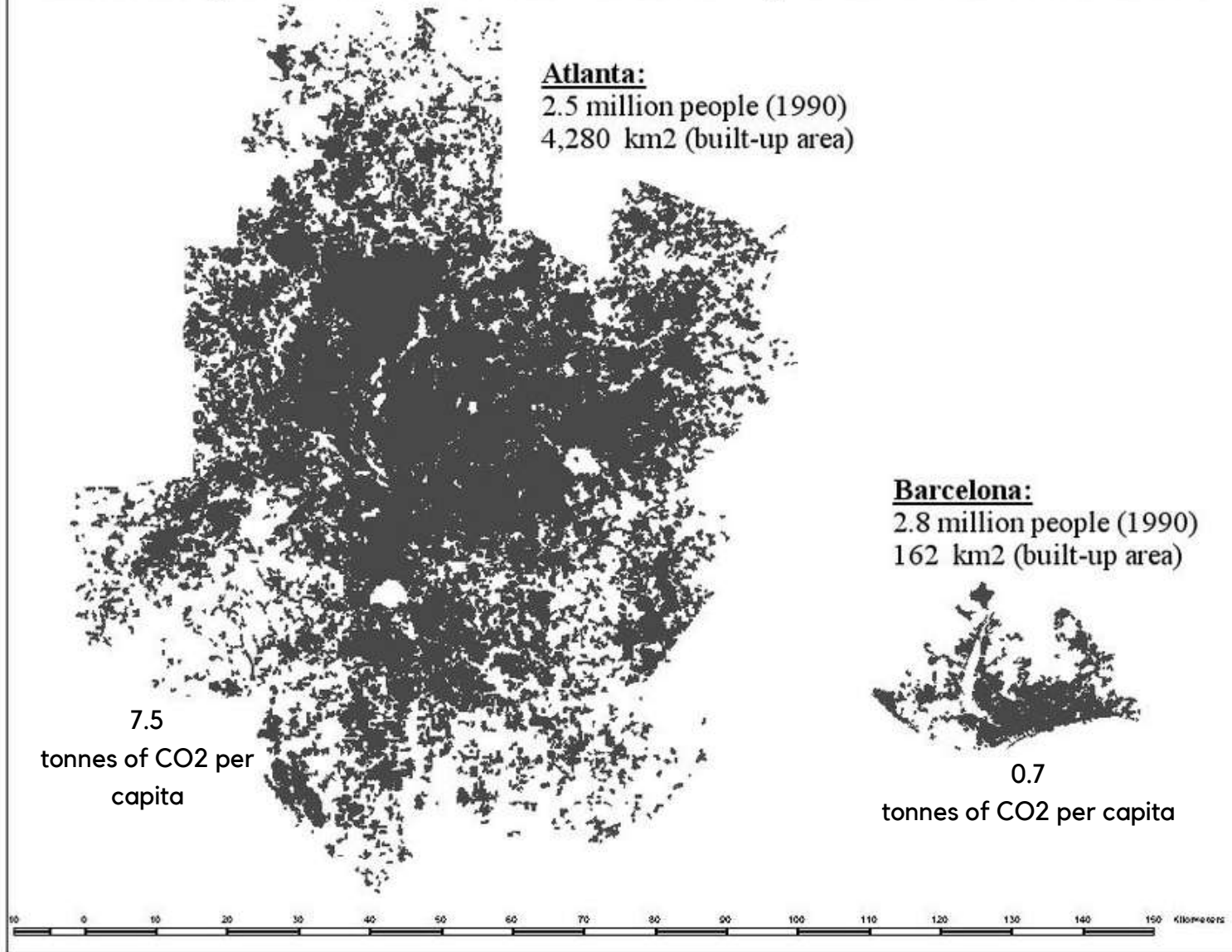
Planning for mixed use  
developments decreases  
dependency on vehicles and  
encourages non-motorized modes of  
transit



Atlanta vs. Barcelona



The Built-up Area of Atlanta and Barcelona Represented at the Same Scale



# Atlanta vs. Barcelona

# Where is Cairo on this Spectrum?

## Atlanta

Tonnes of CO2  
per capita  
7.5

Built up Area:  
4,280 km<sup>2</sup>

Population density  
630 p/km<sup>2</sup>

Total tonnes of CO2  
540 mil  
(2007)

