



# Learning from International Cases

Healthy Streets Workshop, Chandigarh

19th December 2022

Uditi Agarwal

[uditi@gdci.global](mailto:uditi@gdci.global)

@Global Streets

[www.globaldesigningcities.org](http://www.globaldesigningcities.org)





# STREETS



The image is a large grid of small aerial photographs of a city, likely New York City, showing a dense urban layout. A prominent feature is a large, dark blue, semi-transparent shape that traces a path through the city grid, starting from the bottom left and moving towards the top right. This path highlights a network of public spaces, including parks and open areas. The text 'Largest network of continuous public space' is overlaid on a teal banner across the middle of the image.

Largest network of continuous public space

The background is a grid of small, square images. Most are aerial views of dense urban areas with buildings and streets. Some images show green spaces, parks, and water bodies, illustrating the concept of public space. The grid is overlaid with a semi-transparent teal banner.

Largest network of continuous public space

ONE OF OUR BIGGEST ASSETS IN CITIES!

An aerial photograph of a city street grid. The streets are highlighted with a semi-transparent orange color, creating a network of lines across the urban landscape. The buildings and other structures are in shades of grey and brown. The overall image has a slightly desaturated, high-angle perspective.

# STREETS

Are the platform to.....

# Move



[Click to add image credits](#)

# Play



Fortaleza, Brazil

# Learn to Ride



Recife, Brazil



# Dine



# Celebrate



New York, NY

# Have fun



Rio de Janeiro, Brazil

# Perform



# Dance



# Places to make money....



New York, NY

...and spend it 😊



Edinburgh, Scotland

# To spend time with old friends



Madrid, Spain



...or meet new ones



Portland, USA

# Enjoy some nature



Delft, Netherlands

# Spaces to relax



New Delhi, India

# The front doors to our homes and businesses!



New York, NY















Bogota



You don't matter...

...as much as these guys!

**We must...**

**Prioritize sustainable mobility  
choices**

An aerial photograph of a large parking lot filled with hundreds of cars, viewed from a high angle. The cars are arranged in neat rows, and the overall scene is dominated by the color of the vehicles and the asphalt.

**Stop prioritizing  
and subsidizing  
individual  
motorized  
vehicles**

A photograph of a man in a dark jacket riding a bicycle on a city street. He is looking towards the camera. In the background, there are buildings, a bus stop with route signs (81N, 999, 26, 1A, 350S), and other people on bicycles. The scene is set in an urban environment.

**Make sustainable  
transportation  
options  
safe, convenient,  
affordable, and  
comfortable**

An aerial photograph of a large parking lot filled with hundreds of cars, viewed from a high angle. The image is overlaid with a semi-transparent blue filter.

Stop prioritizing  
and subsidizing  
individual  
motorized  
vehicles

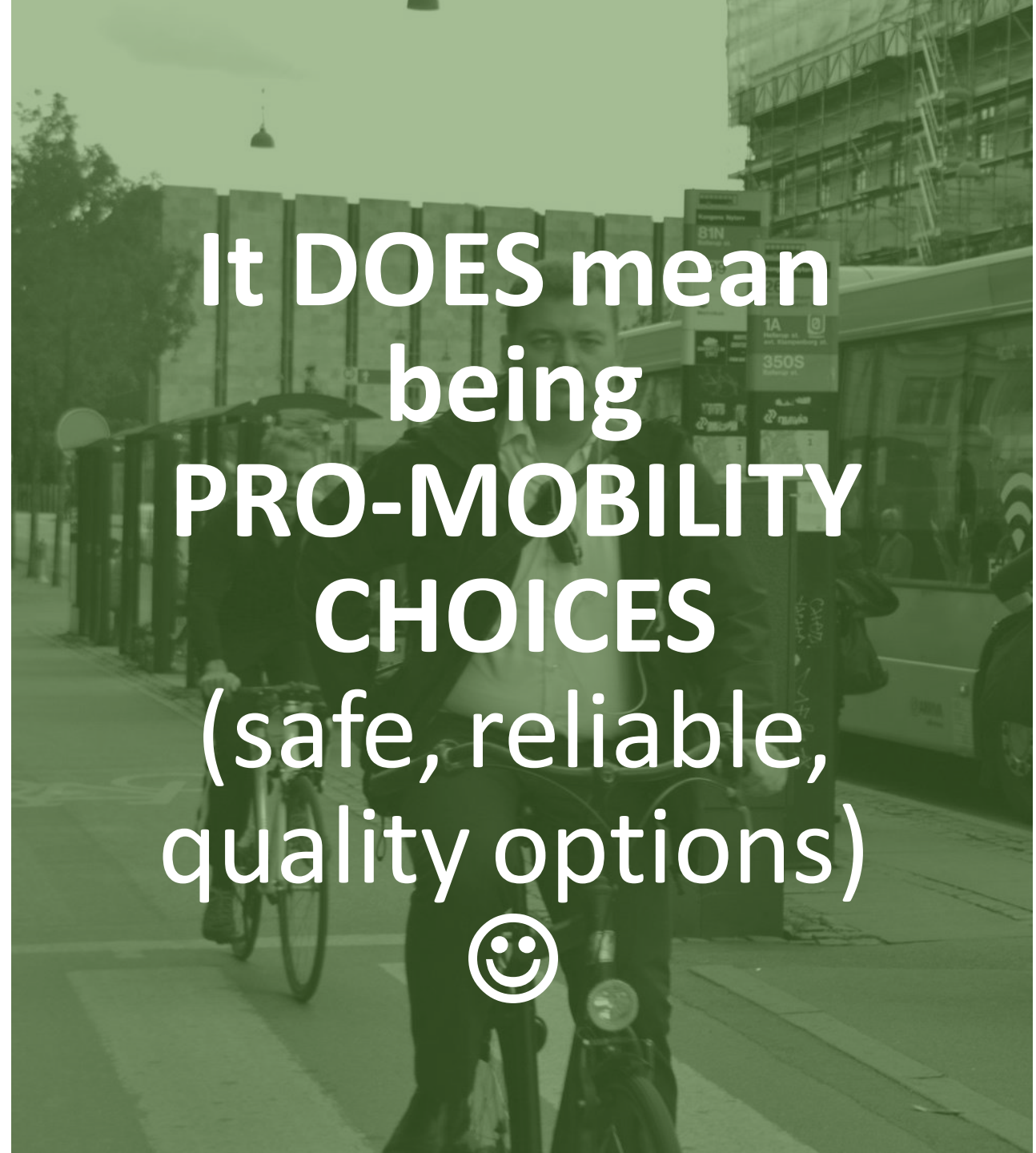
A photograph of a man in a dark jacket and white shirt riding a bicycle on a city street. In the background, there are buildings and a bus stop sign. The image is overlaid with a semi-transparent blue filter.

