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ITDP的智库使命推动更广泛的全球交通减排合作 ITDP Think-Tank Mission

ITDP长期作为权威智库，深度参与中国交通领域的顶层设计与实践。我们多次应国家发改委、交通运输部及北京、上海、广州、深圳等重点城市政府邀请，以专家身份投身于重大交通政策制定、重点项目推进与前沿研究之中，并多次参与行业标准编撰工作，在重要行业会议上发出具有影响力的声音。2024年，ITDP更为国际机构代表受邀出席国际交通论坛（ITF）正部长级高级别会议，与蒙古、哈萨克斯坦、乌兹别克斯坦、塔吉克斯坦、阿塞拜疆和柬埔寨五国交通部长，以及世界银行、亚洲开发银行、经合组织、联合国亚太经社委员会等国际组织领导人共商全球交通治理大计，展现出我们在国际舞台上的专业话语与协作价值。

As a recognized think tank and practitioner, ITDP actively contributes to both policy planning and implementation in China's transport sector. We regularly provide expertise to national authorities and major city governments, supporting key policies, projects, and research, and have participated in drafting industry standards. In 2024, ITDP was invited to the ministerial-level meeting of the International Transport Forum, engaging with transport ministers and global organization leaders on transport governance, demonstrating our influential role in international dialogue.



交通运输部科学研究院

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中国城市交通发展研究中心

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北京市交通委员会

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RESEARCH

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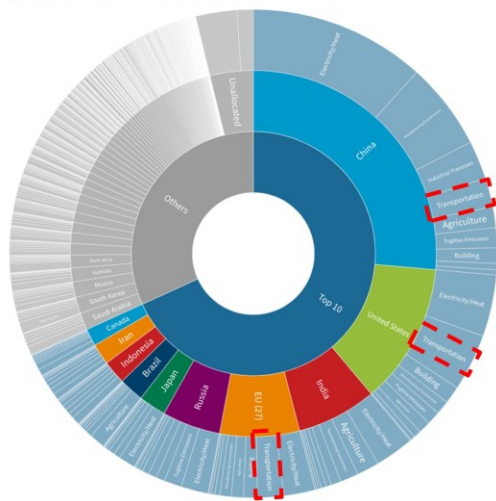
The Imperative

Why transportation is the defining challenge of our generation

5

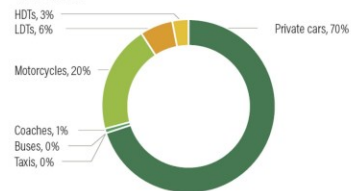
The Top 10 GHG Emitters Contribute Over Two-Thirds of Global Emissions

Explore the Latest Global Greenhouse Gas Emissions Data on Climate Watch



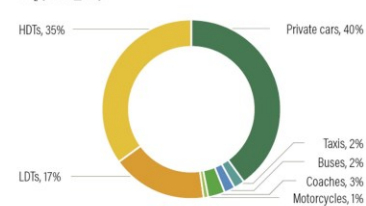
Source: Global GHG Emissions 2019 excluding LULUCF, Climate Watch. The EU 27 is considered a country.
 *Bunker fuels include international aviation and shipping that are not included in country totals. Other territories include regions not covered by Climate Watch country data. See Climate Watch for country level land-use change and forestry and bunker fuel emissions.

Vehicle stock



Trucks in China: 9% of vehicle fleet, 53% of all road transport carbon emissions

CO₂ (WTW_ele)



Source: Lulu Xue and Daizong Liu, WRI 2022

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China's Transit Transformation: Building the World's Largest Metro Network and Electrifying the World's Largest Bus Fleet

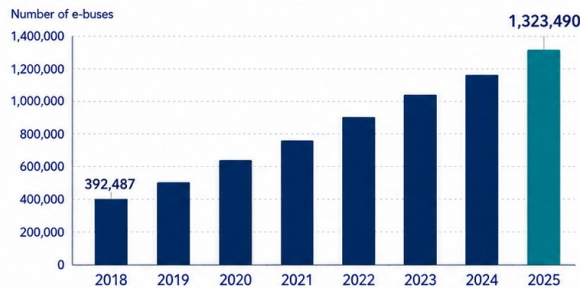
Two decades of rapid urban transport development



ELECTRIC BUS SCALE-UP

1.32 million e-buses

China's electric bus fleet grew from 392,487 in 2018 to 1,323,490 in 2025.



Approximate values for intervening years, as shown in the source slide.

