



Municipality of Teresina  
**Gabriela Uchoa**

**INNOVATION FOR BETTER MOBILITY**  
**TERESINA, BRAZIL**

**A SHORT STORY FIRST..**



Hi, I'm Gabriela Uchoa from  
**TERESINA, Brazil**

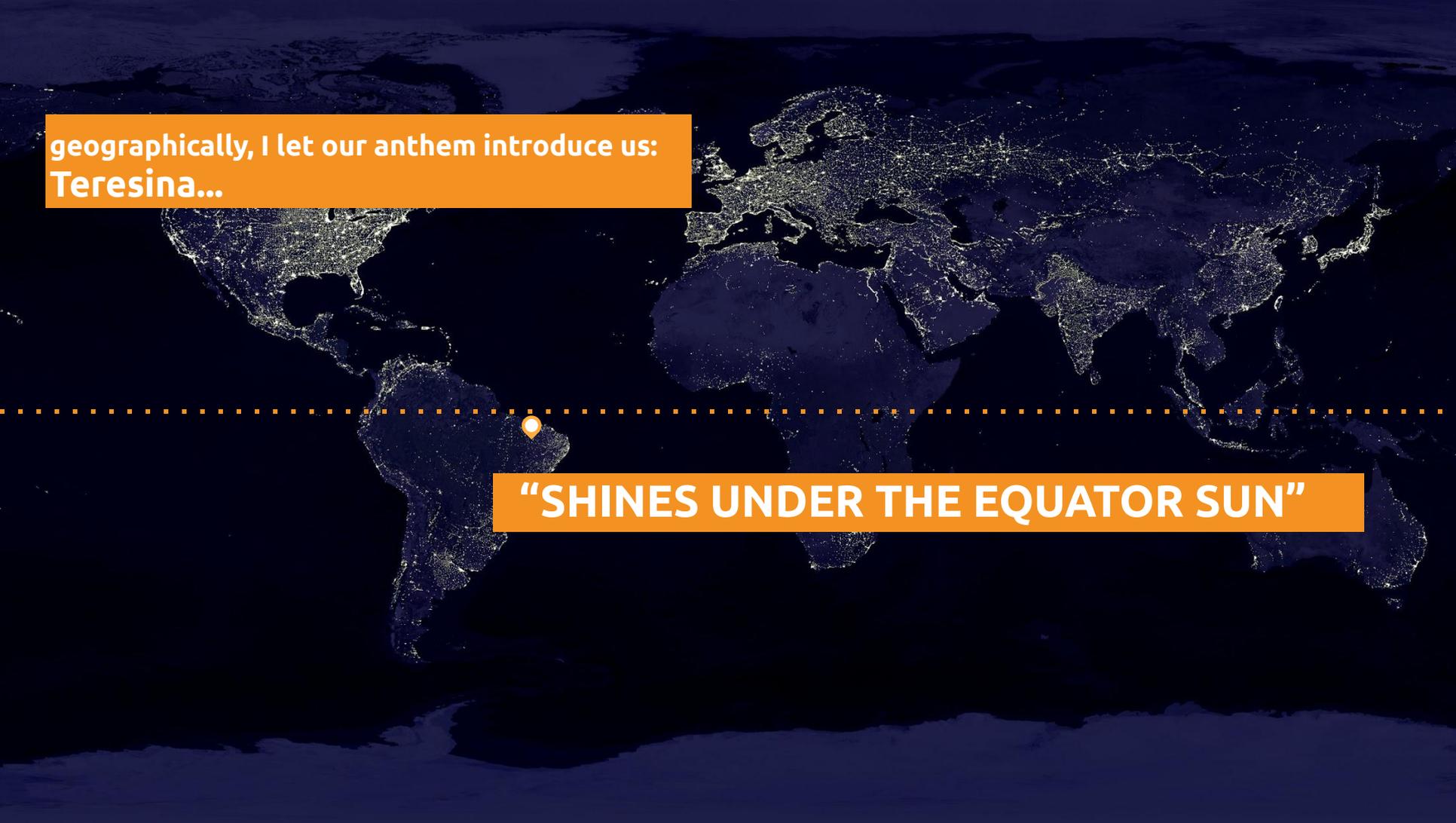
State Capital of Piauí, in the semi-arid Northeast, with population of about **860,000 inhabitants in the city** and about

**1.2mi inhabitants**  
in the metropolitan Area

We live in a relative poor area - 2nd poorest state of Brazil - and our city has a GDP of U\$D 5,6 billion

**GDP/Capita U\$D 6,729**

Despite that, we are a regional reference for health and educational services



geographically, I let our anthem introduce us:  
Teresina...

