

# SAFE ACTIVE MOBILITY IS A CLIMATE SOLUTION WITH SHORT-TERM RETURN



**50 BILLION TONS OF CO<sub>2</sub>**

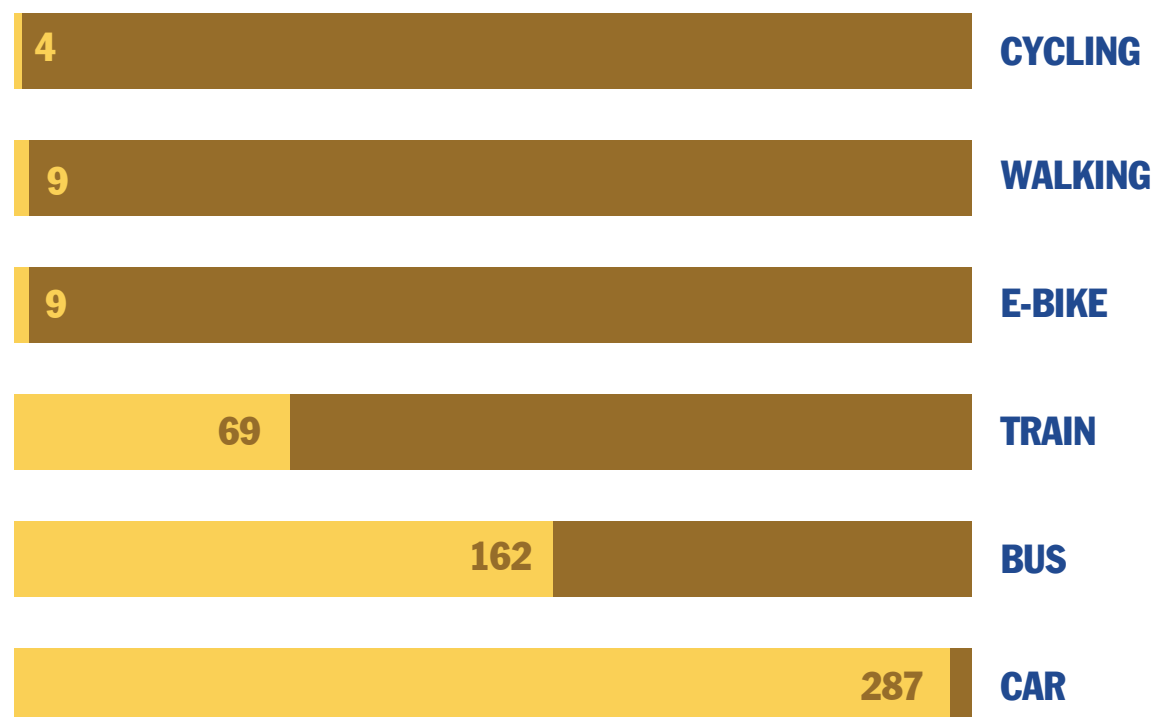
WILL BE EMITTED BY URBAN TRANSPORT IN THE NEXT 30 YEARS IF CURRENT MOTORIZATION TRENDS ARE NOT REVERSED. CITIES MUST FIND WAYS TO MEET URBAN MOBILITY DEMANDS WHILE ENSURING TRANSPORTATION IS AFFORDABLE AND EMISSIONS ARE LIMITED.

Enabling more people to walk and cycle safely is crucial to decarbonizing transport. The potential for replacing motorized vehicle trips with walking and cycling is huge and achievable in the short term.

## CLIMATE BENEFITS POTENTIAL

Walking and cycling require less energy than any other means of transport, and over short distances, are the most effective way to reduce fossil fuels consumption.

## ENERGY EFFICIENCY IN TRANSPORT



↳ these are kilocalories of energy used per km travelled

**5%**

**MORE TRIPS MADE BY BICYCLES INSTEAD OF CARS GLOBALLY WOULD REDUCE CO<sub>2</sub> EMISSIONS BY 7% — THE EQUIVALENT OF TAKING MORE THAN 134 MILLION CARS OFF THE ROAD — BY 2030.**

Promoting walking and cycling provides a quick, affordable, and reliable way to significantly reduce transport emissions, as well as addressing the many other issues of the current transport system: physical inactivity, road safety, traffic congestion and local air pollution.