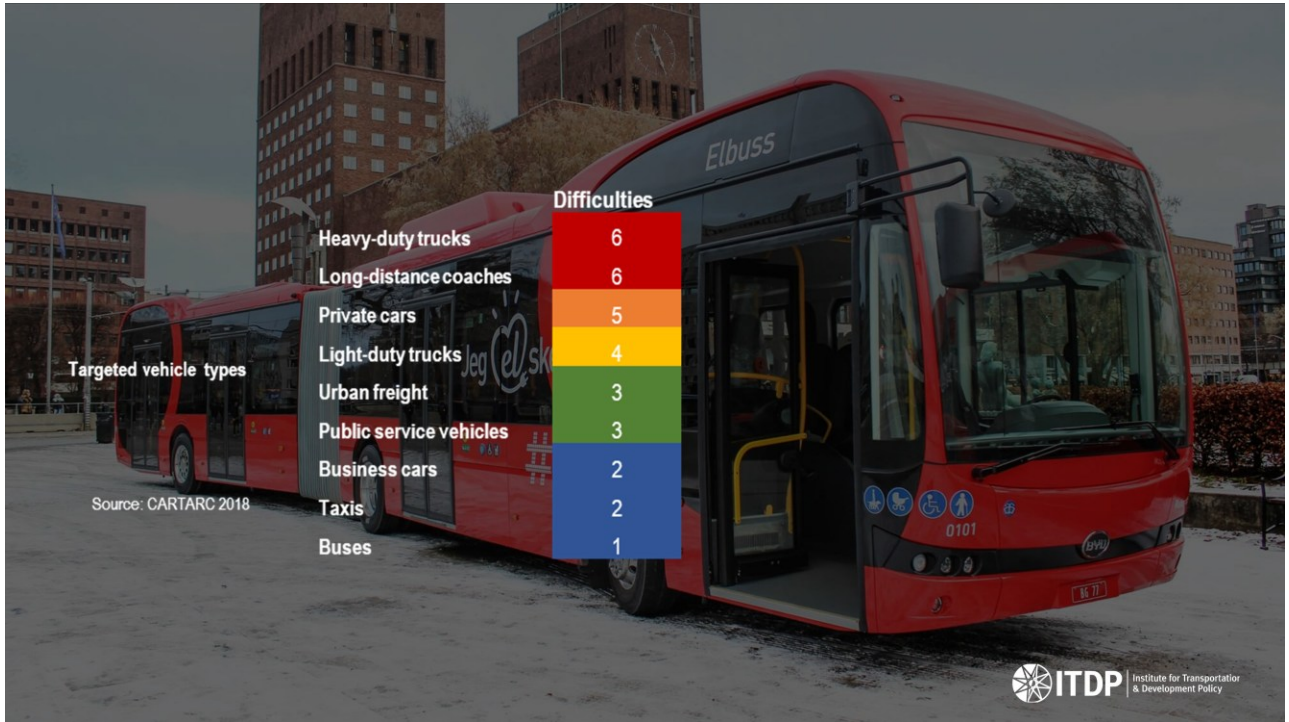


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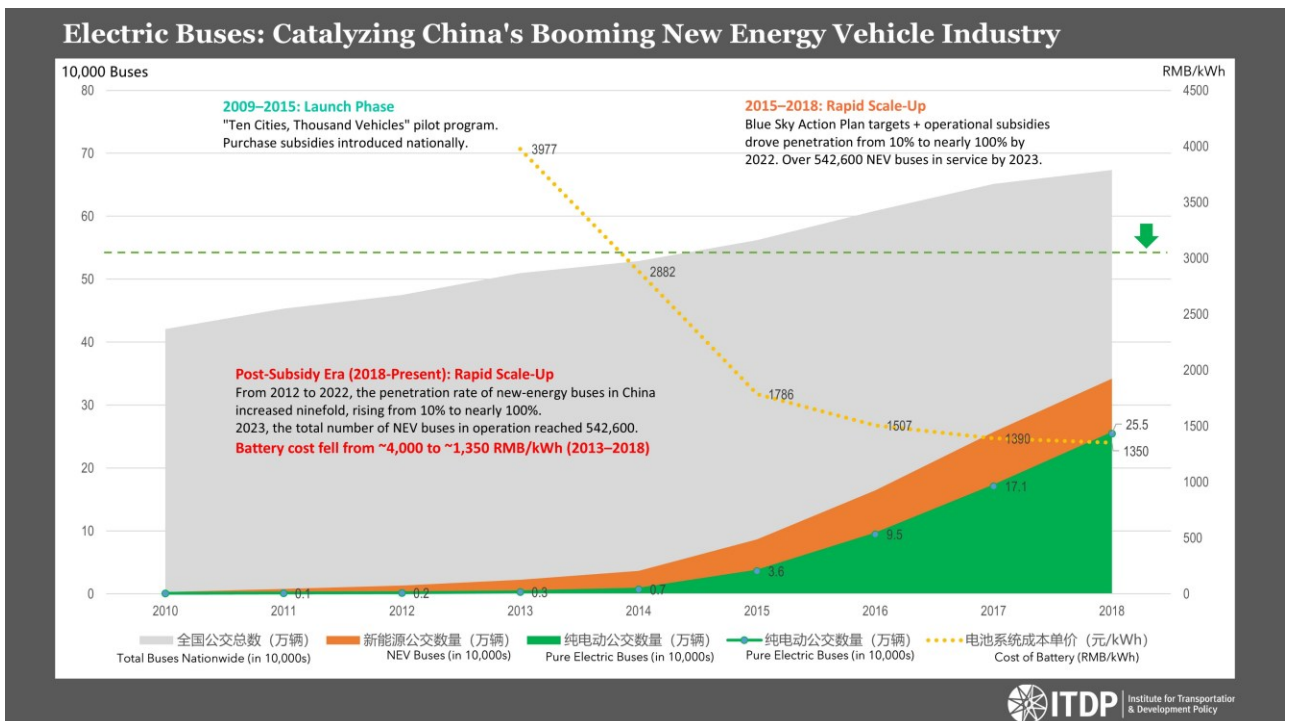
The Electric Bus Revolution

How China electrified the world's largest transit fleet in a decade

8



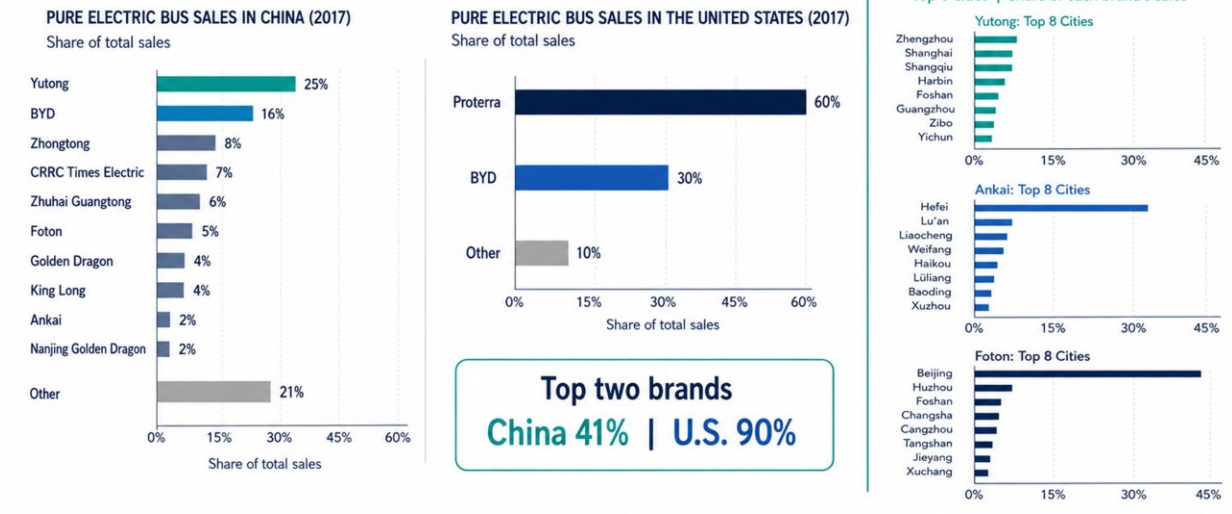