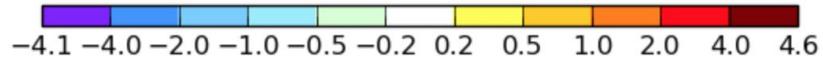
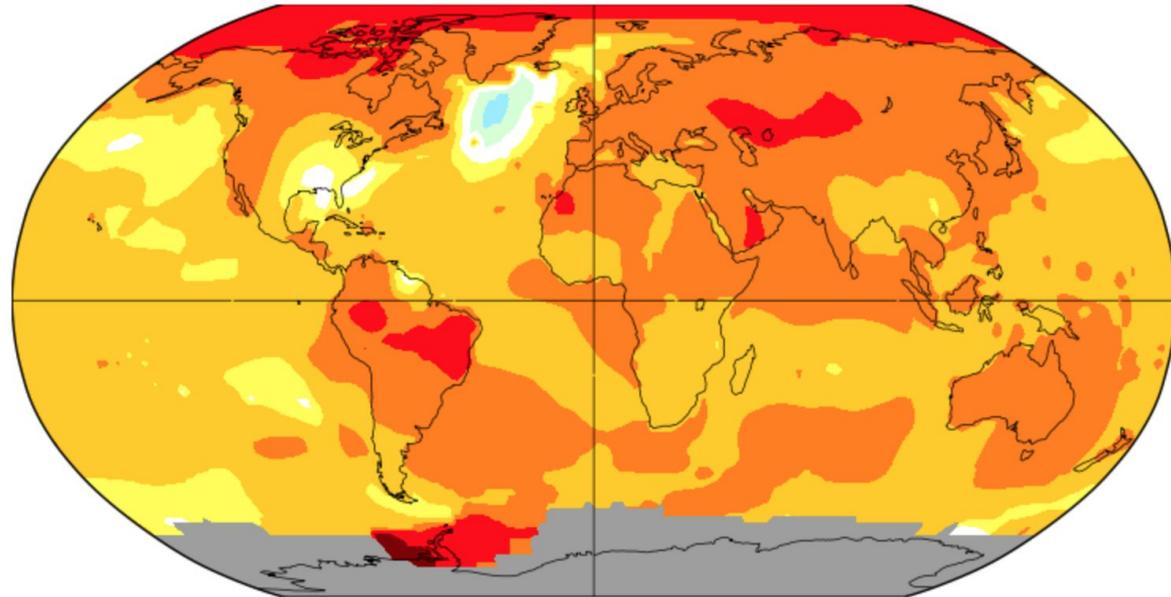
**“SHINES UNDER THE EQUATOR SUN”**