## Egypt

Tonnes of CO2  
per capita  
2.2

Population density  
11,900 p/km<sup>2</sup>

## Barcelona

Tonnes of CO2  
per capita  
0.7

Built up Area:  
162 km<sup>2</sup>

Population density  
16,000 p/km<sup>2</sup>

Total tonnes of CO2  
3.6 mil  
(2012)

# How does Cairo Move?

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# 13%

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of trips in Cairo are not motorized

\*CREATS 2002



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# 63%

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of trips in Cairo are public  
transportation

\*CREATS 2002



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# 79%

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of which are buses and minibuses

\*CREATS 2002



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# How can we move cleaner?

Improve the condition of public transportation  
and expand the network to meet current and  
future demand & use cleaner technologies

# Solutions for Existing Transportation

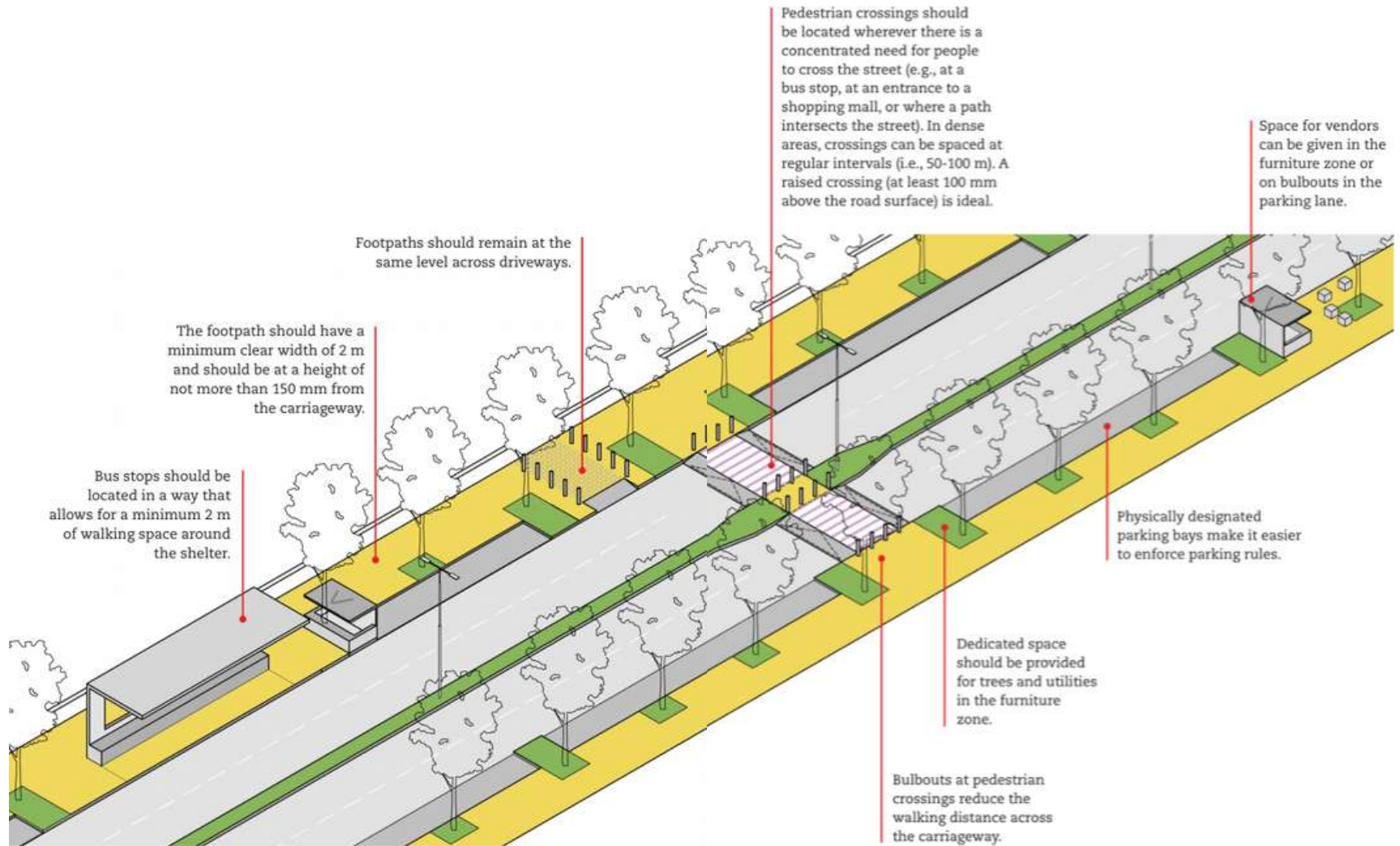
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## **Use Euro-compliant fuel**