Make it easier  
**NOT TO  
DRIVE**





It does **NOT**  
mean being  
**ANTI-CAR**



It **DOES** mean  
being  
**PRO-MOBILITY  
CHOICES**  
(safe, reliable,  
quality options)



**We have been stuck in a self-fulfilling prophecy:**



**= making our streets wider to cross, less humane, and more dangerous!**





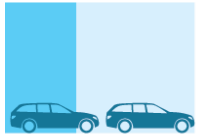
*“Adding highway lanes to deal with traffic congestion is like loosening your belt to cure obesity.” (Lewis Mumford, 1955)*



**Sustainable  
transportation options  
are safer**

**Sustainable  
transportation options  
are more efficient**

# Multimodal streets are more efficient



Private Motor Vehicles  
600–1,600/hour



Mixed Traffic With Frequent Buses  
1,000–2,800/hour



Two-way Protected Bikeway  
6,500–7,500/hour



Dedicated Transit Lanes  
4,000–8,000/hour



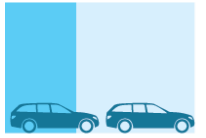
Sidewalk  
8,000–9,000/hour



On-street Transitway, Bus Or Rail  
10,000–25,000/hour



# Multimodal streets are more efficient



Private Motor Vehicles  
600–1,600/hour



Mixed Traffic With Frequent Buses  
1,000–2,800/hour



Two-way Protected Bikeway  
6,500–7,500/hour



Dedicated Transit Lanes  
4,000–8,000/hour



Sidewalk  
8,000–9,000/hour



On-street Transitway, Bus Or Rail  
10,000–25,000/hour

Sustainable modes

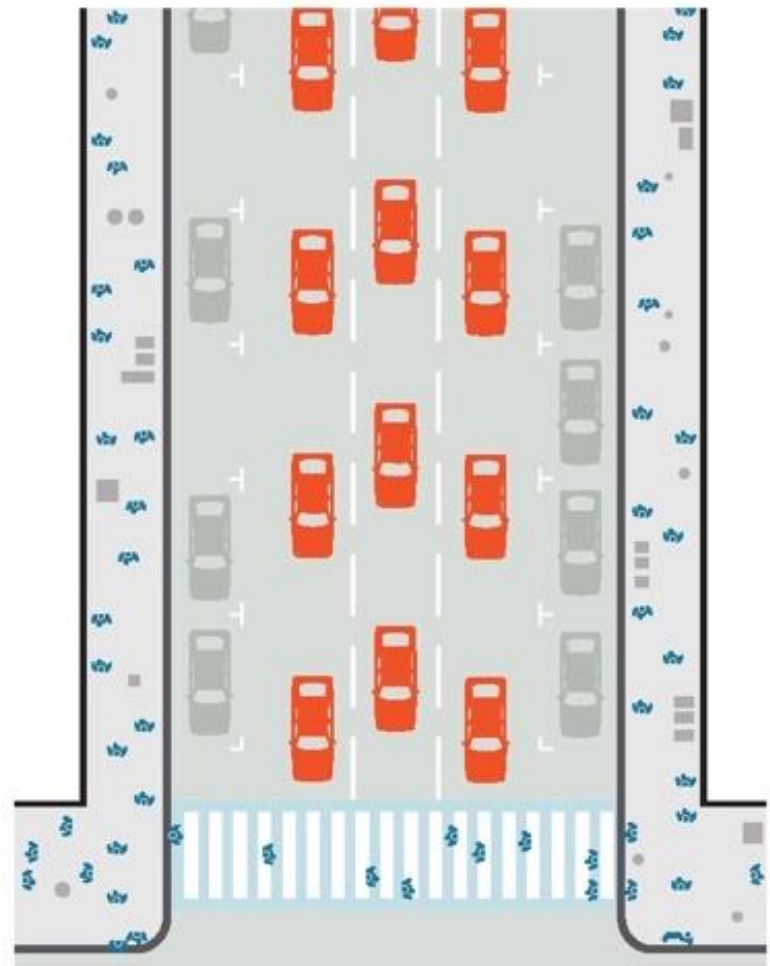
Many times

More efficient



# Multimodal streets are more efficient

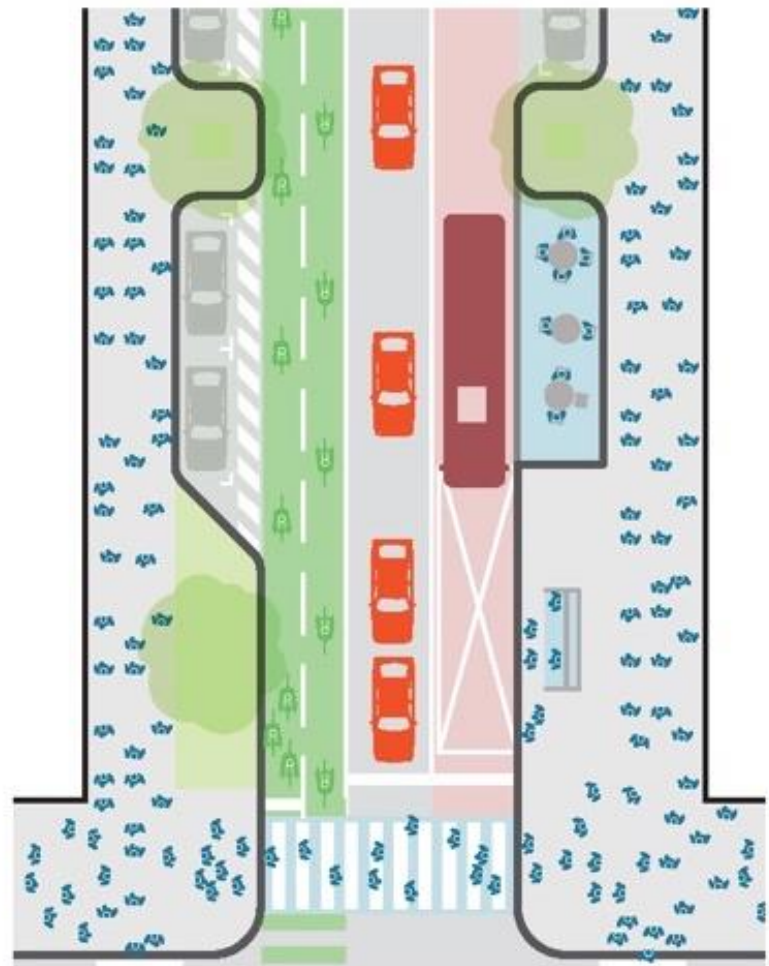
Car-Oriented Street



Total capacity:

**12,300**  
people/ h

Multimodal Street



Total capacity:

**30,100**  
people/ h

**x 2.4**  
people

**It's time to solve a different problem....**



**From moving cars.....**

**It's time to solve a different problem....**

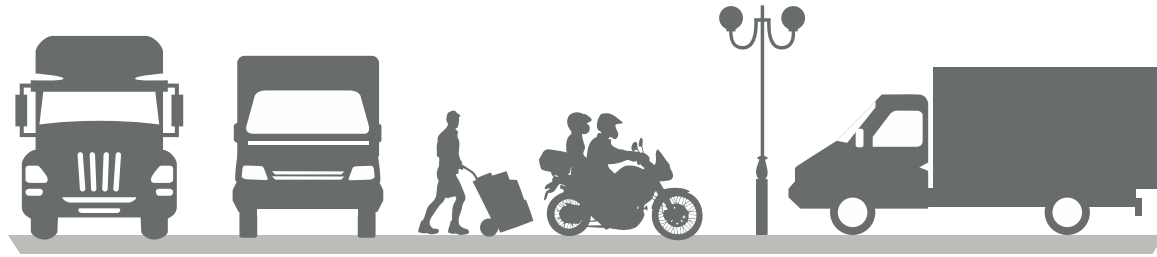
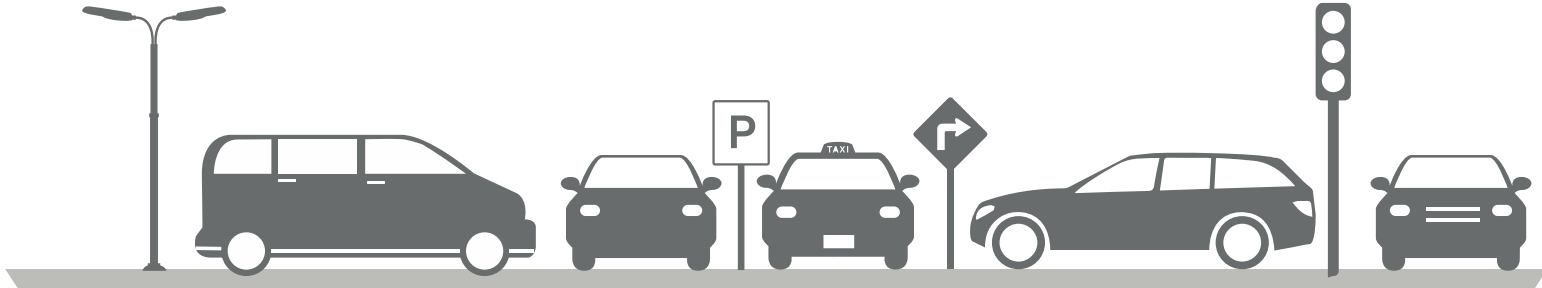


**From moving cars.....**



**To moving people 😊**

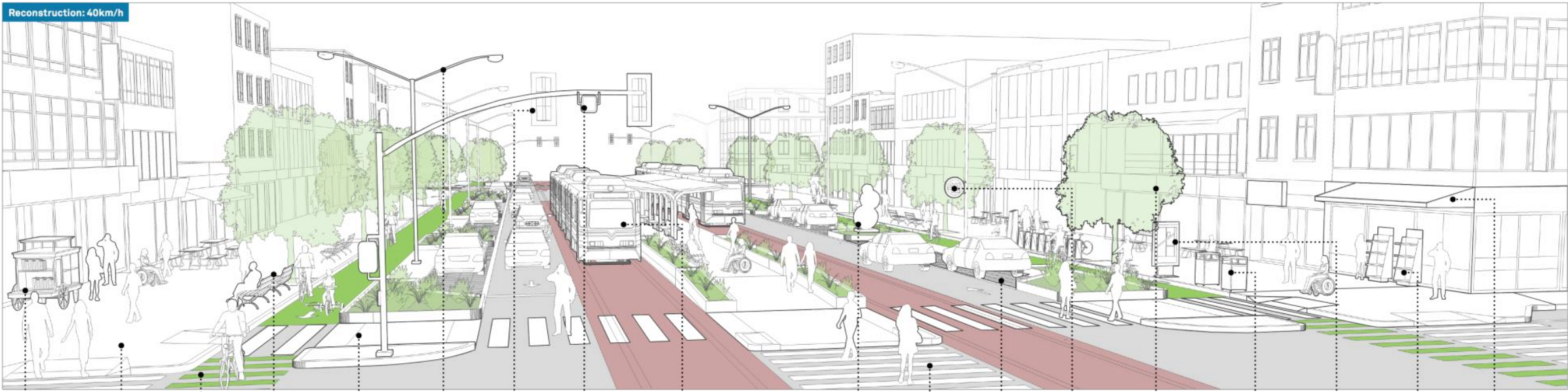




# ...DESIGN STREETS THAT PUT PEOPLE FIRST!



# What is Possible?



- Invite Street Activity
- Change Street Geometry
- Create Cycle Facilities
- Add Seating
- Add or Improve Pedestrian Crossings
- Add Energy-Efficient Lighting
- Improve Signals
- Enhance Enforcement
- Organize Transit
- Integrate Public Artwork
- Connect Walking Networks
- Upgrade Materials
- Reduce Speed Limits
- Add Green Infrastructure
- Provide Street Furniture
- Include Wayfinding
- Activate Ground Floors
- Provide Climate Protection