**Indeed.. Maybe too much!**

Annual J-D

L-OTI(°C) Change 1918-2018

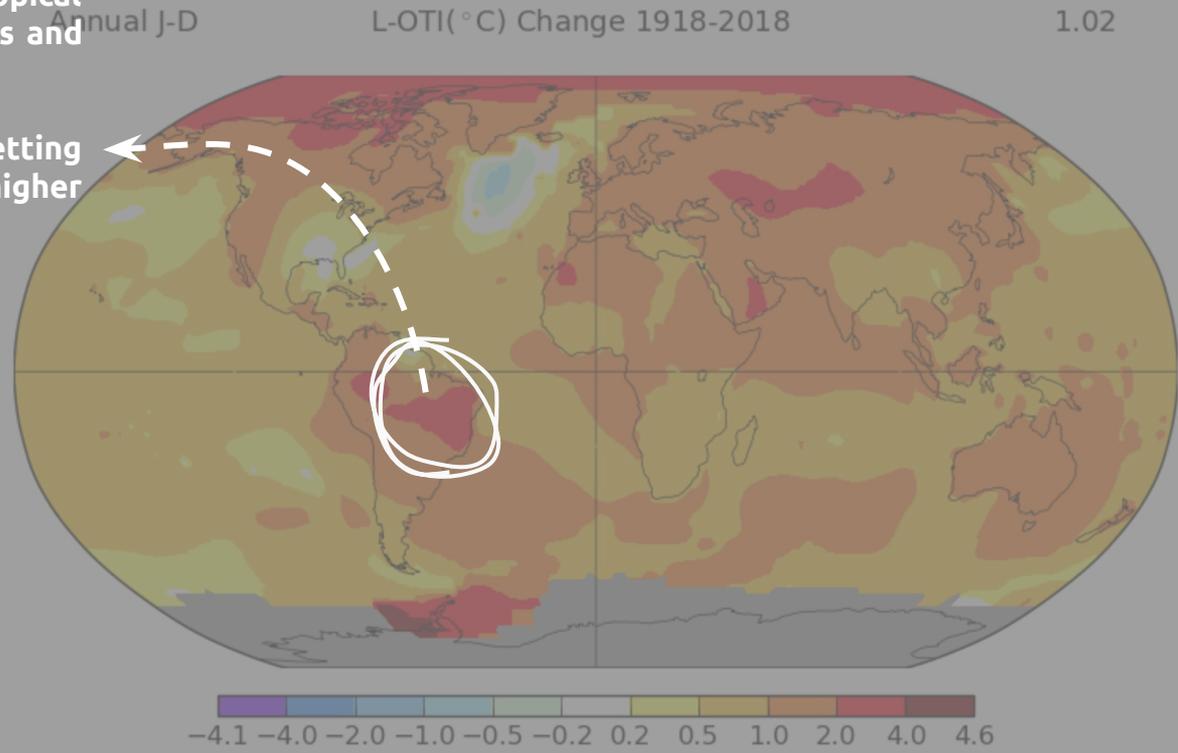
1.02



GISTEMP Team, 2019: GISS Surface Temperature Analysis (GISTEMP).

Teresina has semi-arid tropical climate, with high temperatures and low humidity.

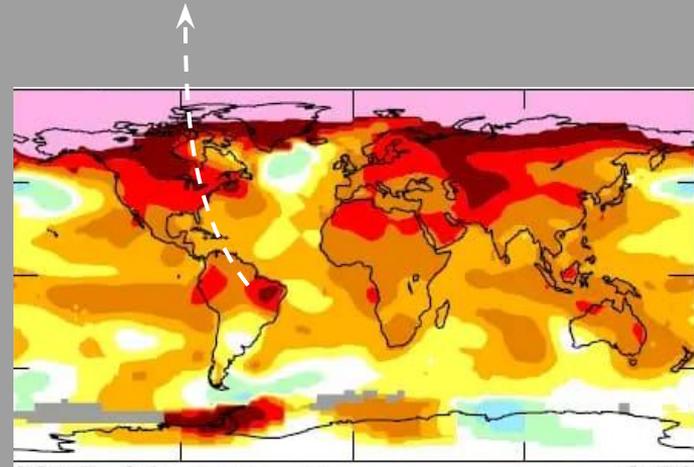
Unfortunately, our city is getting even hotter at a rate twice higher than the global average.



Teresina has semi-arid tropical climate, with high temperatures and low humidity.

Unfortunately, our city is getting even hotter at a rate twice higher than the global average.

In 2016, the global warmest among recent years, we were burning..



And not only temperature average is increasing, but also the number of very hot days.

Days at or above 32°C per year

1986, when I was born, Teresina had 260 days above 32°C. Now we can expect 322 of these very hot days.