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Electric Bus Sales in 2017: China's Fragmented Market vs. U.S. Dominance by Two Brands

Manufacturer market shares and selected Chinese brands' leading city markets



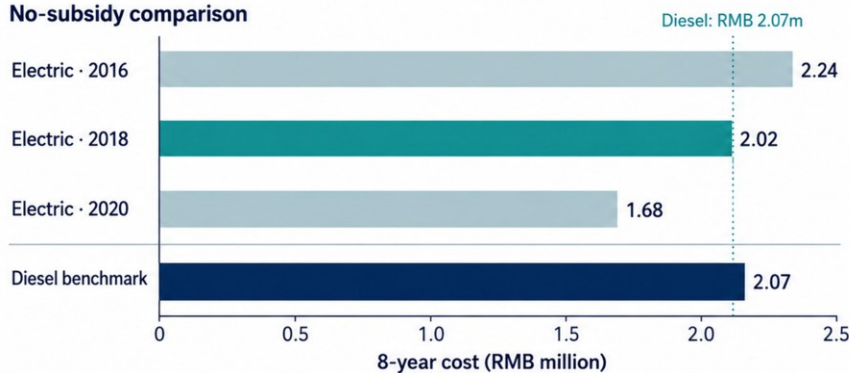
Source: Supplied ITDP slide (2017 data). City-level shares approximated from the original chart.