# Global



# Street



# Design



# Guide



Global Designing Cities Initiative

Free Download



Global  
Designing  
Cities  
Initiative



Bloomberg  
Philanthropies

INITIATIVE FOR GLOBAL ROAD SAFETY

Endorsed by over

# 100+ Cities and Organizations



# A New Approach to Street Design





Designing

for People

# People: Design for All Street Users



**Pedestrians**



**Cyclists**



**Transit Riders**



**Motorists**



**Freight Operators  
and Service  
Providers**



**People Doing  
Business**



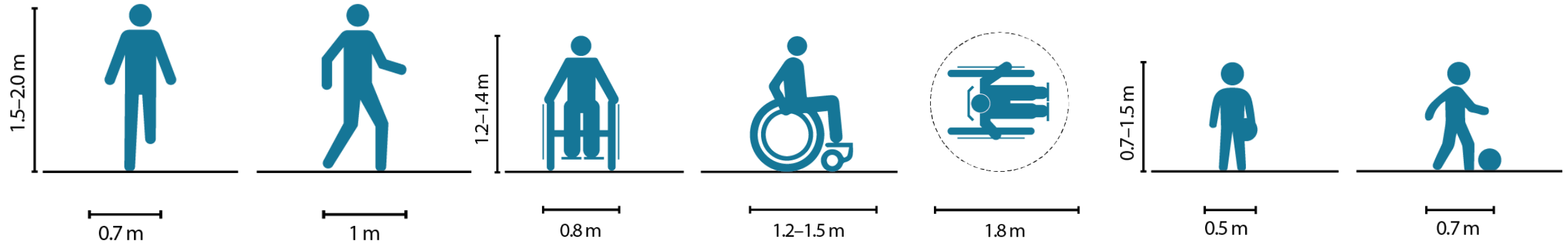
# Designing for

# Pedestrians



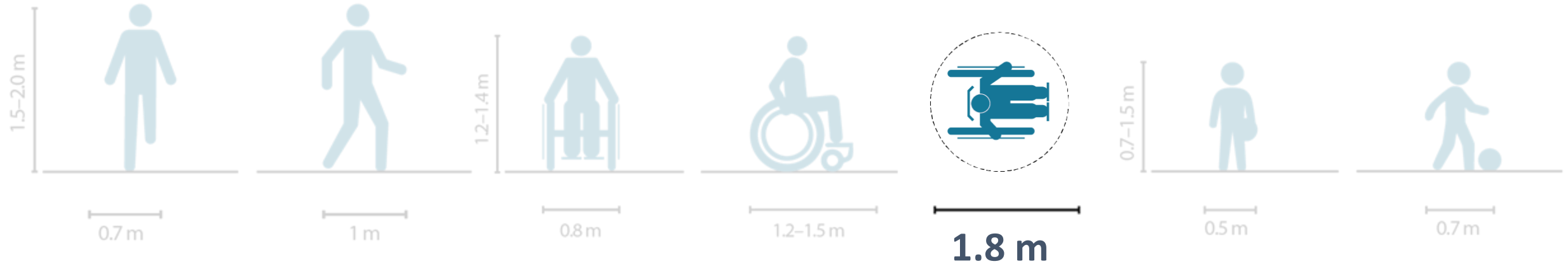
# Pedestrians

## Variations and Dimensions



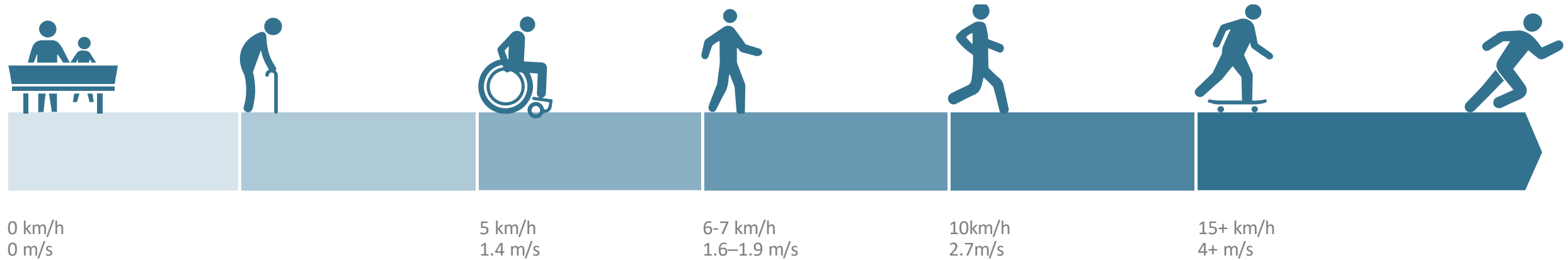
# Pedestrians

## Variations and Dimensions



# Pedestrians

## Walking Speeds



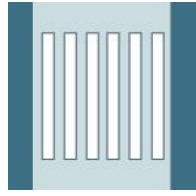
While walking speeds range from **0.3 m/s–1.75 m/s**, people who walk with assistance—in form of canes, walkers, or other devices—are limited to speeds of **0.3 m/s–0.5 m/s**.

# Pedestrians

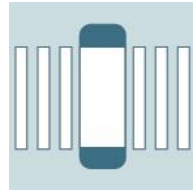
## Elements



Sidewalks



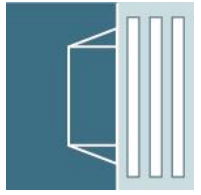
Pedestrian  
Crossings



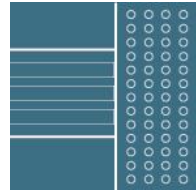
Pedestrian Refuge  
Islands



Curb Extensions



Accessibility  
Ramps



Vision-Impaired  
Guidance



Signage and Way-  
finding



Pedestrian  
Countdown  
Signals + Clocks



Lighting



Seating



Water  
Fountains



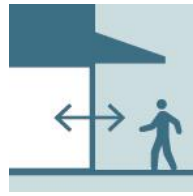
Weather  
Protection



Curbs



Waste  
Receptacles



Active  
Building  
Edges



Trees and  
Landscaping

# Designing for

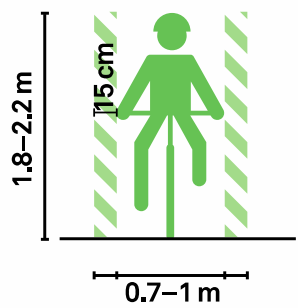


# Cyclists

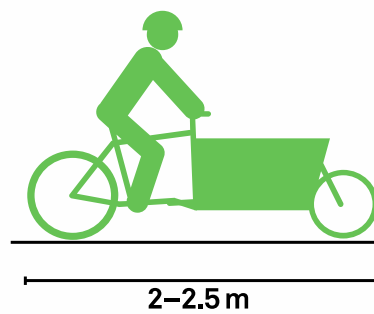
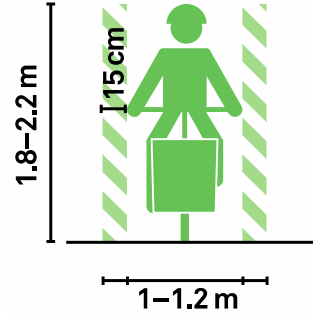
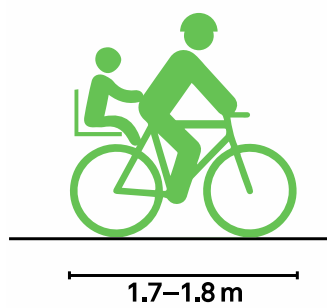
# Cyclists