of days  
32°C

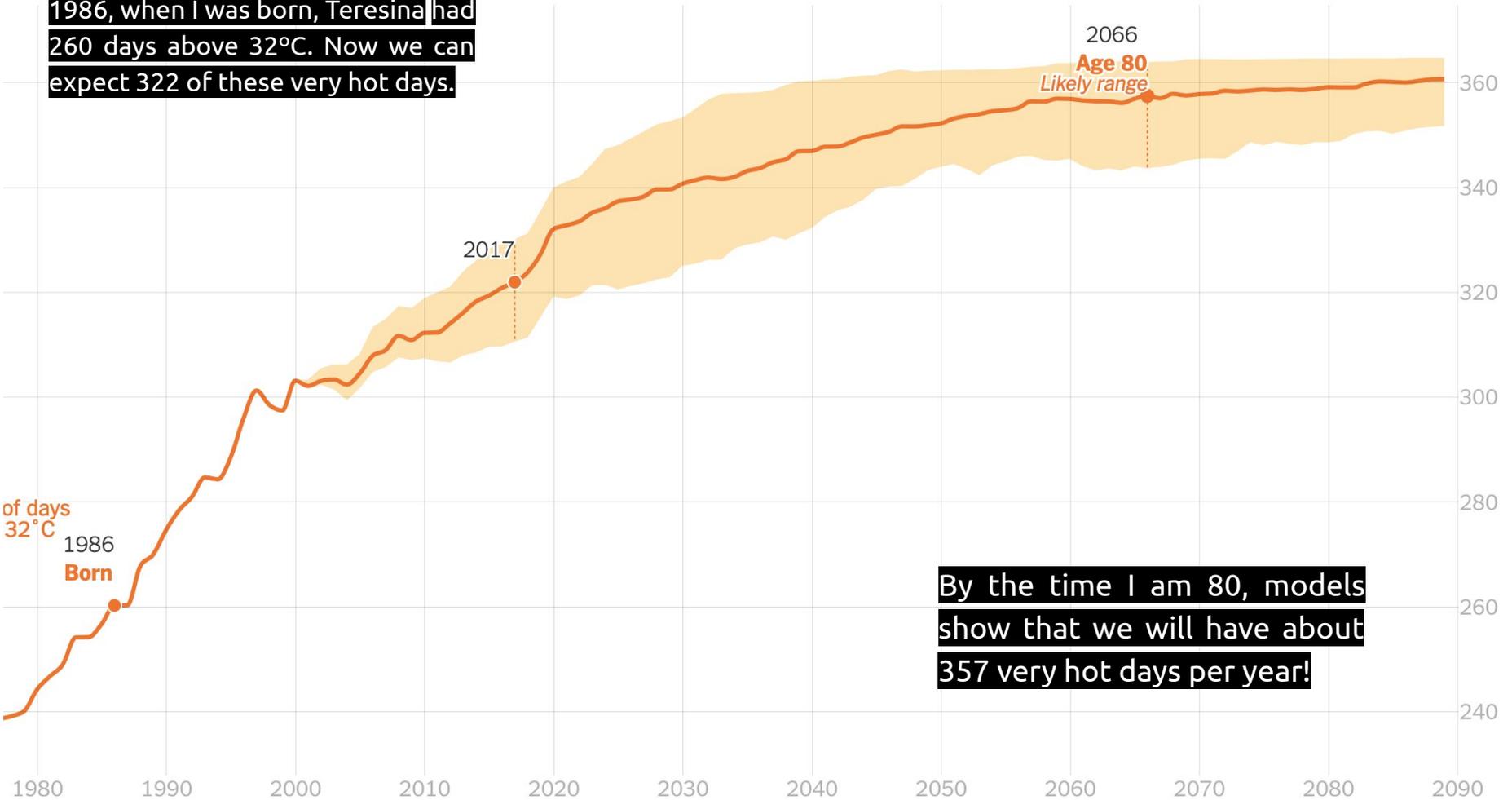
1986  
Born

2017

2066

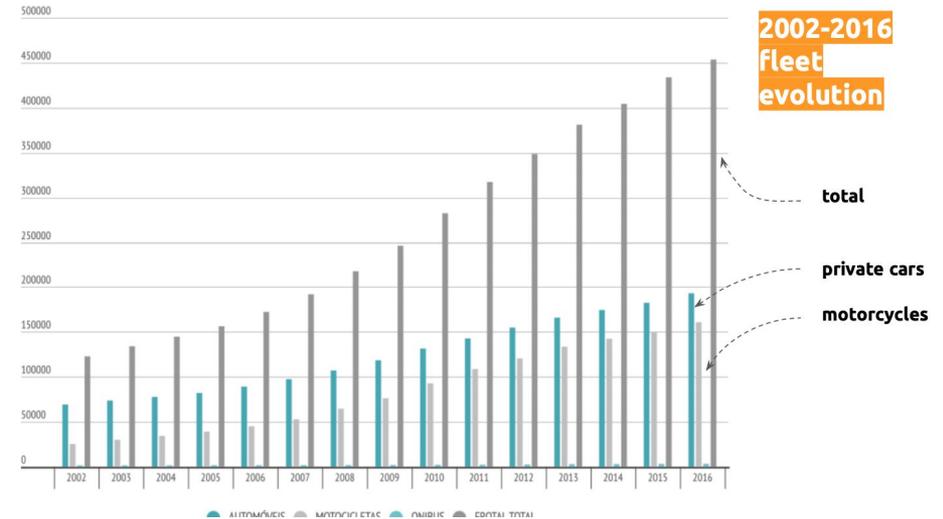
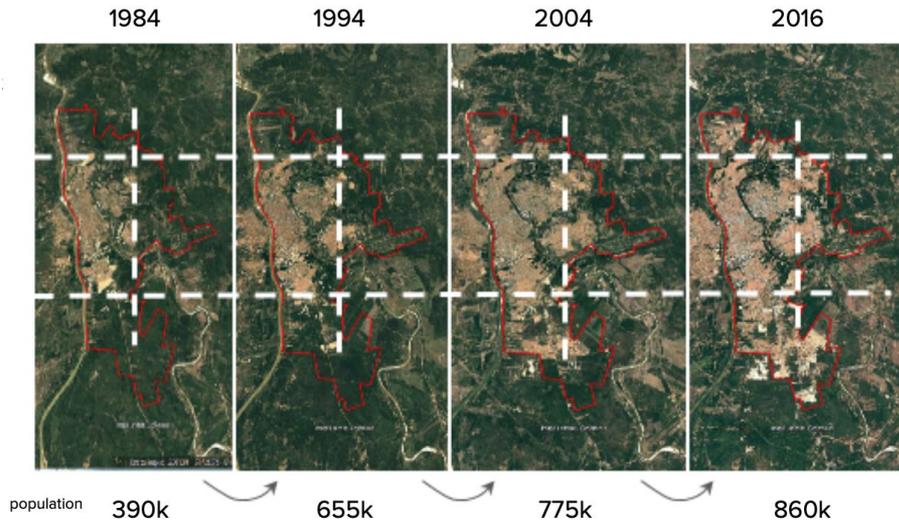
Age 80  
Likely range

By the time I am 80, models show that we will have about 357 very hot days per year!

