

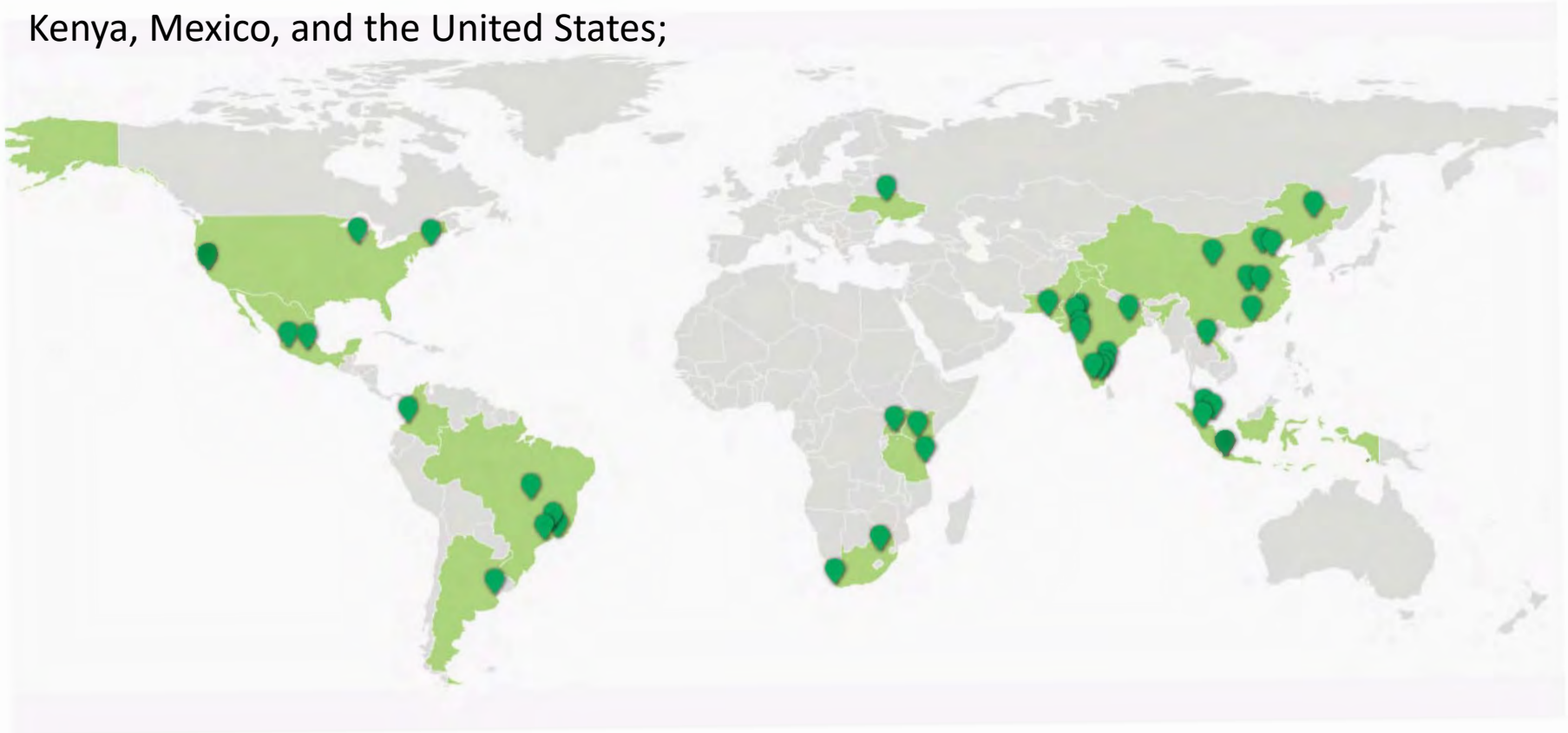
Deng Han, NMT senior Engineer&Bike sharing manager, Oct 10, 2017  
Regional EST Policy Dialogue and Training Workshop



广州市现代快速公交  
和可持续交通研究所  
Institute for Transportation  
& Development Policy

# Transforming the Urban Space through Street Design

□ The Institute for Transportation and Development Policy (ITDP) is a global nonprofit at the forefront of innovation, providing technical expertise to accelerate the growth of sustainable transport and urban development around the world to make cities more livable, equitable, and sustainable. ITDP has offices in Brazil, China, India, Indonesia, Kenya, Mexico, and the United States;





# Regional EST Policy Dialogue and Training Workshop



ITDP's projects have put more than **600,000 bikes and cycle rickshaws** on streets in the global south!



**50+**  
Bus Rapid Transit  
Corridors

Since 2004, ITDP has designed, supported, and inspired 54 bus rapid transit (BRT) corridors, building 1,033 km of BRT.

**That's enough to cover the distance from Paris to Berlin.**



## Working Capital

Through advocacy and partnerships with the Global Environment Facility, the World Bank, the Asian Development Bank, and other large multilateral institutions,

**ITDP has leveraged more than \$200 billion for investment in more sustainable transport.**

## One Extra Week

7.7 million people ride these BRTs every day, saving each person 7 days a year in commuting time.

**That's about 140,000 years in total time saved!**



Deng Han, NMT senior Engineer&Bike sharing manager, Oct 10, 2017  
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# Transforming the Urban Space through Street Design



Asian cities, especially cities in South Asia and South-east Asia

- High population density
- Fast economic development
- Rapid urbanization progress



## Traffic problems and the followings:

- Economic problems
- Social problems
- Health problems

# Manila, Philippines



# Manila, Philippines





A street scene in Vientiane, Lao PDR. On the left, a tall white wall runs along the sidewalk, with a large tree and a green tarp visible behind it. A paved road with a black car driving away is on the right. Buildings and utility poles are visible in the background under a cloudy sky. The foreground shows a concrete sidewalk with some debris and a brick-paved area.