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Electric Buses Reached Cost Parity with Diesel by 2018—Without Subsidies

8-year lifecycle cost | 10-metre battery-electric bus, 200 kWh, non-fast-charging

No-subsidy comparison



2018
Cost parity reached

RMB 2.02m

Electric

versus

RMB 2.07m

Diesel

Lower operating costs
offset higher purchase costs.



Financing still matters

Green bonds and battery or vehicle leasing can ease upfront costs, but may add debt obligations.



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Assumptions: 8 years; 60,000 km annually. Includes vehicle purchase, energy and maintenance costs, accounting for operating efficiency. Excludes labour, charging infrastructure and financing costs. Source: supplied ITDP analysis.

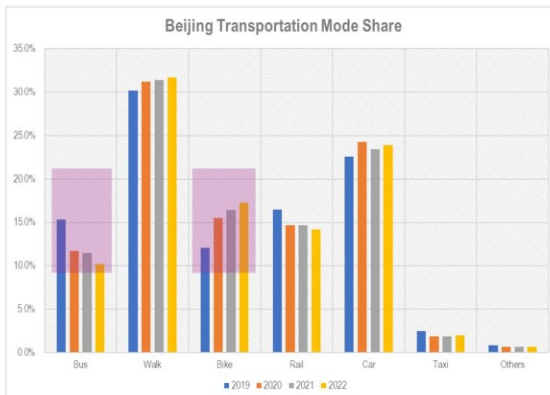
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Can Mobility as a Service become the next big thing?

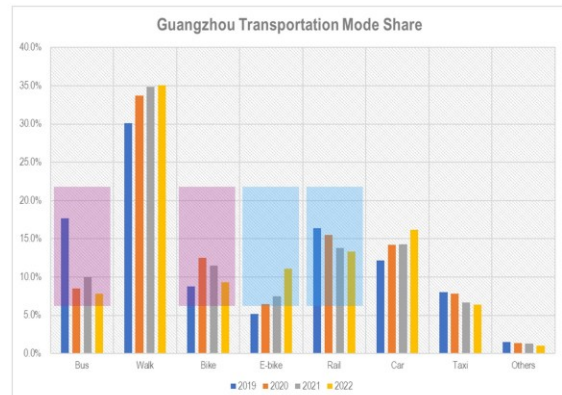
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The Crisis: Public Transit in Freefall

Travel modal share in major Chinese cities before and after the pandemic



Source: ITDP, based on publicly available data



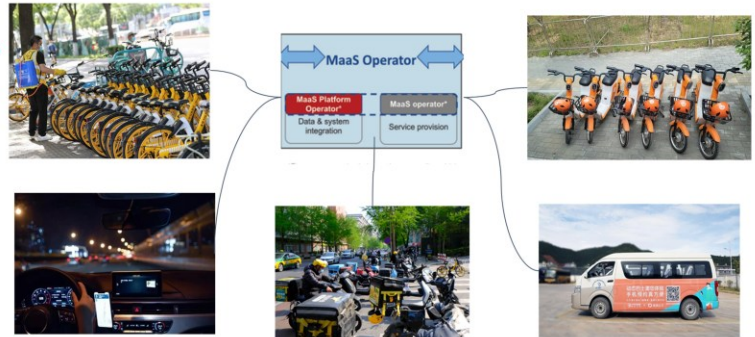
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MaaS Makes Public Transit a Door-to-Door Service

One journey, connected services

MaaS brings public transit and shared mobility into one digital travel service.

Bus and metro anchor the journey. Walking, shared bikes and on-demand services connect the first and last mile.



01 PLAN

Compare multimodal routes

Source: BTI (2023), supplied presentation. Service scope shown for the Beijing pilot.

02 NAVIGATE

See arrivals and transfer guidance

03 RESERVE

Access supported transport services

04 PAY

Connect payment and trip records

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MaaS Brings On-Demand Buses Network Services to China's Public Transit

Digital booking connects passenger requests with flexible bus services.