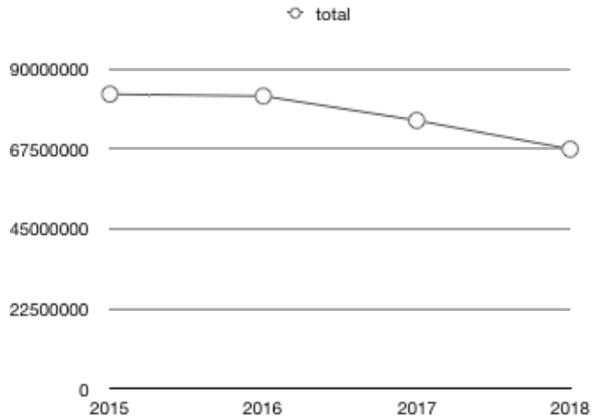


## On top of all that..

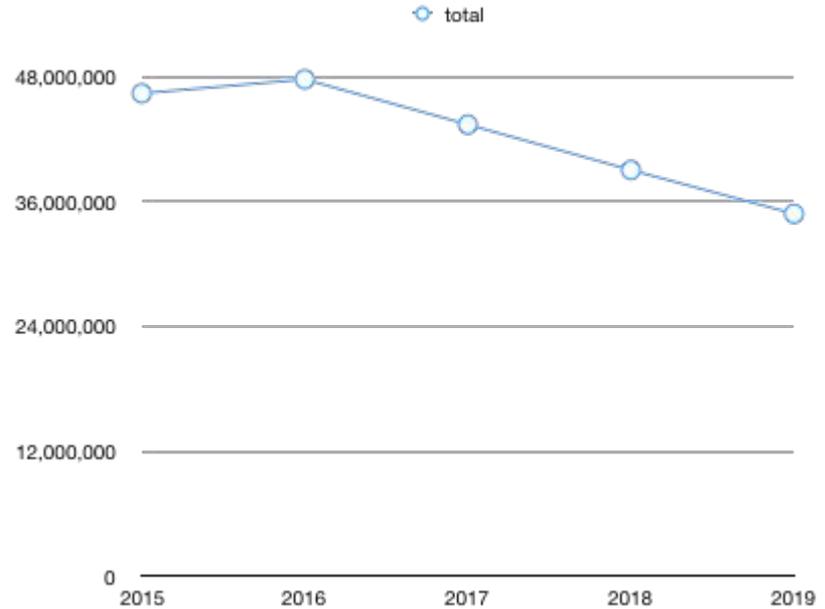
..add an accelerated urban growth with deficient infrastructure, extensive land consumption with low-density urbanisation patterns and a high motorization rate.



# The public transport system lost 18% of passengers 2015-2018



total bus passengers JAN-DEC



total bus passengers JAN-JUL



But we are making our efforts in

**BUILDING RESILIENCE**

# Promoting the shift to more Sustainable Urban Mobility and Land Use



## **SUSTAINABLE MOBILITY INVESTMENTS**

Bus Rapid Transit (BRT) System

8 Terminals

62 Automated Bus Stations

84km of Exclusive Corridors and Bus Lanes

55km Cycle Lanes + 224km proposal

**City Center Pedestrian Accessibility Plan**

## **NEW URBAN MASTERPLAN**

Coordinated and Compact City

Transit Oriented Development (TOD)

Urban densification

## **NEW CITY SUMP**

Sustainable Mobility as Default



and setting up our

# **TERESINA 2030** strategy

A man wearing a wide-brimmed straw hat and a pink shirt is crouching in a garden. He is looking upwards and to the left. In front of him is a white bucket with some soil and plants inside. The garden has raised beds with various green plants. In the background, there are trees, a utility pole, and a clear blue sky.