Vientiane, Lao PDR

A street scene in Dongguan, China. On the left, a clothing store displays mannequins wearing hats and dresses. A sidewalk leads towards a street with cars and pedestrians. In the foreground, a large, ornate, light-colored stone planter sits on a pedestal, filled with green plants and yellow flowers. A black lamppost stands to the right of the planter. The street is paved with grey tiles, and a white car is visible in the background. The text "Dongguan, China" is overlaid in white on a semi-transparent dark band across the middle of the image.

# Dongguan, China

# Vientiane, Lao PDR



A photograph of a busy street in Changzhou, China. In the foreground, a man in a light-colored jacket is pushing a person in a wheelchair. To the left, a person is riding a motorcycle. In the background, many people are walking, and several bicycles and motorcycles are on the road. The scene is set on a paved street with a sidewalk and trees. The text "Changzhou, China" is overlaid in the center of the image.

Changzhou, China



# Hong Kong, China

A rainy street scene in Changsha, China. The pavement is wet and reflective, with several puddles. In the foreground, a silver van is parked on the right, and a silver sedan is parked on the left. A group of people, including children, are walking down the street, holding colorful umbrellas. One child in the foreground is holding a large, pink umbrella with cartoon characters. Another child is holding a pink umbrella with a green and yellow pattern. In the background, there are several multi-story buildings, including a large orange and white building with a sign on top. The sky is overcast and grey.

Changsha, China





# Dacca, Bangladesh



# Guangzhou, China

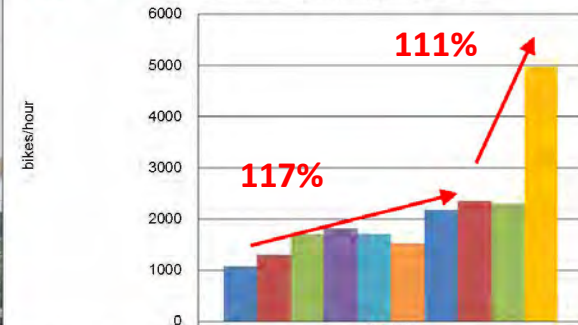




# Guangzhou, China



Volume of Bikes along BRT Corridor




	tangxia
Before BRT (Nov.2009)	1083
After BRT (Mar.2010)	1297
After BRT (Sep.2010)	1713
After BRT (Oct.2010)	1820
After BRT (Dec.2010)	1712
After BRT (Jan.2011)	1530
After BRT (Apr.2012)	2194
After BRT (Dec.2012)	2354
After BRT (Jan.2014)	2299
After DBS (Jun.2017)	4964



Tianjin, China

An aerial view of a busy street in Manila, Philippines. The street is filled with traffic, including a prominent yellow bus in the foreground, several cars, and a white taxi. Pedestrians are walking along the sidewalks, and a large crowd is gathered near a bus stop on the left. The street is lined with numerous billboards and advertisements, including one for 'Under Laser Light Hair Removal 50% OFF' and another for 'Gifts of Christmas'. The scene is set against a backdrop of tall buildings and lush greenery.