Illustrative operating concept by City mapper Pilot in London.

HOW IT WORKS

01 Request a trip

Passengers book through a MaaS platform.

02 Match demand

The service groups requests into shared bus journeys.

03 Adapt the service

Routes and dispatch respond to passenger demand.

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Three Cities, Three Playbooks

MaaS folds every shared mode into the public-transport system — so the last mile rides with the network. There is no single Chinese model: **governance shapes the market.**

BJ

Beijing

The transport authority leads a **public-private alliance** — pairing the city, public transit and two map apps (AMAP, Baidu) to build one MaaS platform together.

● Since 2019 · Green MaaS Platform

GOVERNMENT-LED



SH

Shanghai

Suishenxing — a joint venture between state-owned transport enterprises and a state-owned investment company, run as one corporate platform.

● SOE + state investment vehicle

STATE-OWNED



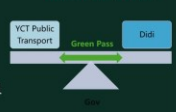
GZ

Guangzhou

The leanest model: **one company, one product**, backed and supported by the local public-transport operator.

● Supported by local PT company

SINGLE PLAYER



The institutional model determines who coordinates the service and its partners.

Source: BTI / WRI (2023)

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Beijing's MaaS Reached Scale by 2023

Mass adoption and a rapidly growing carbon-reward programme

>30M

platform users

4.5M

green trips per day

3.54M

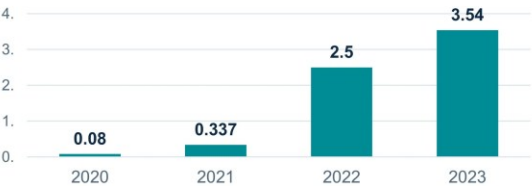
carbon-reward participants

400 ktCO₂

cumulative avoided emissions

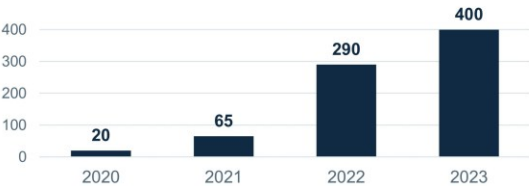
Carbon-reward registrations

Million registered users



Reported cumulative carbon savings

Thousand tonnes of CO₂ avoided



Source: BTI/WRI (2023 update)

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Next Big Move

The Autonomous Revolution



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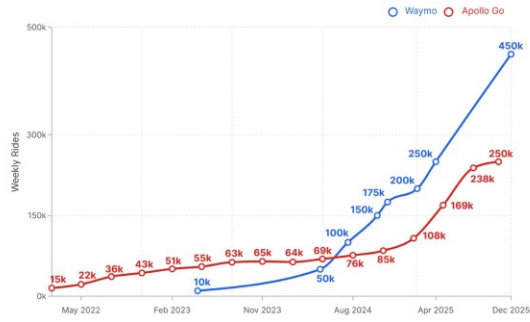
20



China's autonomous vehicles: from highways to dense urban cores

Weekly Ridership Growth

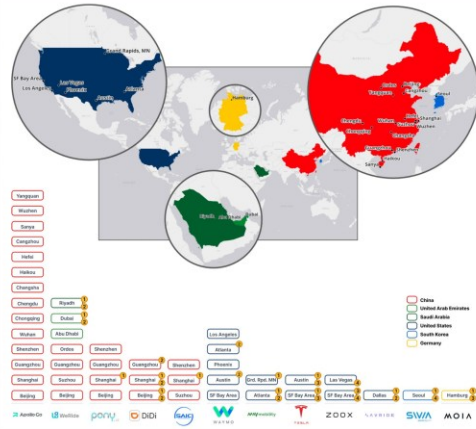
Waymo vs. Apollo Go (2022-2025)



○ Data points represent reported weekly ride milestones and calculations from reported quarterly rides.