# MONITORING SDGs

at local level

# ALIGNING OUR ACTIONS TO THE SDGs

## ACTIONS REPORT

TERESINA 2030

# 264

## ACTIONS



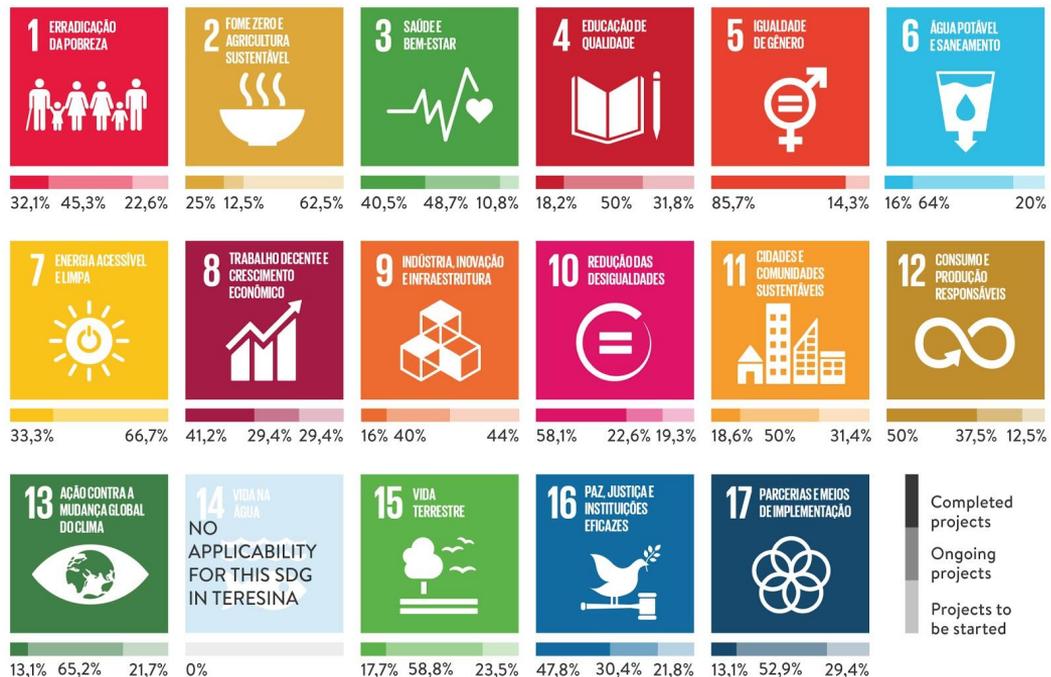
77 completed projects

112 ongoing projects

75 projects to be started

# 5 THEMATIC AXIS

### FINISHED PROJECTS PER SUSTAINABLE DEVELOPMENT GOAL



Completed projects  
Ongoing projects  
Projects to be started



and innovating in new projects in our

**TERESINA 2030 THINK TANK**

# WOMEN FOR CLIMATE TERESINA

Building female leaders to tackle climate issues

AGENDA 2030, LAGOAS DO NORTE & SMPM  
PARTNERS | BWORLD BANK, NETHERLANDS EMBASSY



## DIRCEU INTEGRATED MOBILITY PLAN

IDB City for People Award Winning Project 2017

Integrated Mobility Plan for the Grande Dirceu Region and Hortas do Dirceu Linear Park

AGENDA 2030 & SDU SUDESTE  
PARTNERS | CODEVASF, DEPUTY CHAMBER



## MUV TERESINA

Gamification to promote active and sustainable mobility.

AGENDA 2030, STRANS, SEMEL, SEMDEC & PRODATER  
PARTNERS | UNIÃO EUROPEIA

## COMPLETE STREETS ON DEMAND

Pilot project of complete streets on demand. How do you want your street?

AGENDA 2030, SEMEC, STRANS & SEMDUH  
PARTNERS | WRI E ICLEI, NDB BANK

## CAF SUSTAINABLE TERESINA : GOVERNANCE FOR RESILIENCE

Institutional capacity building for Urban Resilience. City SUMP, IWRM Plan, Open Data City Plan, Comprehensive Training for public service leaders

AGENDA 2030 & PRODATER  
PARTNER | CAF

# TERESINA URBAN RESILIENCE PROGRAMME

Teresina will be the first Brazilian city to implement UN Habitat Urban Resilience Programme. Resilienc Diagnosis and Action For Resilience Plan

IMPLEMENTING ACTORS | TERESINA 2030 & EMARI  
PARTNER | ONU HABITAT



## GEF SUSTAINABLE METROPOLIS

Implementation of an integrated metropolitan planning system and the low carbon zone Teresina-Timon.

TERESINA 2030 & SEMDEC  
PARTNERS | GEF & UNEP

## MUNICIPAL SOLAR PLANT

Photovoltaic Power Plant to supply all public buildings with local clean and renewable energy

AGENDA 2030 & SEMCOP  
PARTNERS | BANK OF BRAZIL

## OBSERVATORY OF MOBILITY

More technology and transparency in public transport management in Teresina  
Better information management and the use of blockchain technology for public transport transparency.

TERESINA 2030 & STRANS  
PARTNER | EUROCLIMA & AFD

## LIVING LAB TERESINA

innovation and acceleration of sustainable development projects

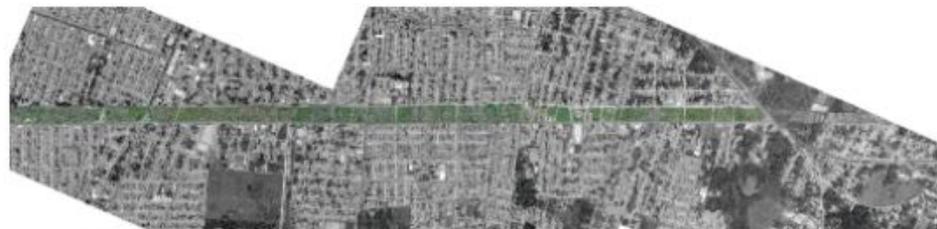
AGENDA 2030 & SEMDEC  
PARTNERS | MCTIC, UFPI AND AFD

## TERESINA TOWARDS AGENDA 2030

International Cooperation and Financing for advances under the TERESINA AGENDA 2030 strategy and its actions in the areas of: sustainable urban development, improvement of the health and social assistance sector, fostering education, economic and solidarity development, support for innovation, heritage preservation and improvement of governance efficiency.