Types: Speed, Variations and Dimensions

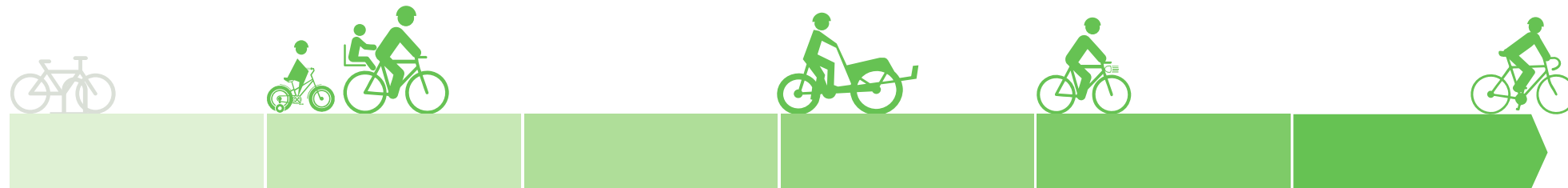
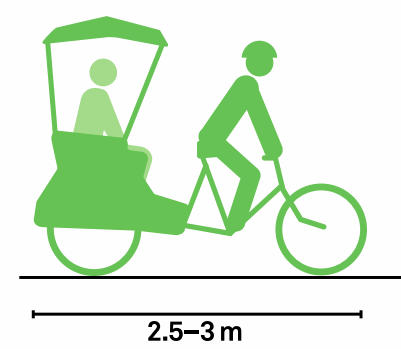
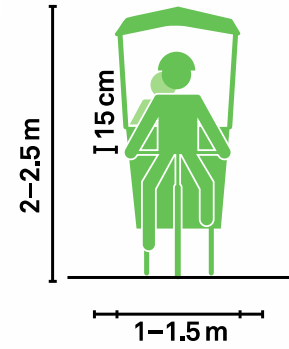
Bicycle