## URBAN MOBILITY AND ADAPTATION POTENTIAL

Walking and cycling could satisfy a large part of the current mobility demand in cities.

**60%**

**OF URBAN TRIPS ARE SHORTER THAN 5 KM, A QUARTER ARE LESS THAN 1KM – DISTANCES THAT CAN BE TRAVELED BY A 20-MIN BIKE RIDE OR WALK. NEVERTHELESS, MORE THAN HALF OF THESE TRIPS ARE CURRENTLY TRAVELLED BY MOTORIZED VEHICLES.**

In many cities in low-and-middle income countries, walking is the primary mode of travel. However, they often lack the necessary infrastructure to support walking, rendering it unsafe and increasing health costs due to traffic injuries and fatalities. Similarly, cycling is a viable alternative for most short vehicle trips but is often hindered by the lack of safe infrastructure.

On the other hand, the higher share of trips already made by active mobility can be an advantage to maintain low levels of motorization and maximize investments in public transportation. Integrated, safe and attractive active mobility provides “first/last mile” connections and expands the

public transport catchment areas, increasing ridership and revenue. Active mobility networks can also help build urban resilience and address climate challenges especially when designed alongside stormwater management and other green infrastructure. In times of crisis, walking and cycling can support efficient movement of people and goods when communications and power networks go down, as was seen in Mexico after the 2017 earthquake, and in many cities during the COVID-19 pandemic.

## INVESTMENT RETURN POTENTIAL

The cost of a car-centric transport system is enormous, requiring 50% more transport spending from governments and individuals than a system based on walking, cycling, and public transport.

Because active mobility infrastructure is faster to build and low-cost to implement compared to other transport infrastructure, payback periods are also shorter. Cycling infrastructure generates climate, health, and economic benefits in the near term, often paying for itself over periods as low as two years.

Investments in cycling networks have proven to be extremely cost-effective in terms of GHG emissions reductions per dollar invested, even compared to investments in BRT and metro. These investments have also been shown to be a cost-effective way to reduce mortality and bring in health co-benefits of climate action.

City	Project	GHG reduction (tons/yr)	Total cost (USD, 2022)	Cost-effectiveness
Guangzhou	Protected bicycle lane network	16,000	69mi	4,630
	BRT	40,000	234mi	3,423
Mexico City	BRT (Metrobus – insurgentes)	26,000	152mi	3,412
Bogotá	Protected bicycle lane network	22,000	132mi	3,333
	BRT Phase II	80,000	989mi	1,618

Source: Adapted from ITDP's Protected Bicycle Lanes Protected the Climate

(TONS OF GHG EMISSIONS/ MILLION USD INVESTED)



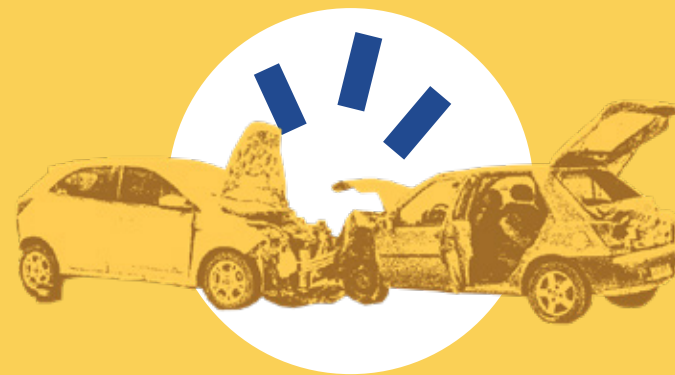


# TANGIBLE BENEFITS OF ACTIVE MOBILITY INFRASTRUCTURE AT THE CITY LEVEL

## MORE PEOPLE CYCLING AND WALKING IN SAFE INFRASTRUCTURE



fewer cars on the road



fewer traffic fatalities



fewer construction and maintenance costs for car infrastructure

### BOGOTÁ



**USD 0.62 PER TRIP**

The protected cycling network saves cyclists



**USD 80 MILLION/YEAR**

In cost savings for individual travelers

### BUENOS AIRES

**307 KM OF CYCLE LANES**



Greenhouse gas emissions reductions valued at approximately 1/3 of cycle lanes construction costs