TERESINA 2030 & EMARI  
PARTNER | FRENCH DEVELOPMENT AGENCY (AFD)





## Hortas do Dirceu

*People Centered Integrated Mobility Plan*



Biggest Urban Community Garden in Latin America

AREA **45 HA**, EXTENSION: **4,5 km**

INVESTMENT **USD 2,580,851**

### Partners

Superintendência Municipal de Transportes e Trânsito (STRANS) |  
Superintendência de Desenvolvimento Urbano Sudeste | CODEVASF

# MUV



European  
Commission

Horizon 2020  
European Union funding  
for Research & Innovation

## Horizon2020 Mobility Urban Values MUV Teresina

Mobility solution through mobile application that increases citizens' awareness of the quality of the urban environment in which they live, in order to promote a change to more sustainable and healthy mobility choices adapted to our city.

### Parceiros

MUV Partners | European Union's Horizon 2020 Research and Innovation Programme



# COMPLETE STREETS ON-DEMAND

Take a kit and make up your street



UNIVERSAL BULK OF STREET ELEMENTS



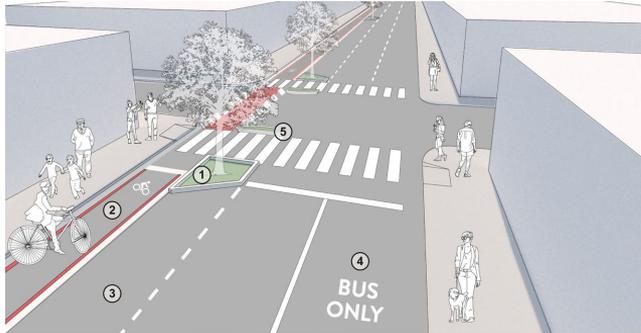
PARTICIPATORY STREET WORKSHOP



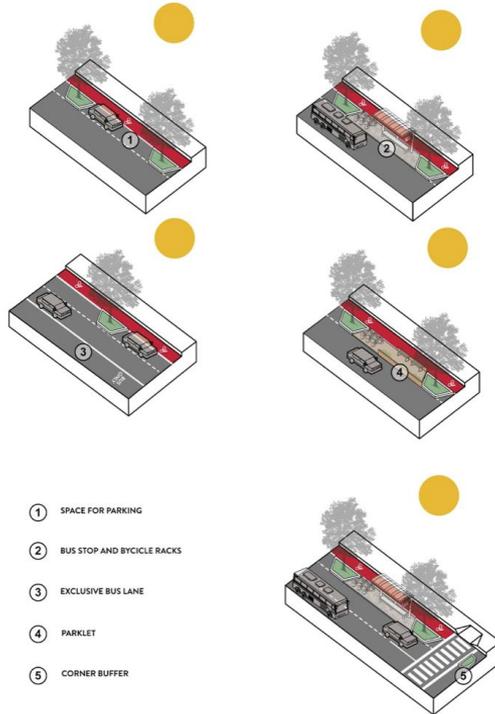
TACTICAL SOLUTION



IMPLEMENTATION



- 1 TREE PIT
- 2 CYCLETRACK
- 3 PARKING LANE
- 4 EXCLUSIVE BUS LANE
- 5 CORNER BUFFER



- 1 SPACE FOR PARKING
- 2 BUS STOP AND BICYCLE RACKS
- 3 EXCLUSIVE BUS LANE
- 4 PARKLET
- 5 CORNER BUFFER

Pilot project to transform the image of urban space, reducing the austerity of the roads, making them more friendly. It also aims to reduce costs of conflict with interventions and promote innovations to gain agility in public procurement process and its implementations.



**Euroclima+**

# Observatory Of Mobility

*Innovation for public transport*

*how can technology and transparency  
improve urban transport?*

*Financed by the European Union*



## main challenges

*crime rate and thermal discomfort;*  
*city's urbanization pattern;*  
*low income and transport fare costs;*  
*falling demand;*  
*transport system governance;*

# main challenges

*crime rate and thermal discomfort;*  
*city's urbanization pattern;*  
*low income and transport fare costs;*  
*falling demand;*  
*transport system governance;*

*Transport system reliability;*  
*Information Asymmetry;*  
*Stakeholders Distrust & Conflict Costs;*  
*Bureaucratic and not effective processes*  
*and policies;*

A long line of modern, green and blue buses is parked at a bus station platform. The platform has a yellow tactile strip along the edge and blue overhead signs. The scene is brightly lit, suggesting daytime.