# Manila, Philippines

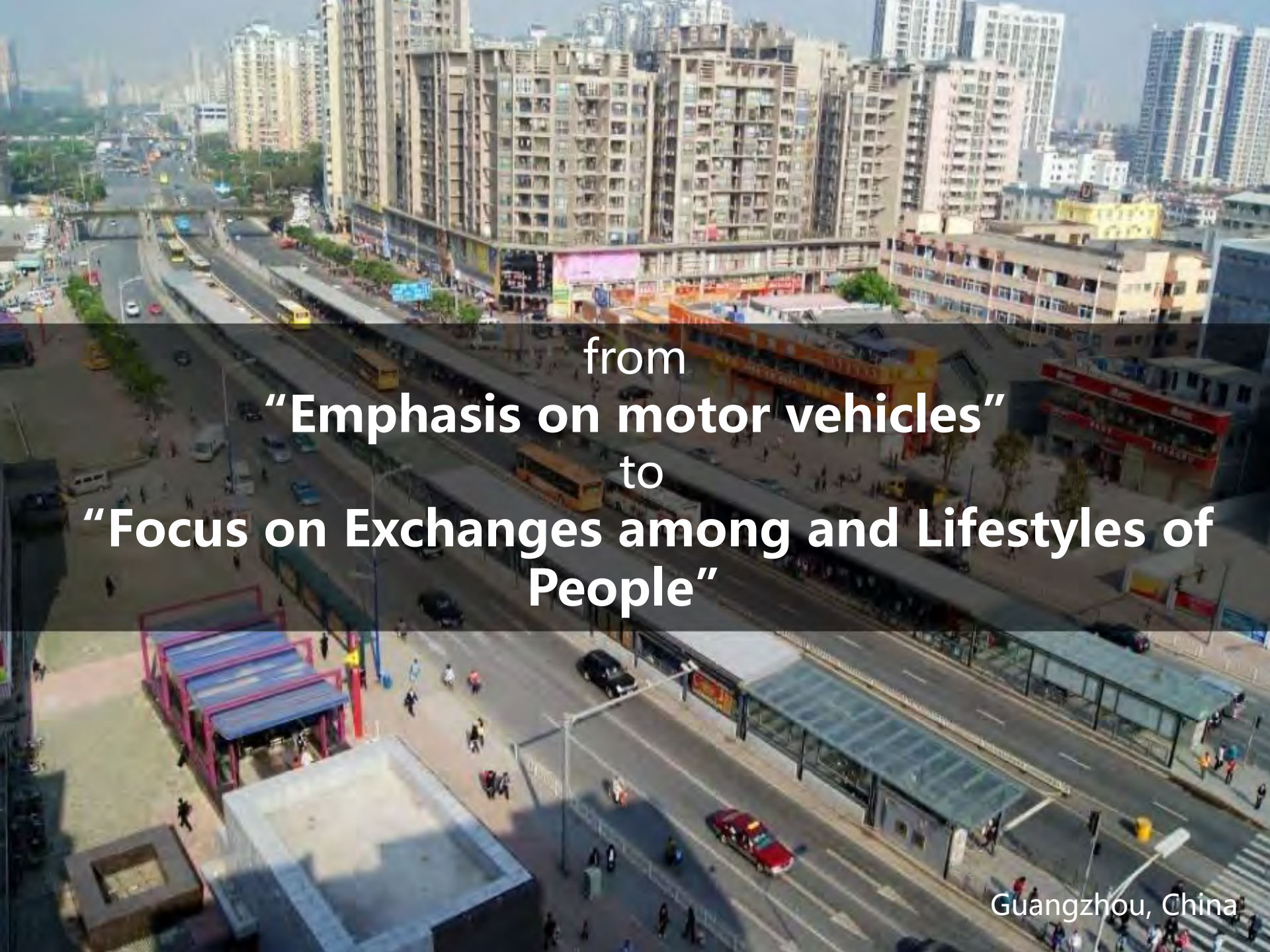


Come back again

**What should we do**

# **Access for All:**

Guidance Note on Inclusive Street Design for Asia and  
the Pacific

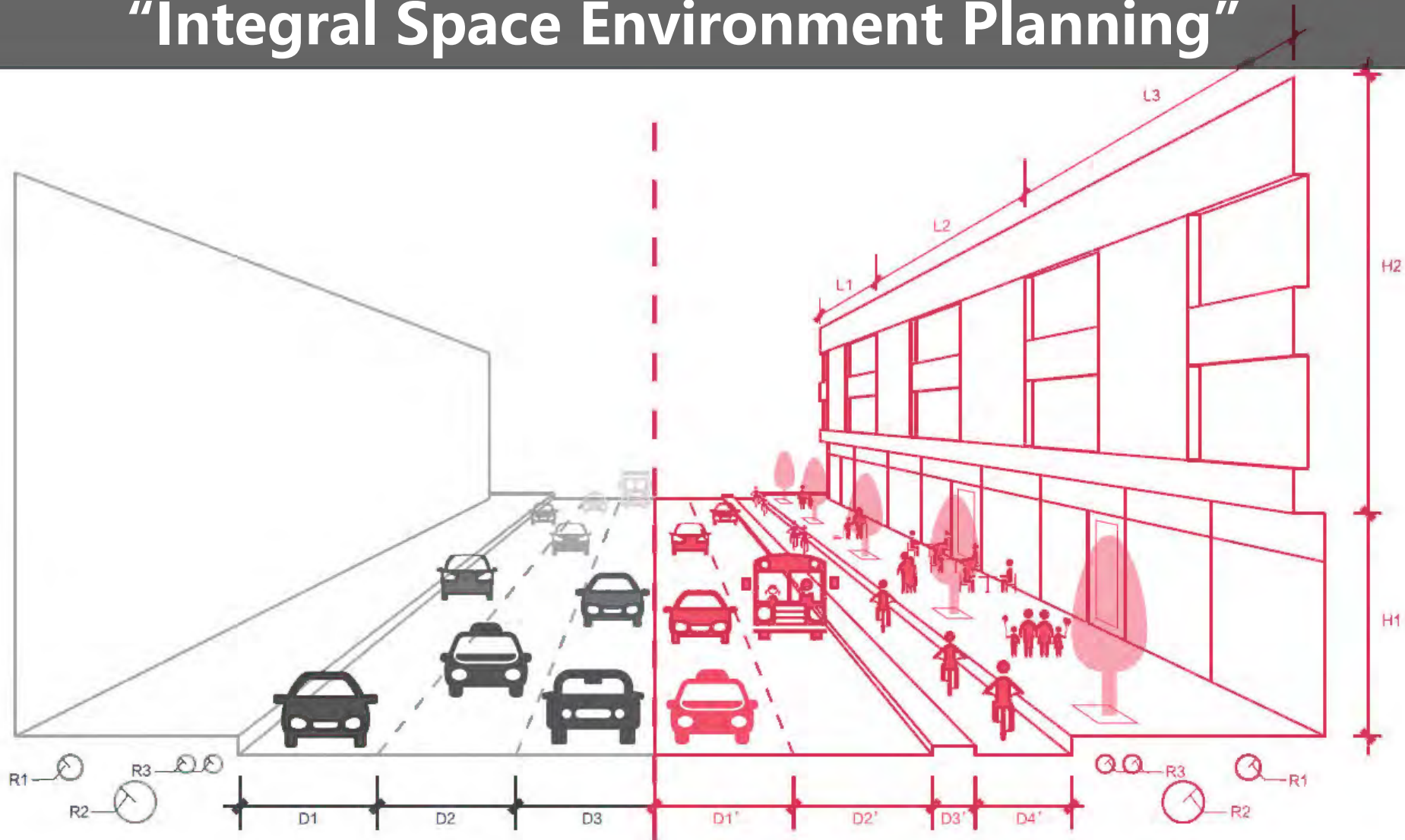


from  
“Emphasis on motor vehicles”  
to  
“Focus on Exchanges among and Lifestyles of  
People”

