



# DESIGNED TO BE SAFE

## EVIDENCE THAT DESIGN WORKS!

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FORTALEZA - BRAZIL



**Prefeitura de  
Fortaleza**

Secretaria Municipal de Conservação  
e Serviços Públicos



## THE CITY OF FORTALEZA



POPULATION  
2.627.482

5<sup>TH</sup>  
IN BRAZIL



GDP  
US\$ 10.75 BI

10<sup>TH</sup>  
IN BRAZIL



DENSITY  
8.367,7 POP/KM<sup>2</sup>

1<sup>ST</sup>  
IN BRAZIL



TOURISM FLOW  
10,9% OF BRAZIL

4<sup>TH</sup>  
IN BRAZIL



# FORTALEZA

A CITY THAT REVOLUTIONIZED  
ITS URBAN MOBILITY  
**WITHIN 4 YEARS**



# THESE EFFORTS HAVE HAD NATIONAL AND INTERNATIONAL RECOGNITION



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## Fortaleza, Brazil Wins 2019 Sustainable Transport Award

June 29, 2018

 70



**FORTALEZA, BRASIL VENCE O PRÊMIO 2019 DE MOBILIDADE SUSTENTÁVEL DO ITDP**



**SEVERAL DIFFERENT  
ROAD SAFETY ELEMENTS  
ARE BEING IMPLEMENTED  
IN THE CITY**



# LOW SPEED ZONES

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RODOLFO TEÓFILO AND ALBERT SABIN

# RODOLFO TEÓFILO

## 1<sup>ST</sup> LOW SPEED ZONE

**LOW SPEED ZONE**

=



**CURB  
EXTENSION**

+



**RAISED  
CROSSWALK**

+



**REFUGE  
ISLAND**

+



**DIAGONAL  
CROSSING**

[SPEED LIMIT = 30 KM/H]







# ALBERT SABIN

## 2<sup>ND</sup> LOW SPEED ZONE

**LOW SPEED ZONE**

=



**CURB  
EXTENSION**

+



**RAISED  
CROSSWALK**

+



**REFUGE  
ISLAND**

+



**DIAGONAL  
CROSSING**

[SPEED LIMIT = 40 KM/H]

# ALBERT SABIN HOSPITAL

BEFORE





**LOW SPEED ZONE**

**ALBERT SABIN HOSPITAL**







BEFORE

CREDIT: NACTO GDCI

**1,160 SQM**  
OF RENEWED  
SIDEWALKS



AFTER

CREDIT: NACTO GDCI

**1,980 SQM**  
OF ASPHALT  
RECLAIMED AS A  
PEDESTRIAN SPACE





**67%** IN CROSSING  
DISTANCES  
OF REDUCTION







## PEDESTRIANS WALKING OUTSIDE FACILITY

\*AT TERTULIANO SALES ST.

41.7% **>** 3.8%  
BEFORE AFTER





# SPACE ALLOCATION

BEFORE

 31%

 69%



# SPACE ALLOCATION

AFTER

 57%

 43%





NO MORE  
CHILDREN  
OBSERVED  
WALKING OR  
BEING CARRIED  
ON THE ROADBED

\* BEFORE = 50 %





# INTERIM INTERVENTIONS

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CIDADE DA GENTE AT CIDADE 2000 AND DRAGÃO DO MAR

# INTERIM



# INTERVENTION



**TIME FRAME:** MONTHS  
(MAXIMUM 1 YEAR INTERVENTION)



**MORE TIME** TO EVALUATE THE IMPACTS OF THE INTERVENTION (BEING ABLE TO EVALUATE DIFFERENT TIMES OF THE YEAR, CONSIDERING TIME OF ADAPTATION OF THE AREA TO THE NEW CONFIGURATION, FOR EXAMPLE)



**A STRATEGY OF CONVINCING** NOT ONLY TECHNICIANS, BUT ALSO THE POPULATION, FACILITATING THE UNDERSTANDING OF THE PROJECT