Buses and micro-buses currently use Diesel fuel which has 100 times the recommended sulfur content

## **Explore using Biogas or CNG**

Explore other alternative energy solutions like biogas or Compressed Natural Gas which has a smaller carbon footprint



# Build better sidewalks





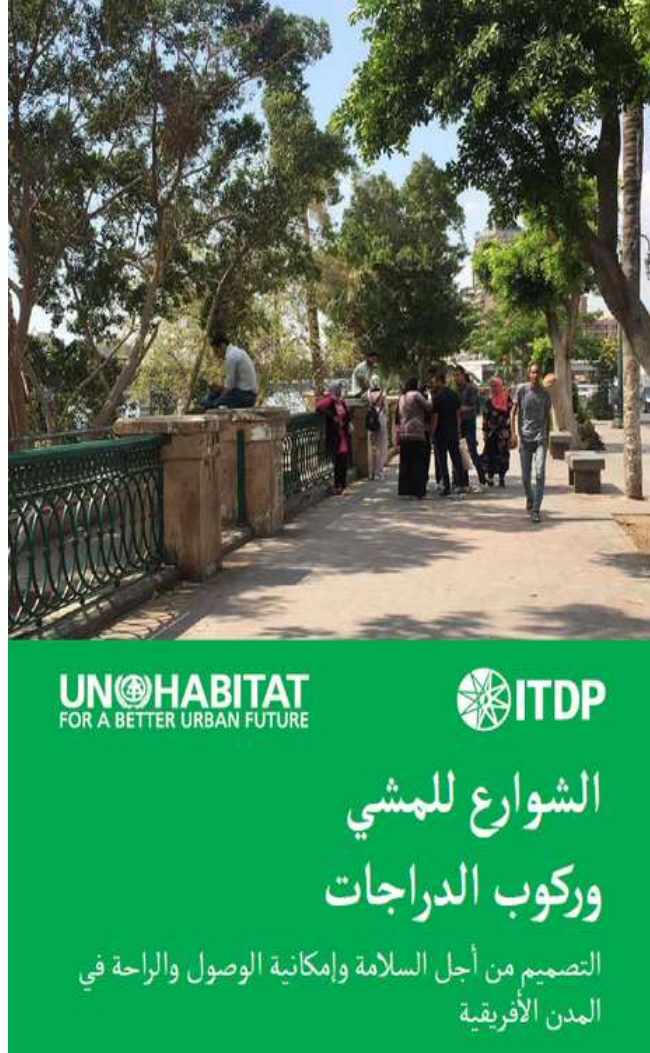
# Bad vs. Good Practice

\*Streets for Walking and Cycling 2018