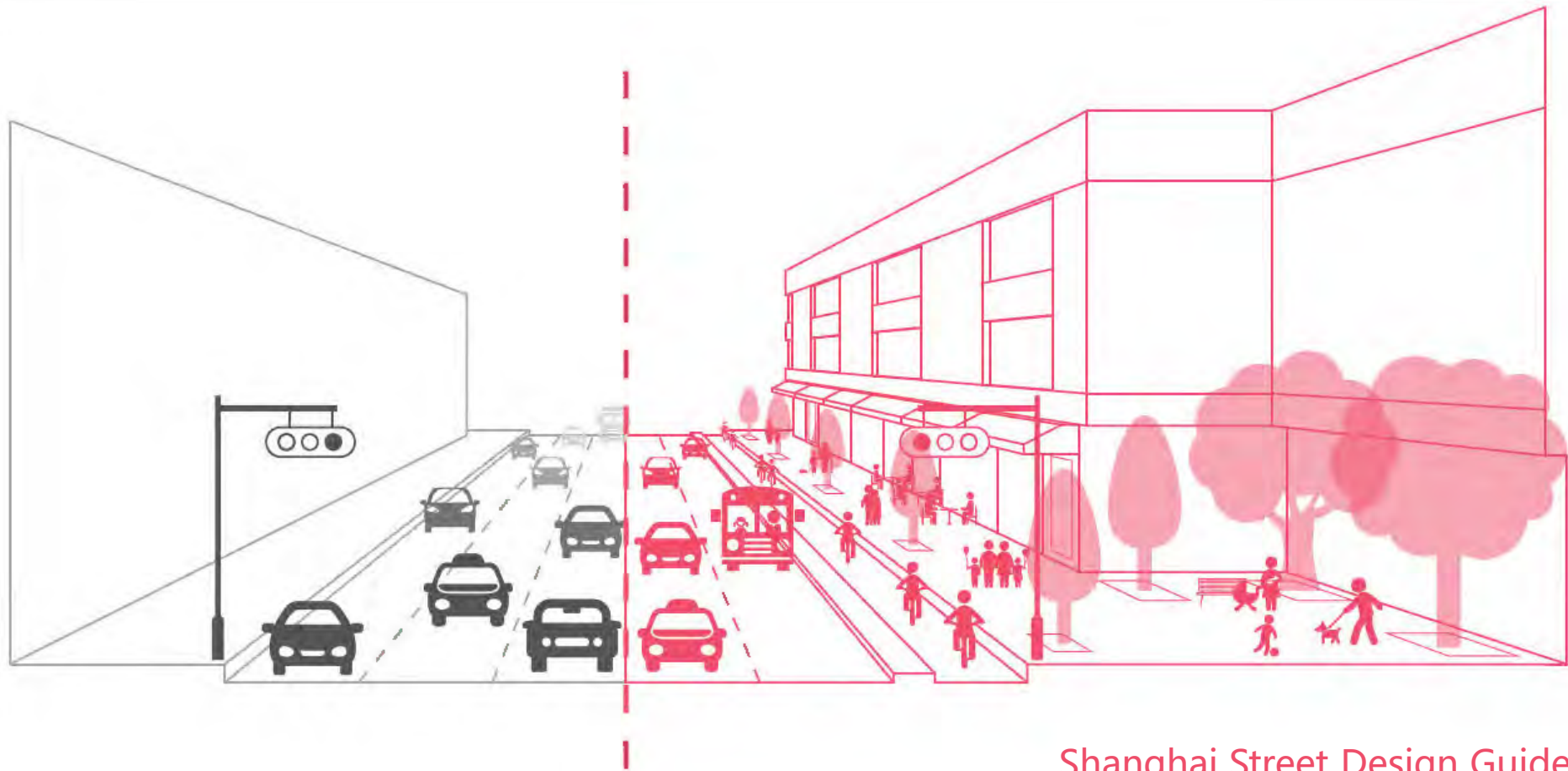
Guangzhou, China

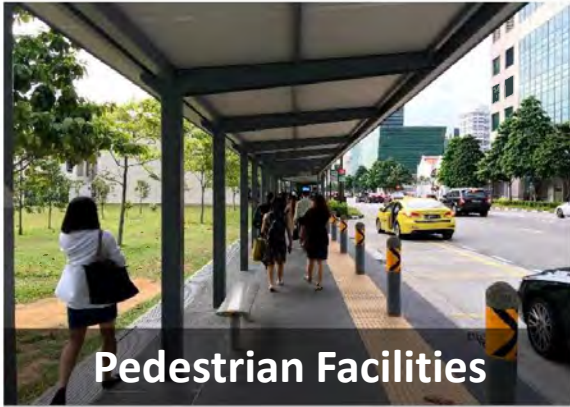


from  
“Engineering-oriented Design”  
to  
“Integral Space Environment Planning”



from  
**“Highlighting Traffic Efficiency”**  
to  
**“Enhance Integrative Development of Streets  
and Blocks”**