Where autonomous ridehailing exists today

December, 2025



Next Big Move

Cities Return to Being People-Centered

Active Mobility Infrastructure for Better Urban Life

Tianjin combined metro access, street design, traffic systems and drainage in one citywide program

126 km

new cycle lanes

96

metro stations upgraded,
plus 1 bus terminal

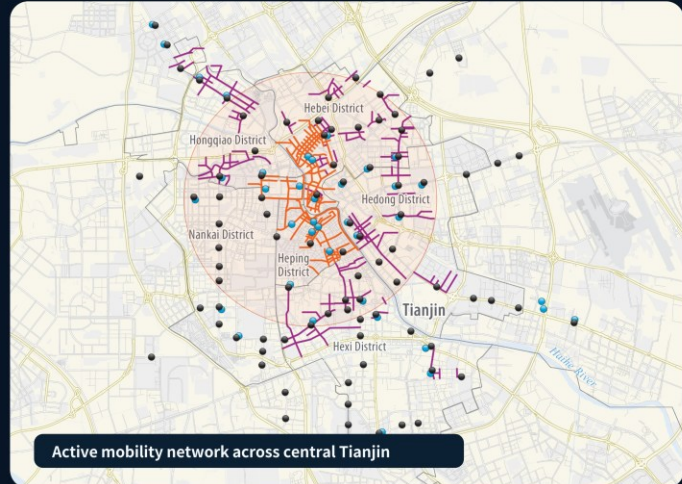
+175,750

additional metro trips per
day in 2022

53.54%

economic internal rate of return

Infrastructure investment changed how
people move through and use the city
every day



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Safer Streets, Better Everyday Mobility

Binjiangdao and Xing'an Road before and after: clearer space and safer movement



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Cars and pedestrians shared poorly defined space



Bollards clarified the street edge and organized bike parking



Better streets made cycling a more natural part of daily life

261,144

additional walking and cycling trips
per day

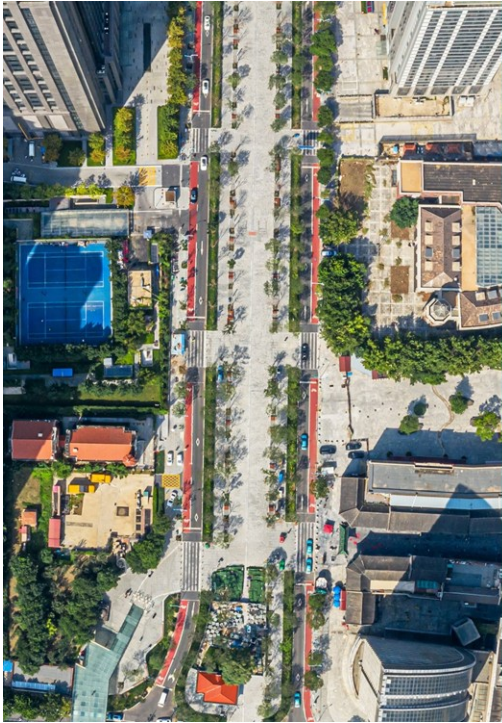
9.2%

fewer traffic crashes

100% of project streets achieved iRAP 3 stars or higher

Small businesses and local spending increased. Benefits
were especially strong for the lowest-income 40%.

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TIANJIN, CHINA

Tianjin's Active Mobility Program Earned Global Recognition

2024

Sustainable Transport Award



Tianjin named the 2024 STA Winner

The World Bank's largest non-motorized transport improvement project global-wide.

2015–2022 US\$144.7 million total investment from World Bank
with RMB ¥ 1.4 billion matching fund from local government.

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Tongzhou Highline Park, Beijing 2026



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Agora Verkehrswende ITDP Institute for Transportation & Development Policy

Thank You

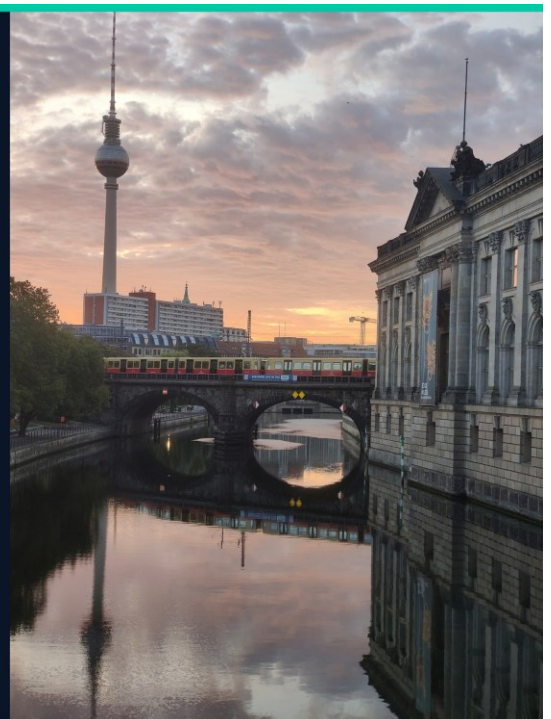
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