# the governance challenge project principles

*Transparency*

*Innovation & Technology*

*Citizens Collaboration*

*Accountability*



# the governance challenge project strategies

We identified innovative technologies, such as blockchain, as an opportunity to solve trusts issues and conflict costs between all the stakeholders of the mobility sectors.

It also aims to solve data management issues, support better bus system operation and foster civic engagement to collaboratively oversee transportation operations in a collaborative way.



# the governance challenge project strategies

The project implements an innovation process in order to experiment with a digitally enabled approach, which aims at

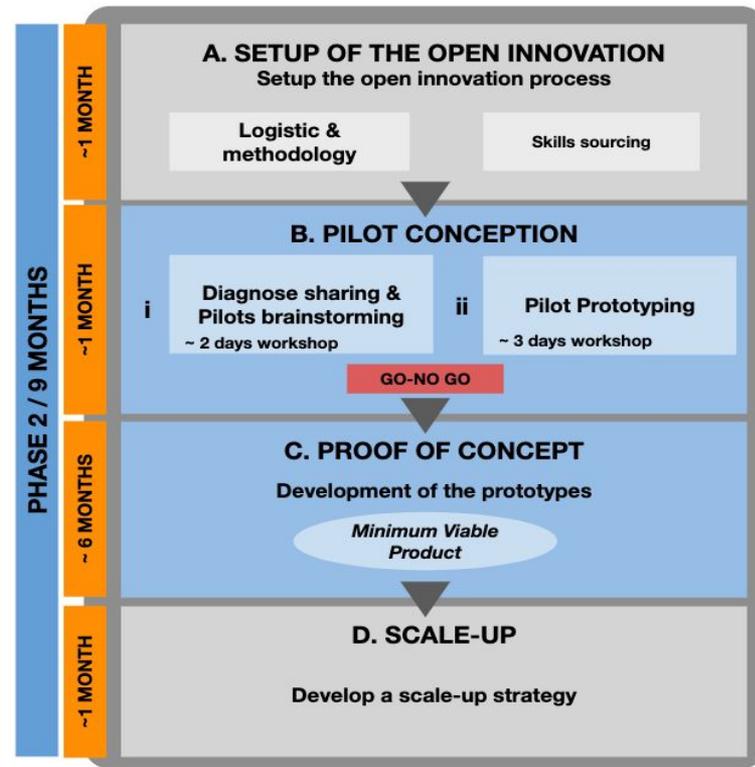
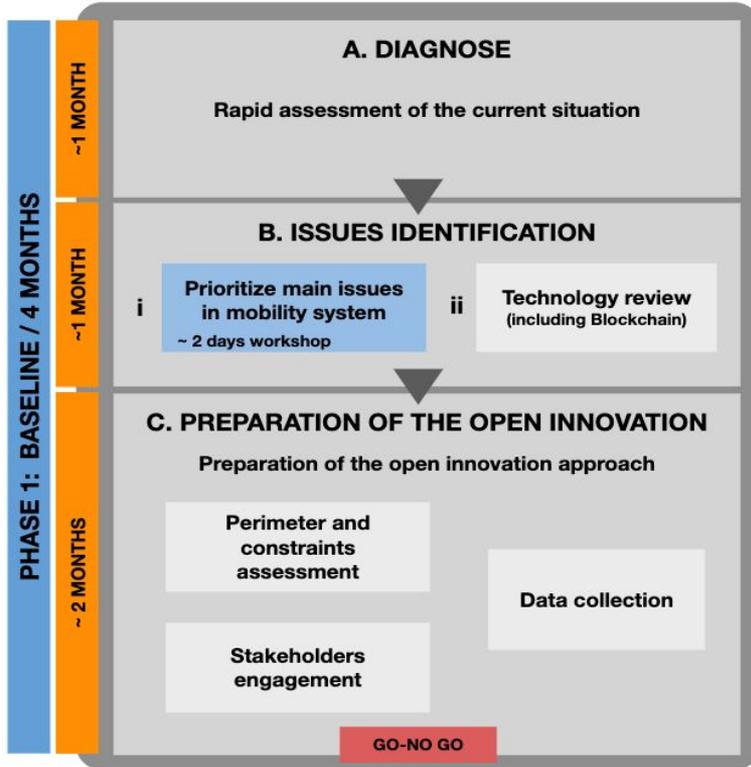
identifying the key issues of the transport system management and

developing relevant and replicable digital solutions that can address those issues and scale up strategy.

# project implementation

Participative  
process

Decision  
making





**semplan.teresina.pi.gov.br**

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