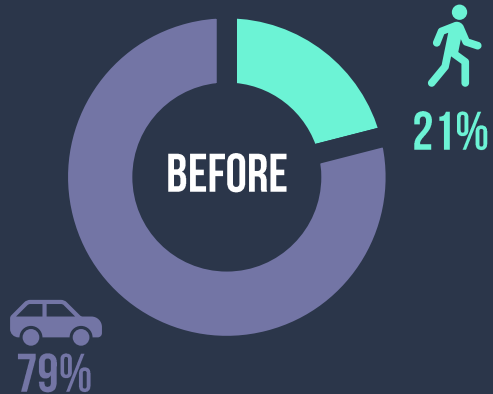


# “CIDADE DA GENTE” PROJECT

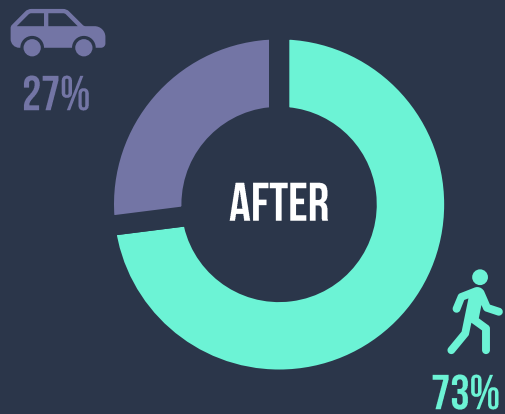
FORTALEZA REDESIGNING STREETS FOR PEOPLE







# MORE SPACE FOR PEDESTRIANS





# PERMANENT PROJECT AT CIDADE 2000





# PERMANENT PROJECT AT CIDADE 2000



# PERMANENT PROJECT AT CIDADE 2000





# SECOND EDITION:

“CIDADE DA GENTE” AT THE SURROUNDINGS OF DRAGÃO DO MAR CULTURAL CENTER

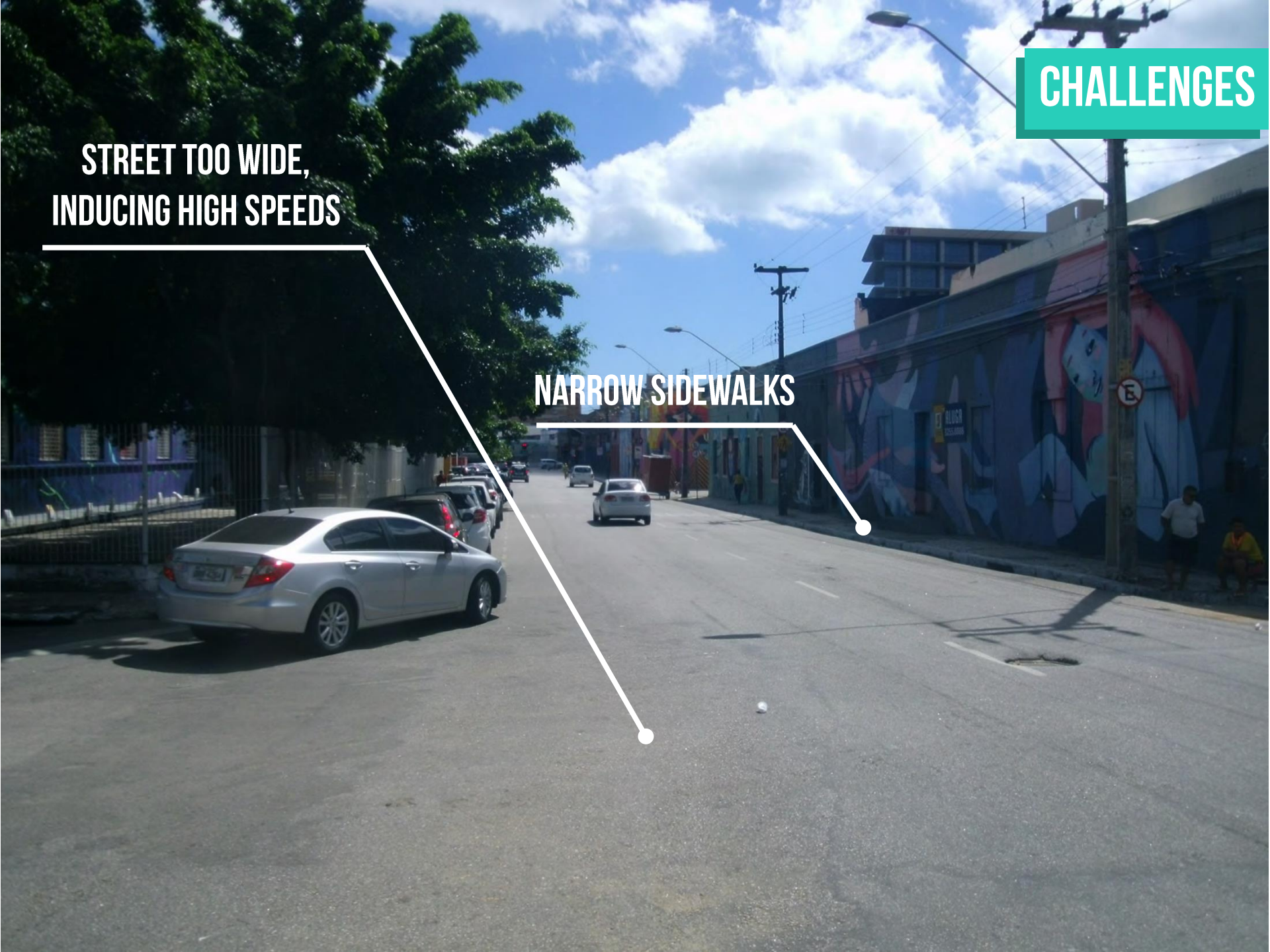




# CHALLENGES

**STREET TOO WIDE,  
INDUCING HIGH SPEEDS**