Cargo Bike



Tricycle / Cycle rickshaw



0 km/h

Children and families

10 km/h

20 km/h

Commuter

> 30 km/h

Recreational Cyclists

# Cyclists

Redefine the Cyclist





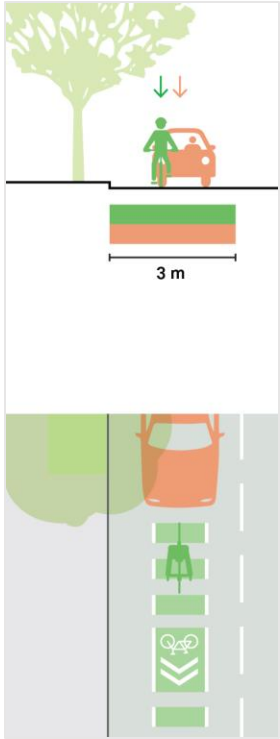
# Cyclists

Designing for All Ages and Ability

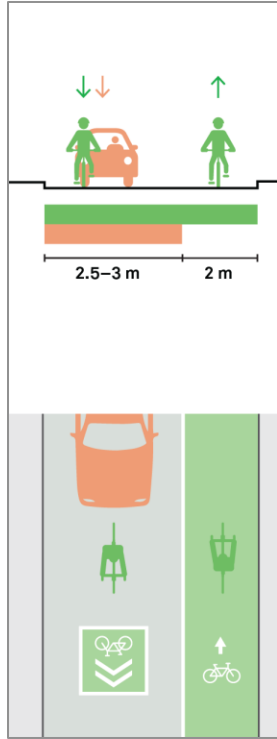


# Cycle Facilities

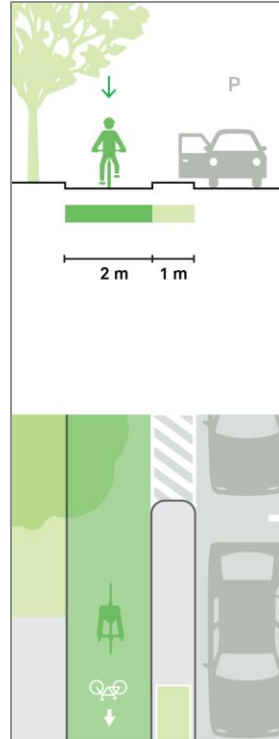
## Geometry



Cycle Street



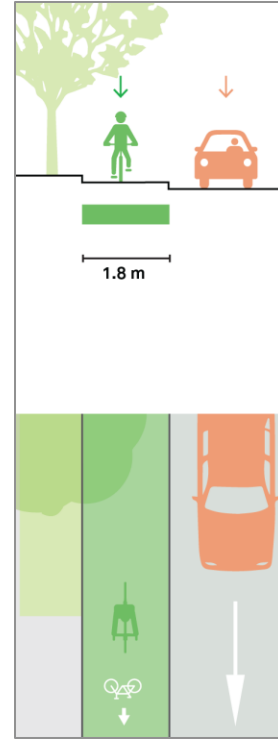
Contraflow Cycle Street



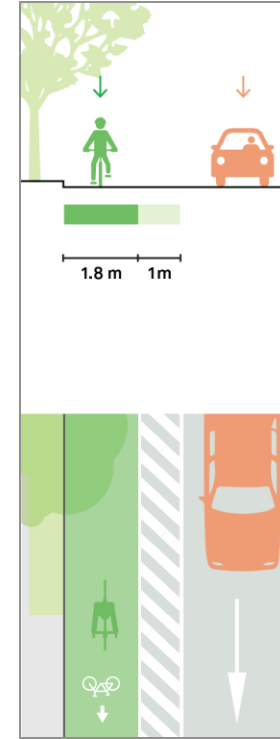
Protected Cycle Track



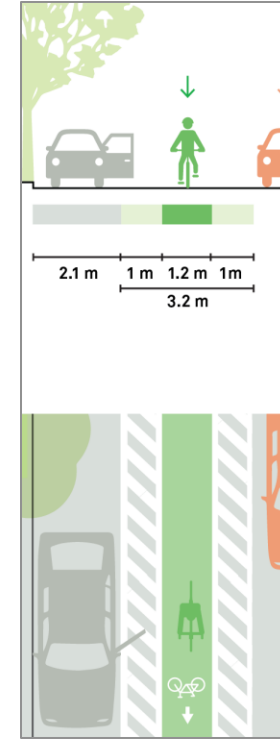
Bidirectional Cycle Track



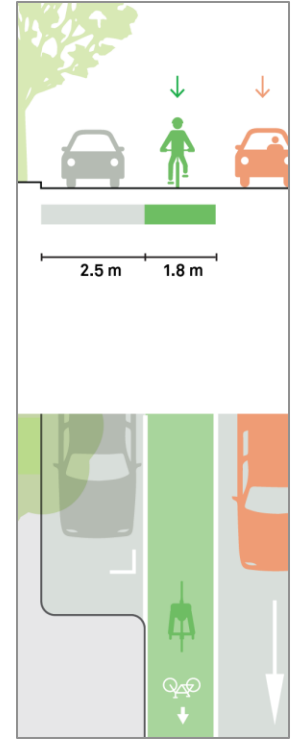
Raised Cycle Track



Curbside Buffered Cycle Lane



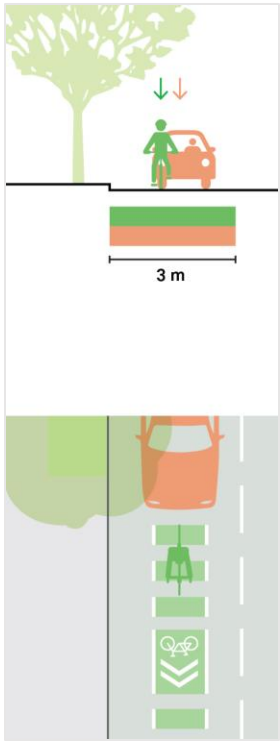
Buffered Cycle Lane



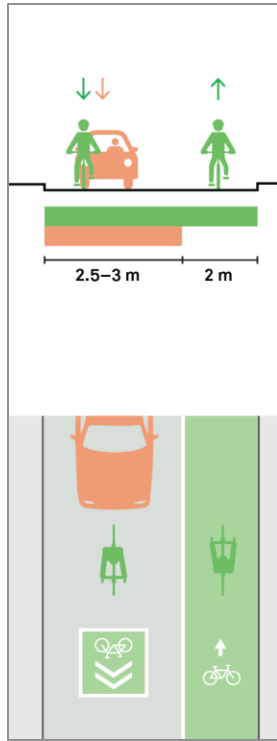
Conventional Cycle Lane

# Cycle Facilities

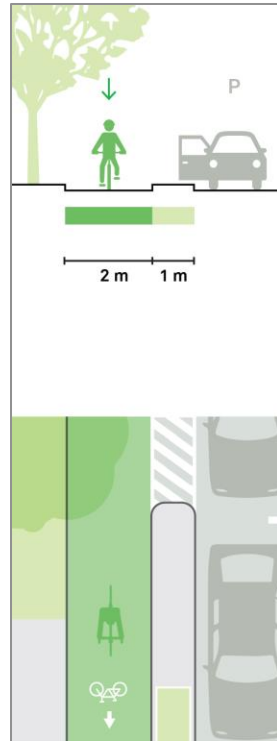
## Geometry



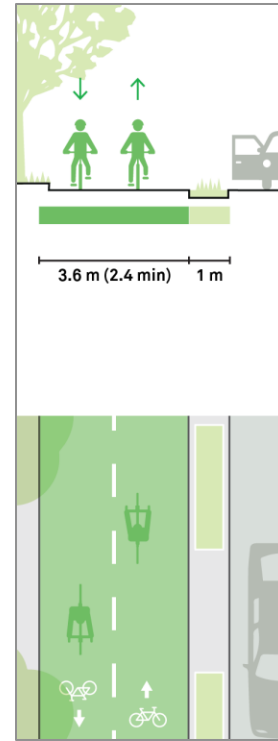
Cycle Street



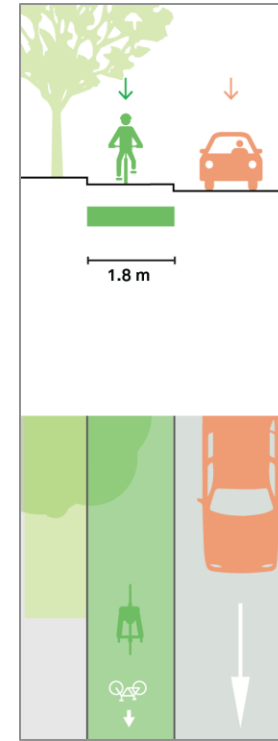
Contraflow Cycle Street



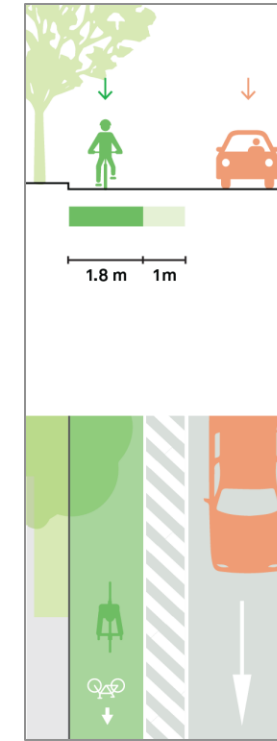
Protected Cycle Track



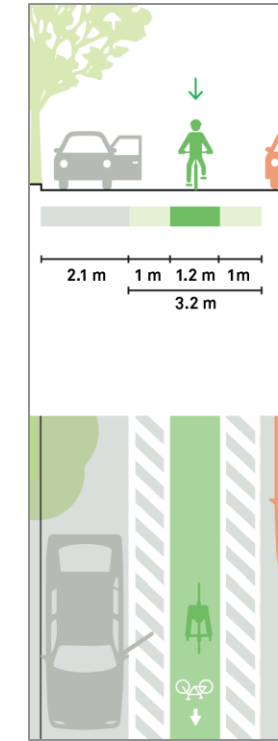
Bidirectional Cycle Track



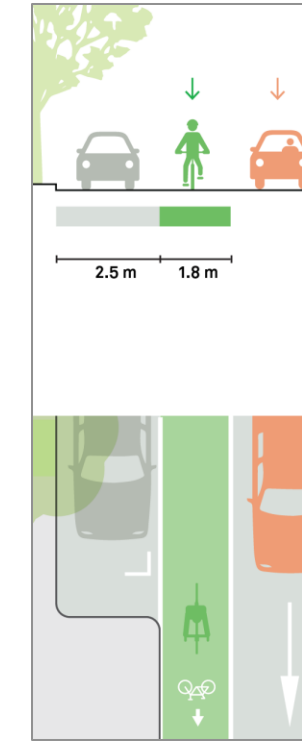
Raised Cycle Track



Curbside Buffered Cycle Lane



Buffered Cycle Lane



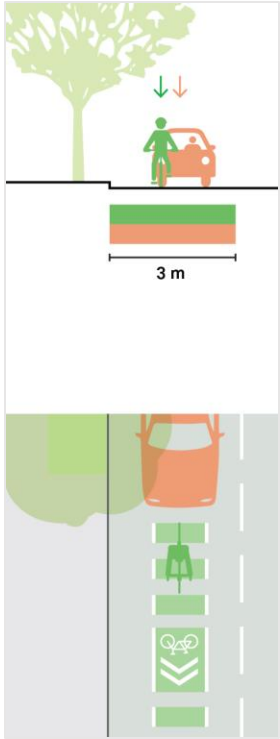
Conventional Cycle Lane

< 30 km/h

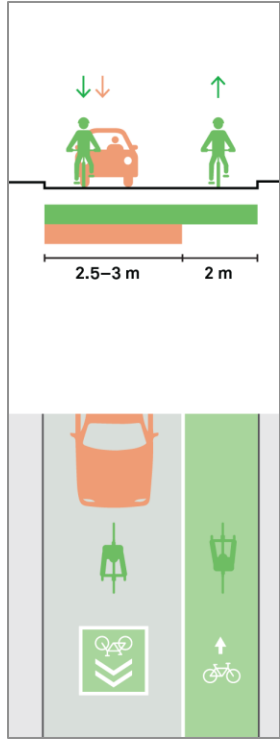
SHARE

# Cycle Facilities

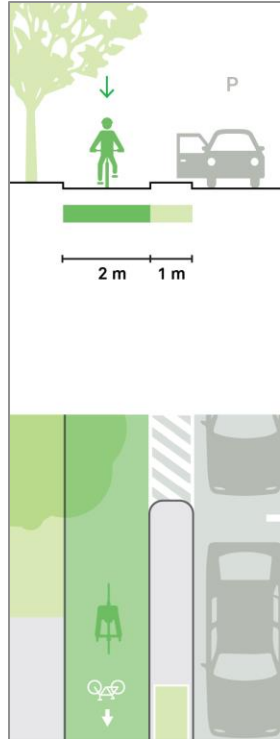
## Geometry



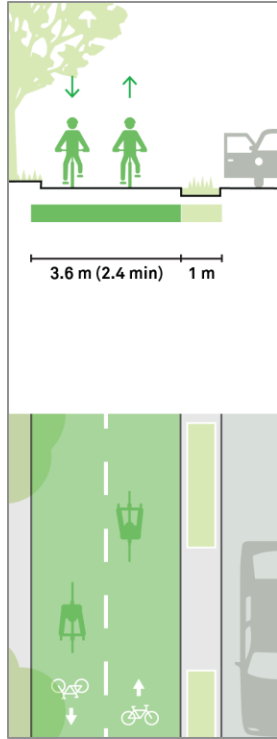
Cycle Street



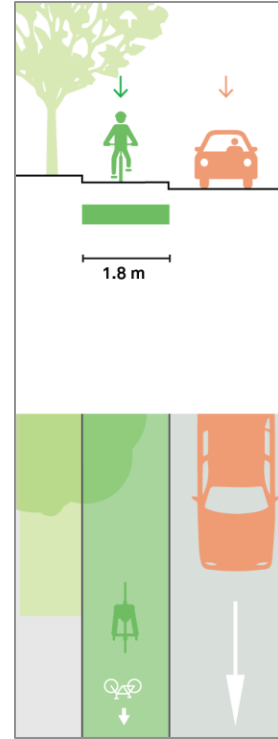
Contraflow Cycle Street



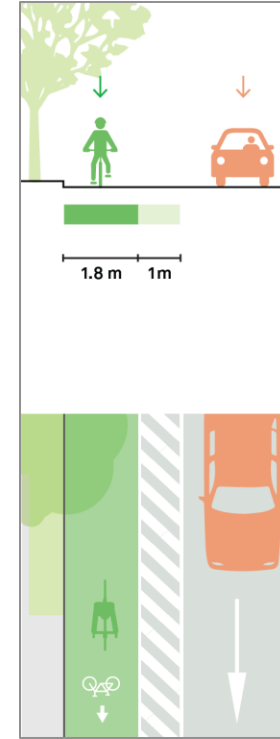
Protected Cycle Track



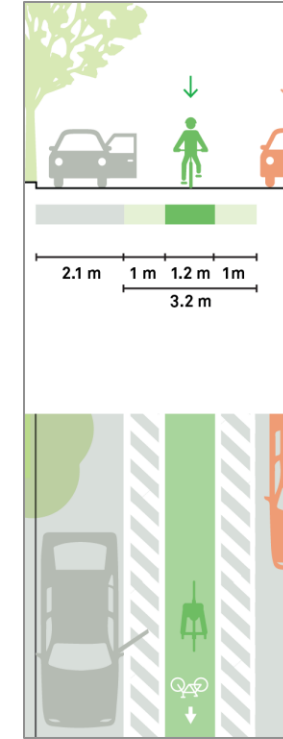
Bidirectional Cycle Track



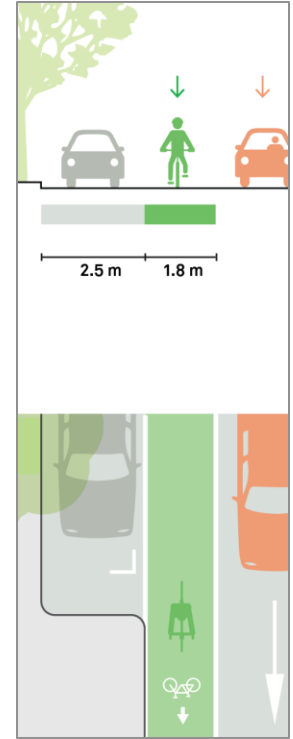
Raised Cycle Track



Curbside Buffered Cycle Lane



Buffered Cycle Lane