**Pedestrian Facilities**



**Universal Access**



**Non-motorized Vehicles**



**Transit Integration**



**Traffic Calming**



**Green Infrastructure**



**Visibility & Information**



**Space for Place**



**Smart Street**

# Best Practice

**Walkable**

# Width and pavement



Shanghai, China

# Shading



Singapore

# Raising crossing



拾洲过街沙岛·抬升过街



Guangzhou, China





A 9005Q



Guangzhou, China



Guangzhou, China



Guangzhou, China



Guangzhou, China

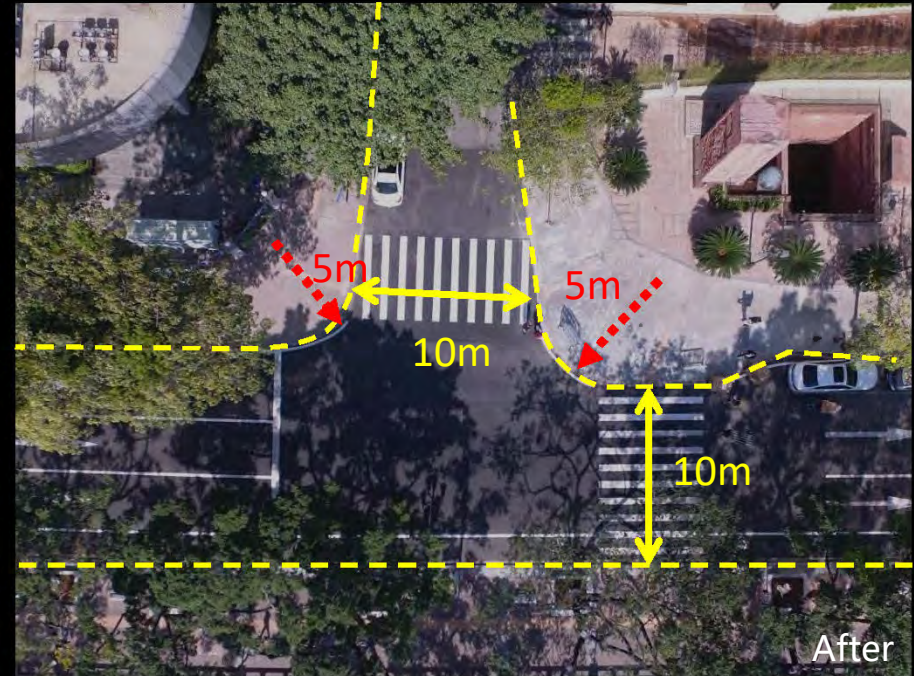
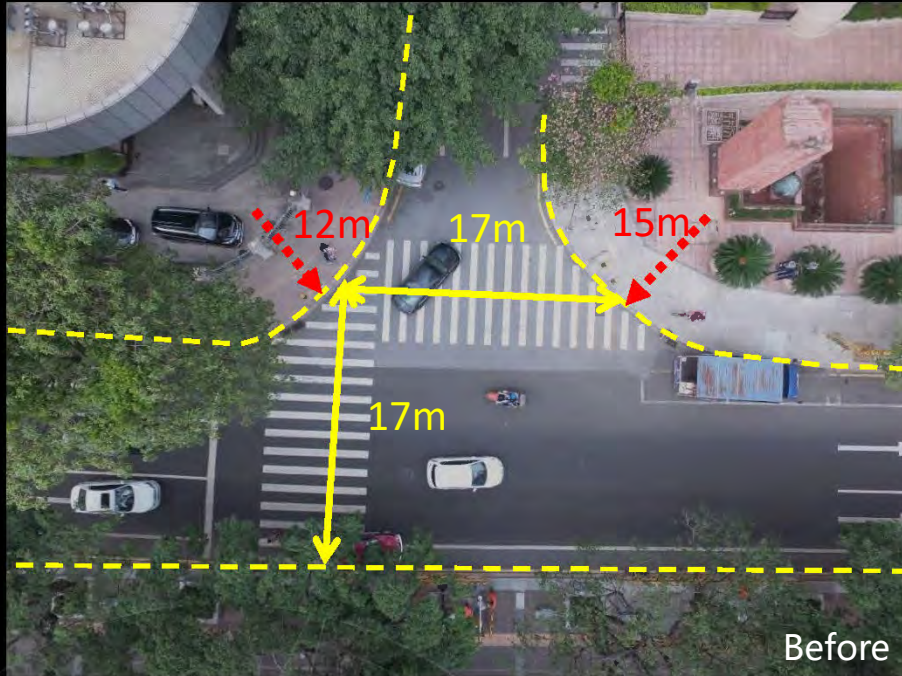


Guangzhou, China



Guangzhou, China

# Turning radius



Turning radius

↓ 60%

Crossing distance

↓ 40%

Guangzhou, China

沿江西路-新堤二横路交叉口



Guangzhou, China



# Refuge Island



# Visually Active Frontage



Tokyo, Japan

# Lighting



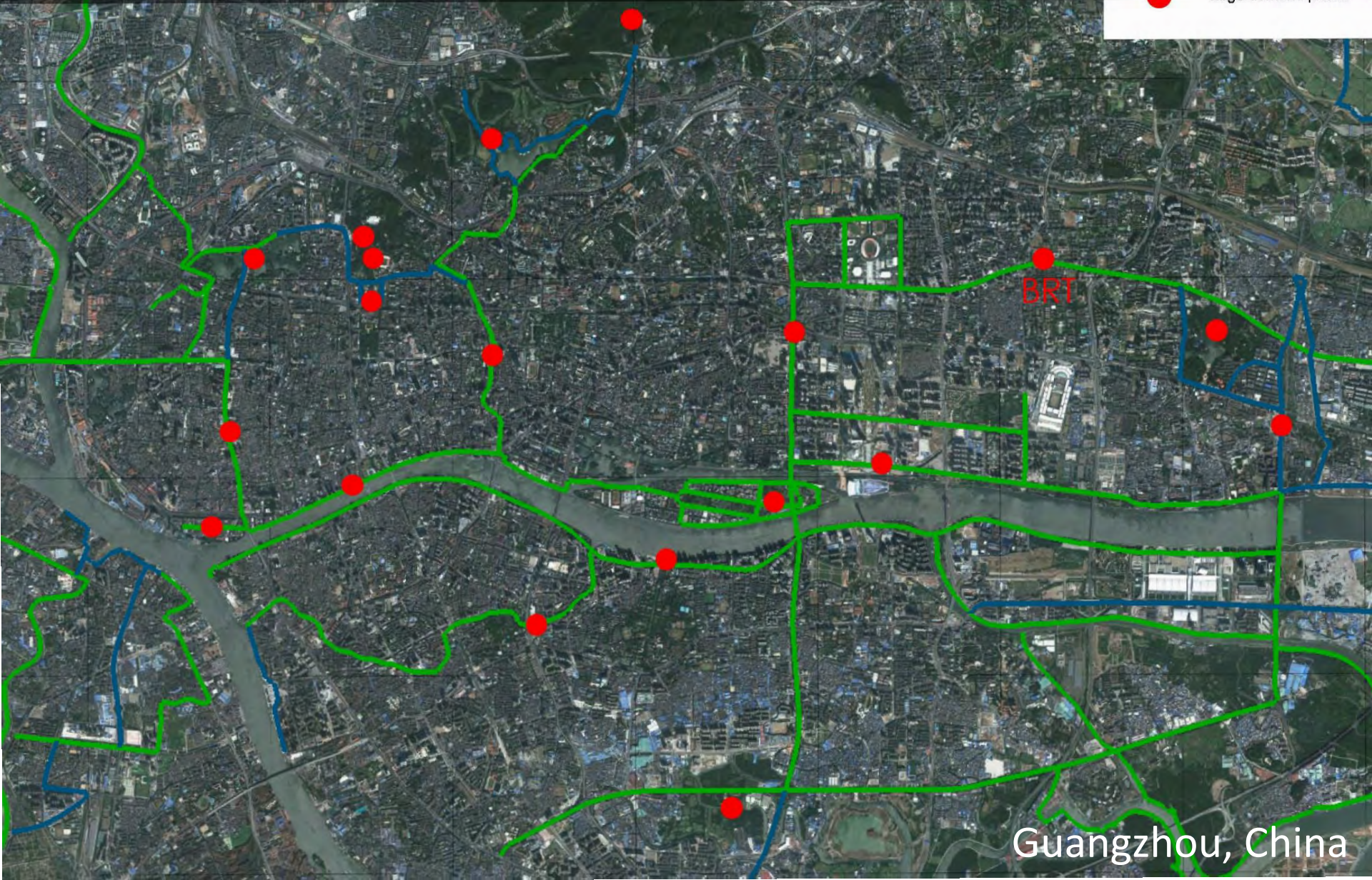
Singapore

**Cycleable**

# Network

Key:

- greenway(2010)
- greenway(2011, 2012)
- large demand points



Guangzhou, China

# Protected Cycle Lane



Xi'an, China

# Cycle Lane



Shanghai, China

# Surface Material



Yichang, China



# Pavement



Santiago, Chile

# Cycle track



Guangzhou, China

A photograph of a covered walkway with a ramp and tactile paving, illustrating universal access. The walkway is covered by a white, curved roof supported by white pillars. A ramp with metal handrails leads up to the walkway. A bicycle is parked on the ramp. In the background, there are trees and a white building with balconies. The text "Universal Access" is overlaid in large, bold, yellow letters.

# Universal Access

- people who are blind
- people in wheelchairs
- people pushing prams, carts, luggage

Singapore

# Ramp



Shanghai, China

# Universal Access across street



Karl Ejlstrom, itdp-china.org

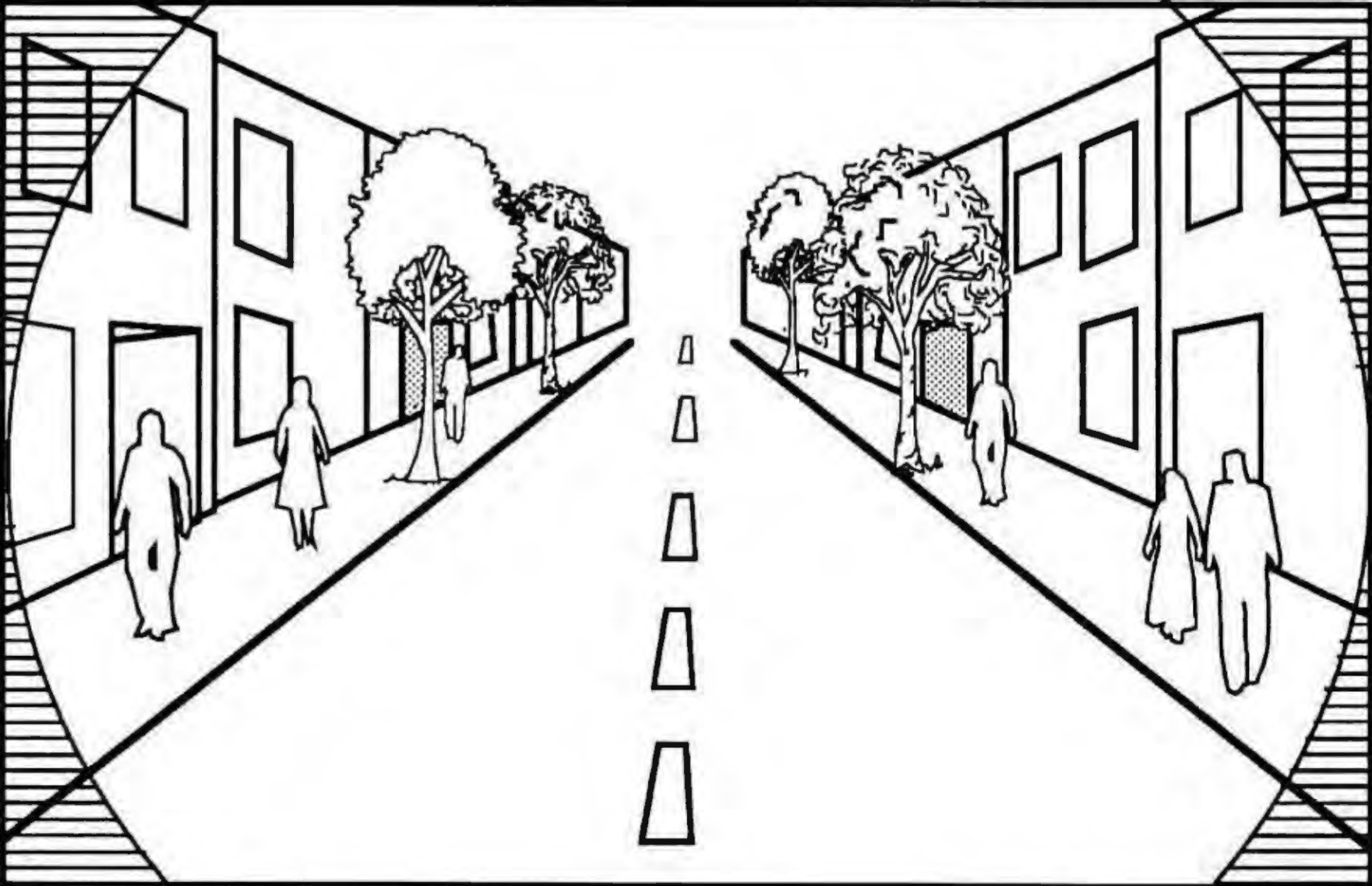
Hongkong, China

# Signal



# Traffic Calming

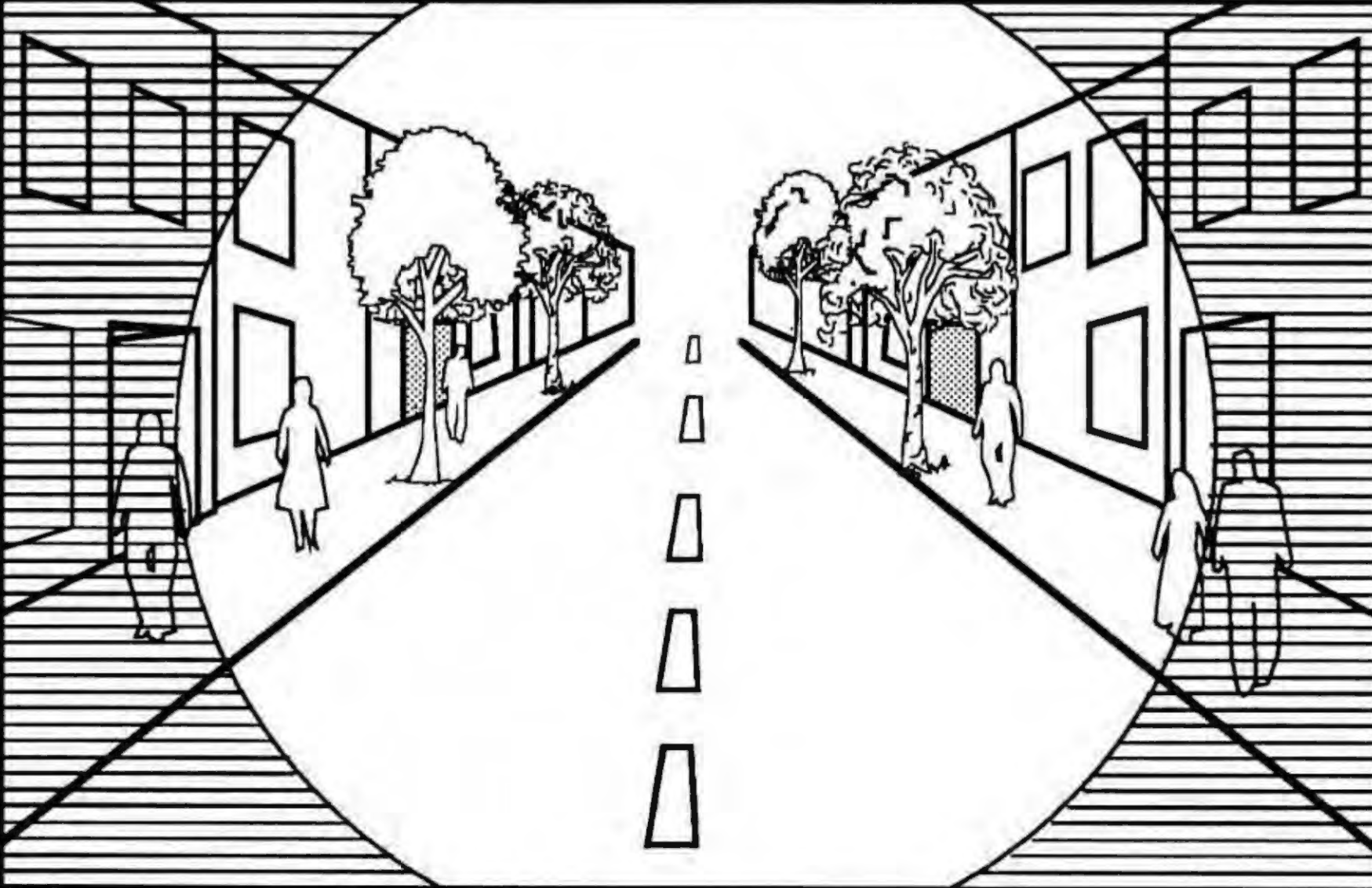
As speed increases, driver focuses less on surroundings