**NARROW SIDEWALKS**





# CHALLENGES

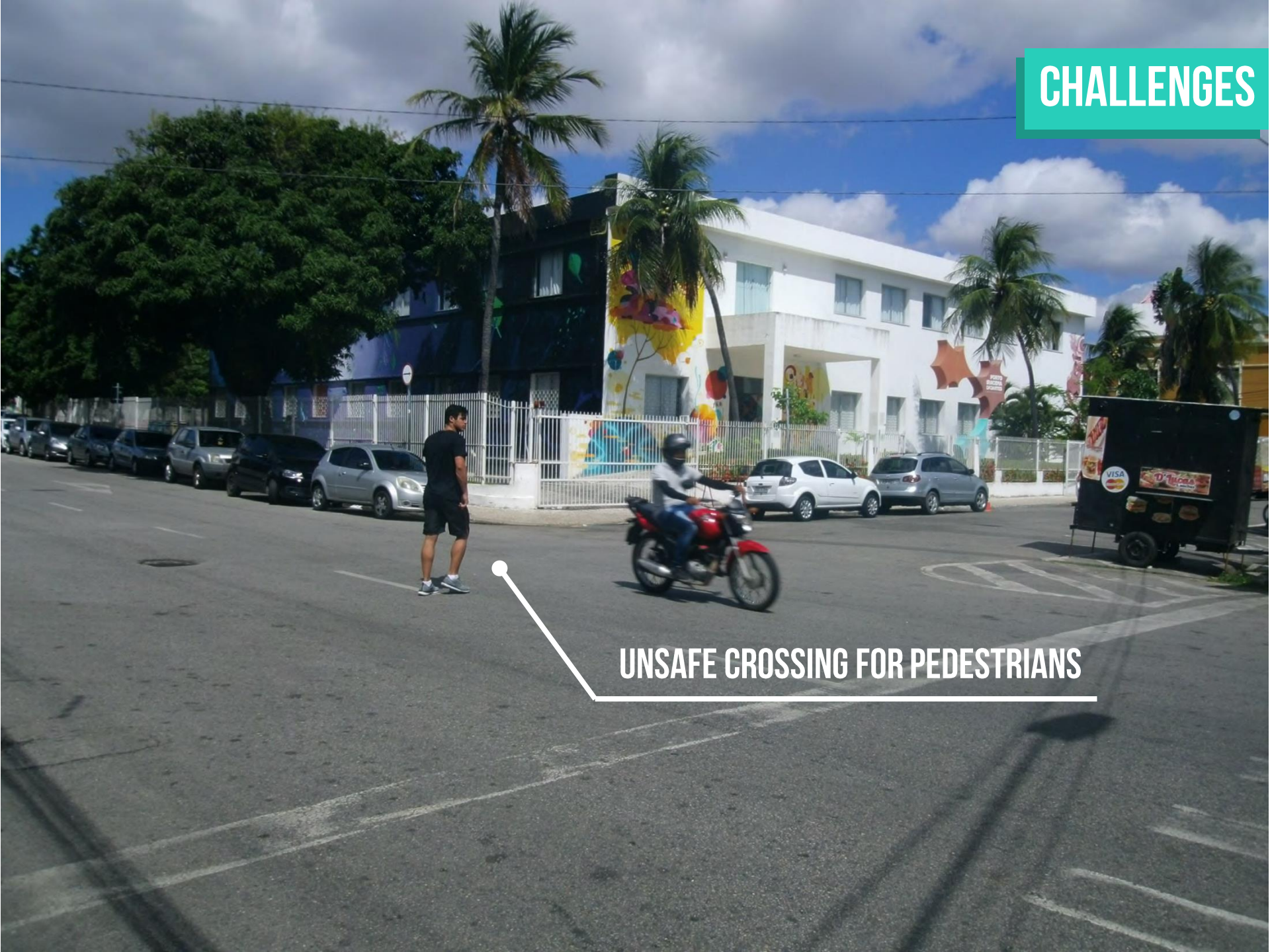
**NARROW SIDEWALKS**

**UNACCESSIBLE SPACE**





# CHALLENGES



**UNSAFE CROSSING FOR PEDESTRIANS**





**LOW COST**  
MATERIALS

**HIGH**  
IMPACT





4.000 M<sup>2</sup>

RECLAIMED  
PUBLIC SPACE



8 NEW  
CROSSWALKS







90% PEOPLE  
CONSIDER THE INTERVENTION  
GOOD OR GREAT





**80% REDUCTION**  
**IN CROSSING DISTANCES**  
**AT ALMIRANTE JACEGUAY**  
**(WITH DRAGÃO DO MAR)**



**ENCOURAGING THE RESPECT TO**  
**THE CROSSWALKS**



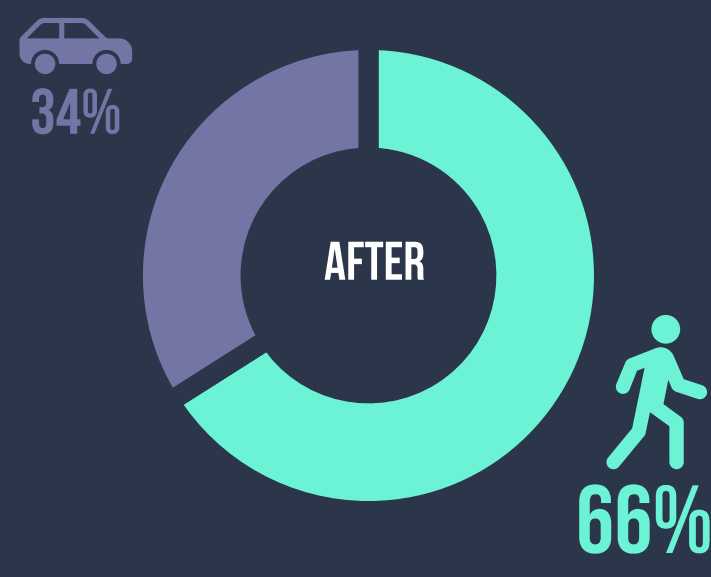