Conventional Cycle Lane

< 30 km/h

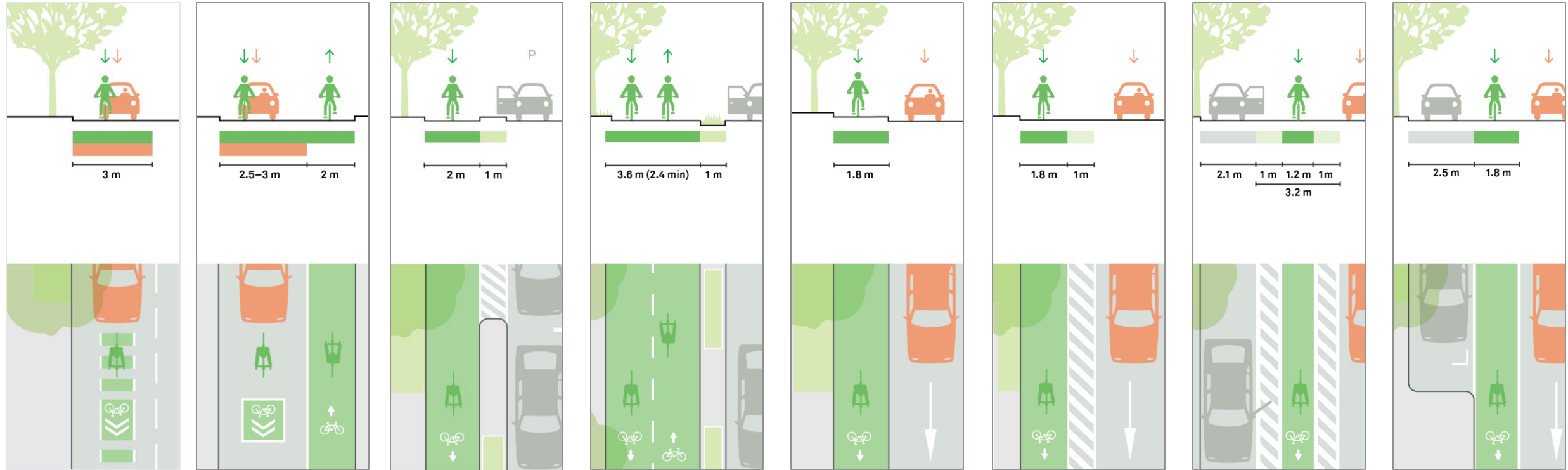
**SHARE**

> 30 km/h

**PROTECT**

# Cycle Facilities

## Geometry



Cycle Street

Contraflow Cycle Street

Protected Cycle Track

Bidirectional Cycle Track

Raised Cycle Track

Curbside Buffered Cycle Lane

Buffered Cycle Lane

Conventional Cycle Lane

< 30 km/h

> 30 km/h

30-40 km/h

**SHARE**

**PROTECT**

**CONTEXTUALIZE**



Bangkok, Thailand



Mexico City, Mexico



Addis Ababa, Ethiopia



Seoul, South Korea



Bogotá, Colombia



ENTRADA Y  
SALIDA DE  
VOLQUETAS  
A 100 m

ENTRADA Y  
SALIDA DE  
VOLQUETAS  
A 100 m

Bogotá, Colombia





Addis Ababa, Ethiopia



Addis Ababa, Ethiopia



Addis Ababa, Ethiopia



Fortaleza, Brazil



Fortaleza, Brazil



Fortaleza, Brazil

Photo: City of Fortaleza



Bogotá, Colombia







Bogota, Colombia



Recife, Brazil

Photo: City of Recife



Recife, Brazil

Photo: Daniel Tavares



Salvador, Brazil



Tirana, Albania



Mexico city, Mexico



Quito, Ecuador



• Addis Ababa, Ethiopia





# Street Transformations



Bogotá,  
Colombia

Before



↓ 52%

fewer conflicts between pedestrians and vehicles at peak hour, during the pop-up

Bogotá,  
Colombia

During



**79%** want the project to be permanent

**Bogotá, Colombia**

**During**





Before



After

**4,000 m<sup>2</sup>**  
Reclaimed  
Public space



**UP TO 80%**  
REDUCTION IN  
CROSSING  
DISTANCES

**17.50 m**  
Before

**3.50 m**  
After



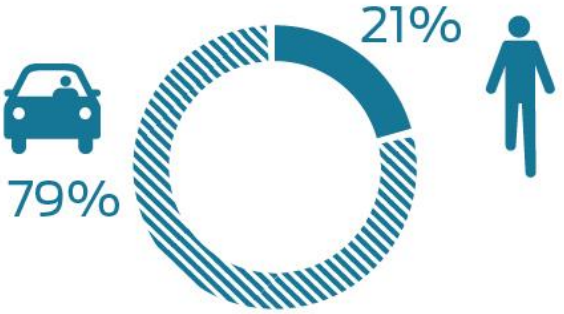




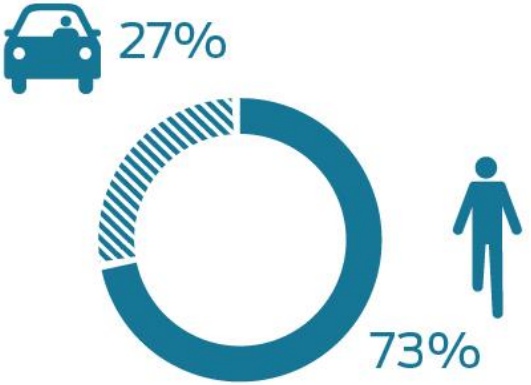
109% more pedestrians in the area

# Fortaleza

## Space allocation



BEFORE



AFTER



# Fortaleza

User satisfaction and experience



# 94%

Approve of the intervention



# 97%

Believe Pedestrians should be prioritized over motorized traffic





**BICI**

**BLOOMBERG INITIATIVE FOR  
CYCLING INFRASTRUCTURE**