# Integrated Transportation Network



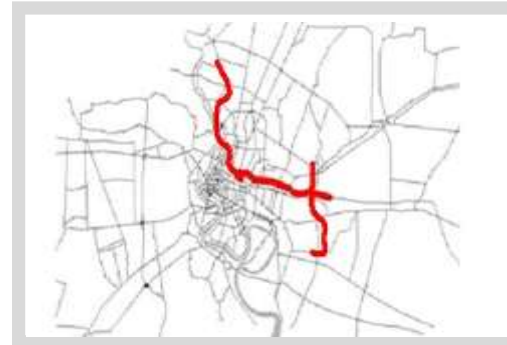


# NMT Report customized to Cairo

# What can we do with \$1 bn



426 KM  
OF BRT



14 KM OF  
ELEVATED  
RAIL



40 KM  
OF LRT



7 KM OF  
SUBWAY

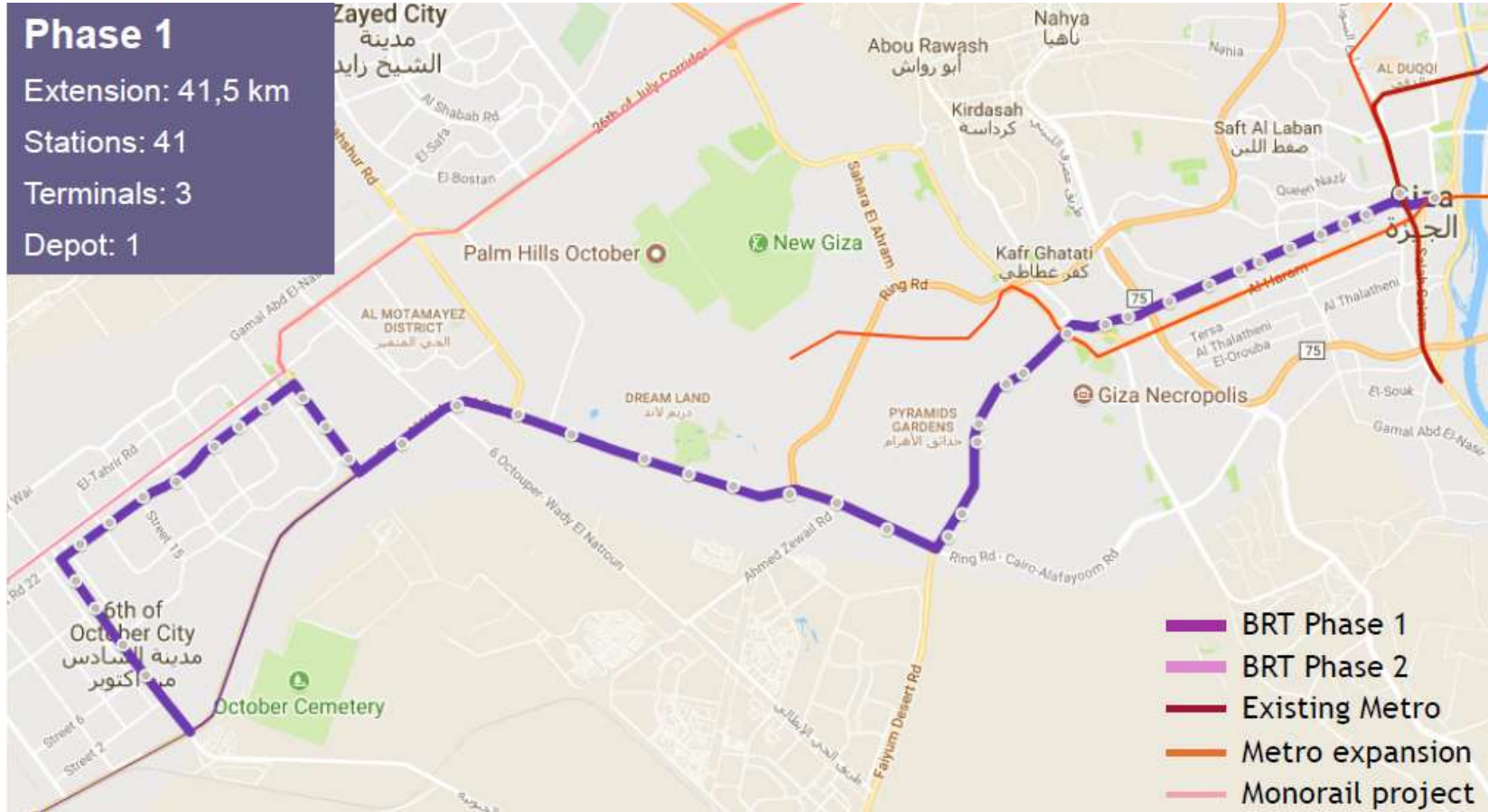
# Projects

BRT

Bike Share & Bike  
Lanes



# Bus Rapid Transit



Affordable bus service that runs in dedicated lanes and uses real time data to transport an estimate of 126,000 passengers per day