**IMPLEMENTATION OF 17KM OF PROTECTED CYCLE LANES ON CÓRDOBA AND CORRIENTES AVENUES**



113% Internal Rate of Return



5.7:1 Benefit to Cost ratio



1 dollar invested in the cycle lanes generated 5.7 dollars in benefits

### GUANGZHOU



**USD 0.10 PER TRIP**

The protected cycling network saves users



**USD 30 MILLION PER YEAR**

in cost savings for individual travelers

### TIANJIN

**126 KM OF CYCLE LANES, PUBLIC SPACE IMPROVEMENTS AND BUS TERMINAL UPGRADES**



Reduced greenhouse gas emissions by 34,281 tCO<sub>2</sub>e<sub>39</sub>



Equivalent of taking 7,600 cars off the road/year



53.5% Internal Rate of Return

### HELSINKI

**REDEVELOPMENT OF HÄMEENTIE ARTERY: ADDITION OF BIKE PATHS AND REMOVAL OF THROUGH TRAFFIC FOR CARS**

BENEFITS



**EUR 18 MILLION**

INVESTMENT COSTS X 2



**EUR 9 MILLION**

## CHALLENGES

Despite the evidence-based benefits, active mobility still lacks priority in the climate agenda and in commitments in many countries' NDCs. While public transport has been more seriously prioritized and financed in recent decades due to its economic and climate benefits, active mobility has been largely overlooked. National-level active mobility infrastructure plans are rare and inconsistently funded. Walking and cycling have not been institutionalized in most government transportation departments. It has proven difficult for many cities to fund cycle and pedestrian infrastructure directly, and other avenues for financing (traditional loans, blended financing) have been pursued inconsistently.

## OPPORTUNITIES FOR ACTION

Prioritizing and investing in walking and cycling in everyday life requires a set of integrated and coherent actions:



### GOVERNMENTS

Create and improve high quality and safe infrastructure, invest in proper campaigns and communication activities, propose coherent land use planning, enable the integration of walking and cycling with public transport and promote capacity building activities.



### DEVELOPMENT PARTNERS

Adopt a standardized cost-benefit analysis methodology for active mobility infrastructure investments, increase funding to build knowledge and capacity with national and local governments and create a dedicated Active Mobility window under the Global Facility to Decarbonize Transport (GFDT) to finance project preparation and pilots.



### PHILANTHROPY AND CIVIL SOCIETY ORGANIZATIONS

Provide support by coordinating key stakeholders to identify and address knowledge, data, and financing gaps while also providing technical assistance to city and national governments to develop and implement cycle network and pedestrian safety plans.

Finally, it is worth noting that these investments will only have their tangible benefits come true when vehicle speeds are limited, and high-quality infrastructure is available and accessible. Implementing a safe system approach where vehicle speeds are managed for the safety of all road users is essential to promote cycling and walking as a safe climate solution.



**THIS AGENDA ON ACTIVE MOBILITY IS A KEY PART OF SUBMISSIONS TO THE G20 ON SAFE & SUSTAINABLE TRANSPORT.**

### SOURCES:

- *Bikenomics: Making the Case for Cycling Investment in your City* - CIVITAS Handshake
- *Making the Economic Case for Cycling* - ITDP
- *Make Way for Walking and Cycling* - Partnership for Active Travel and Health (PATH)
- *The Compact City Scenario – Electrified* - ITDP and University of California, Davis Institute for Transportation Studies
- *The Path Less Travelled: Scaling Up Active Mobility to Capture Economic and Climate Benefits* - ITDP & The World Bank Group



**LEARN MORE ABOUT US:**



### OUR PARTNERS IN THE AGENDA:



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