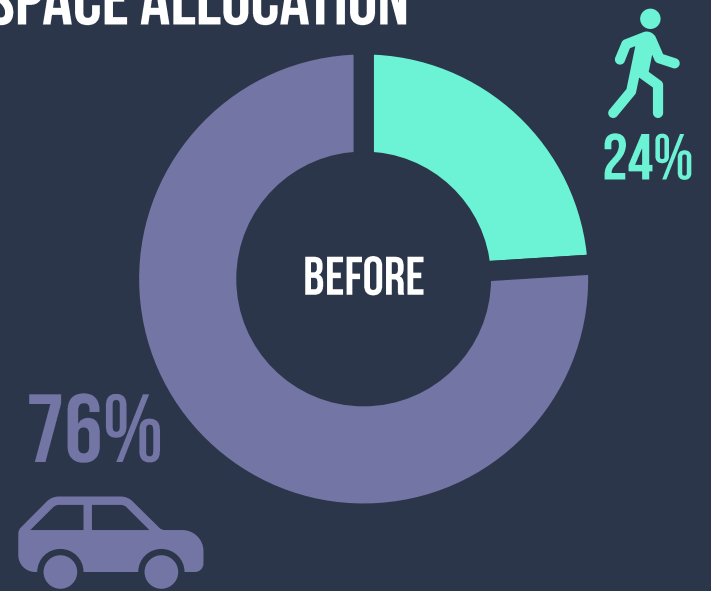


**97% PEOPLE**  
**THINK THAT PEDESTRIANS SHOULD BE**  
**PRIORITIZED**





# SPACE ALLOCATION







Via Fiscalizada por Cámaras

**44% REDUCTION**  
IN BUS SPEED

**50% REDUCTION**  
IN CARS SPEED





BEFORE

25% PEOPLE

C O N S I D E R

T R A F F I C S A F E T Y

G O O D O R G R E A T



AFTER

75% PEOPLE

C O N S I D E R

T R A F F I C S A F E T Y

G O O D O R G R E A T



**THANK YOU!**







# Prefeitura de Fortaleza