---

## What's the program?

BICI is a competitive grant program that will **foster catalytic change in city cycling infrastructure** around the world.

## What's the program?

The program will select **10 cities** who will receive **three years of technical assistance** and **up to \$1M USD** of grant funds

## We are excited to support cities who will

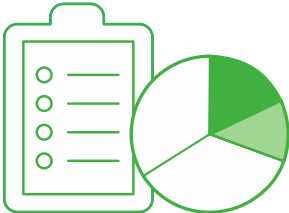
- Dramatically **re-imagine infrastructure** to reclaim and repurpose existing space or create new facilities that put cyclists first
- **Create complete networks** that allow people of all ages and abilities to bike safely and conveniently
- Show what's possible by **bringing world-class cycling infrastructure to regions that currently lack it**
- **Experiment with new materials, technology, or implementation methods** in ways that make cycling networks easier to build or encourage more people to ride

# Why participate?

**Grant funding**



**Technical Assistance**



**BICI Cities Network**

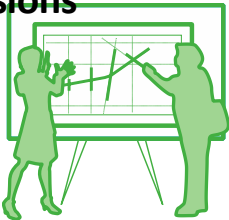


**Communications and Storytelling**

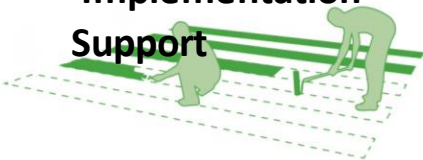


---

**Capacity Building Sessions**



**Project Design Review and Implementation Support**





## Key Program Dates:

- **Applications due: February 3, 2023**
- **Announcement of selected cities: Spring 2023**
- **City support begins: Summer 2023**
- **Program conclusion: March 2026**



BLOOMBERG INITIATIVE FOR  
CYCLING INFRASTRUCTURE

To learn more visit: [bloombergcities.jhu.edu/bici](https://bloombergcities.jhu.edu/bici)

For city specific questions: [bici@gdci.global](mailto:bici@gdci.global)



**Thank  
You**

**GDCI**

Global Design Cities Initiative

**@GlobalStreet**

**[www.globaldesigningcities.org](http://www.globaldesigningcities.org)**

**Uditi Agarwal**

**[uditi@gdci.global](mailto:uditi@gdci.global)**