**BRT Render in Faisal Street**



# Challenges to going Electric

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Unreliable because the market cannot risk it when proving the efficiency of the BRT

Double the initial cost (200k vs. 400k)

Battery needs to be changed every 4 years

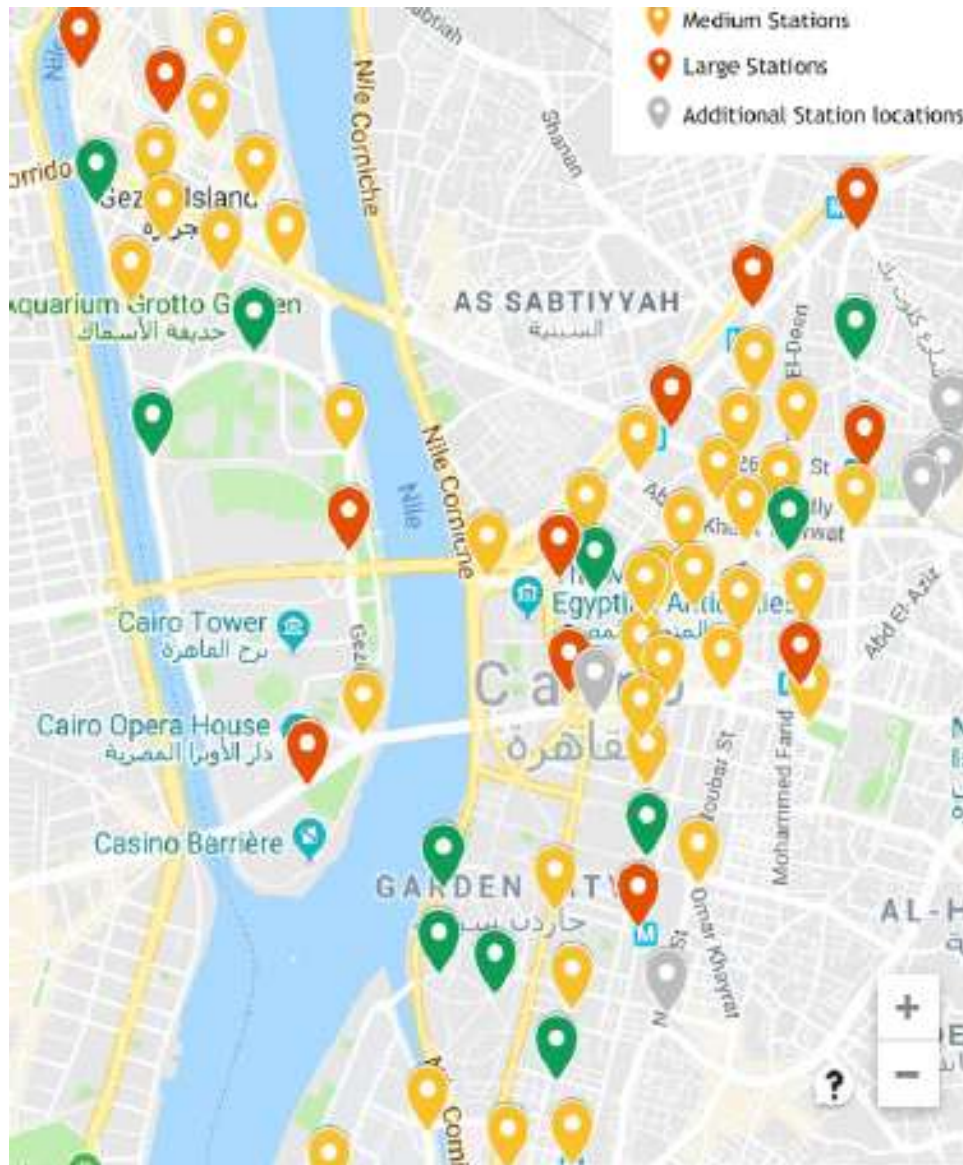




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# Bike Lane Render in Talaat Harb

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# Bike sharing





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# Electric Bikes Example: Dezba

**“ We need to build  
cities for people,  
not for cars. ”**

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# Thank You

**FOR YOUR TIME**

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