**20 km/h**

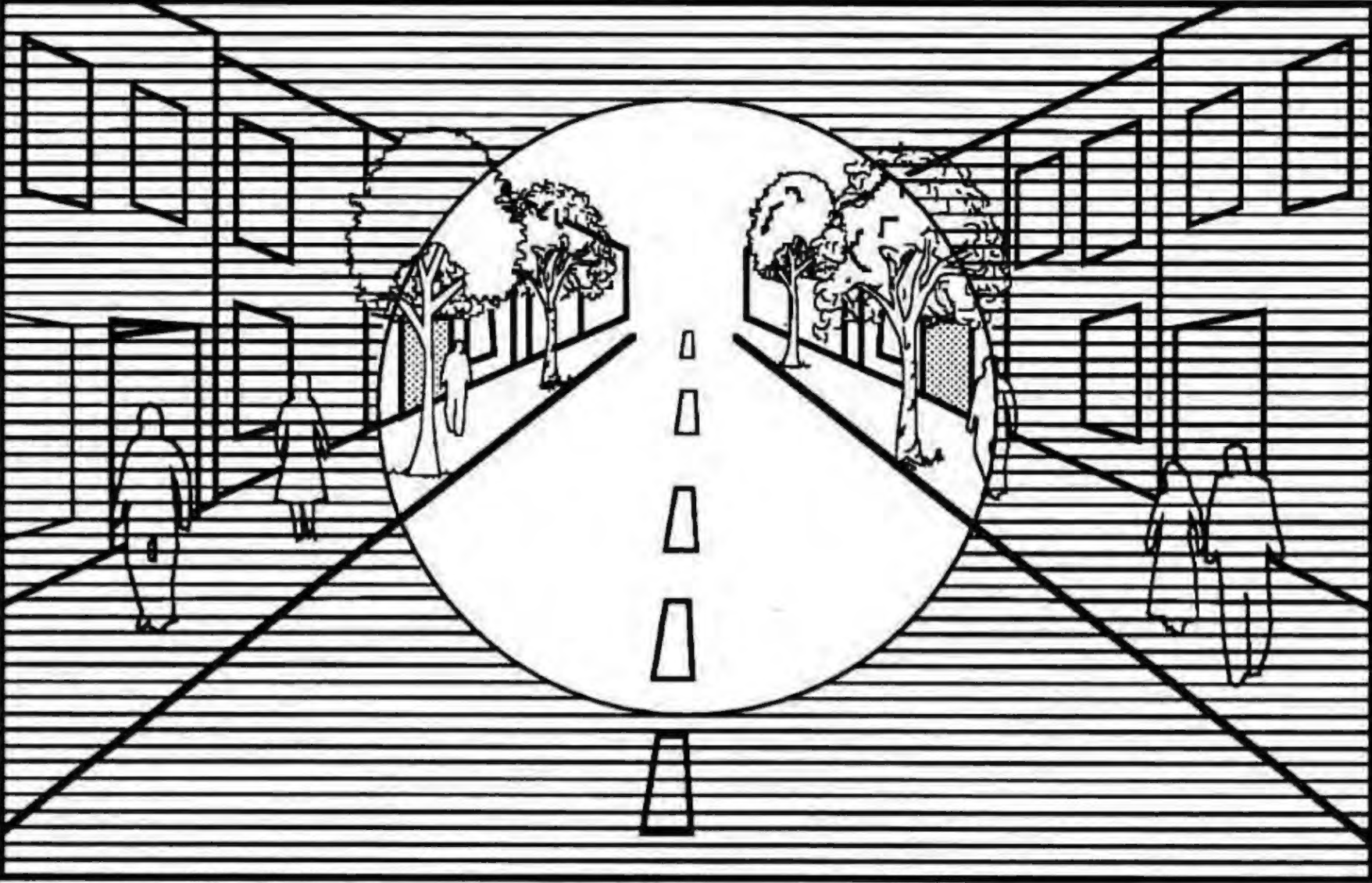


As speed increases, driver focuses less on surroundings



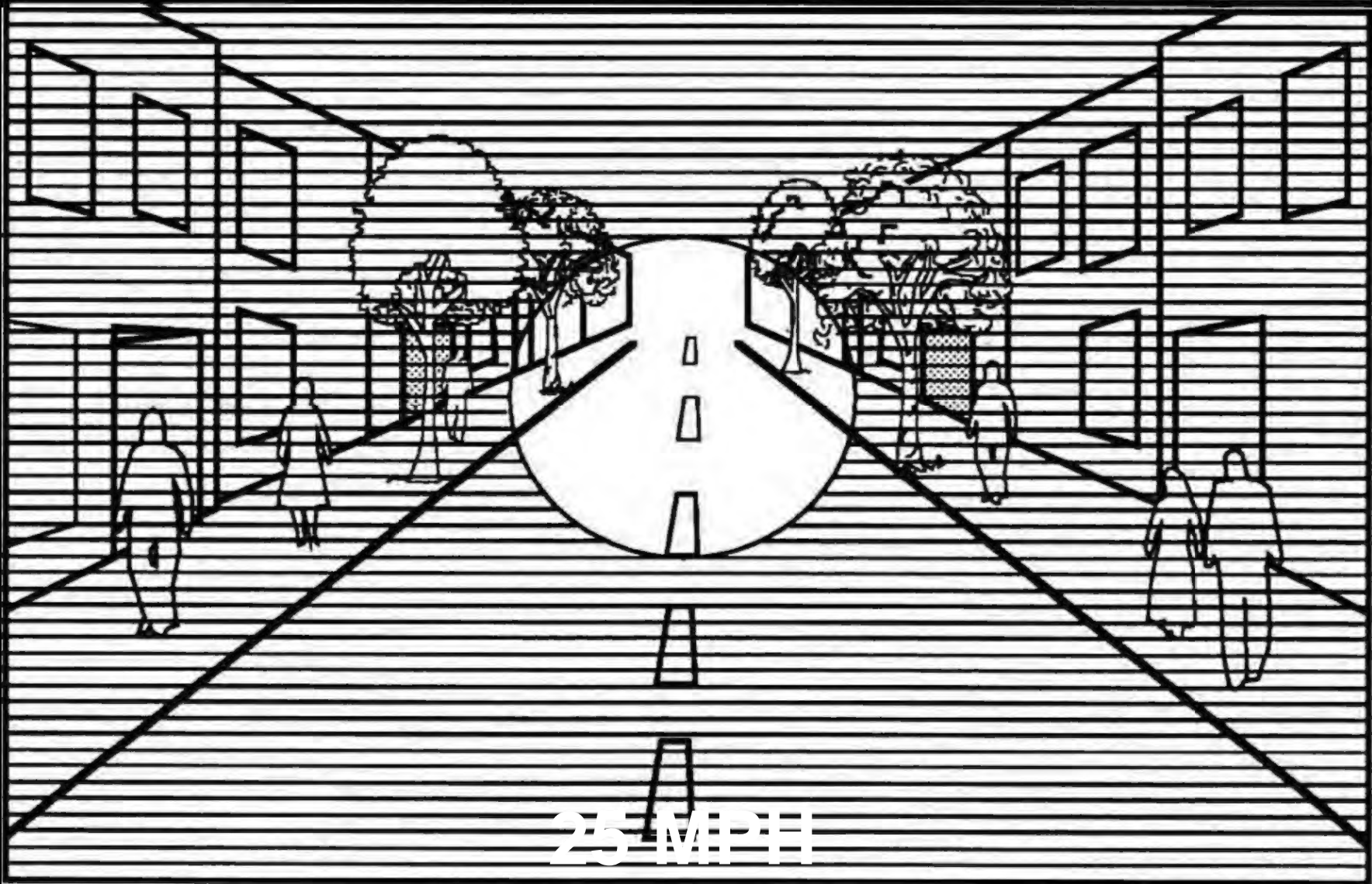
**30 km/h**

As speed increases, driver focuses less on surroundings



**40 km/h**

As speed increases, driver focuses less on surroundings



50 km/h

# Speed Restrictions



# Colorized Pavements



# Speed Hump



# Raising intersection



# Chicane



Tokyo, Japan



# Transit Integration



Yichang, China

# Transit Station Access



Guangzhou, China

# Crossing at Bus Stops



Shanghai, China

# Parking at Stops



# Playspace



Guangzhou, China

# Bike Sharing at Stops



Shanghai, China

**Public Space**

# Playground



Shanghai, China



# Parklet



Shenzhen, China

# Pocket Park



Santiago, Chile



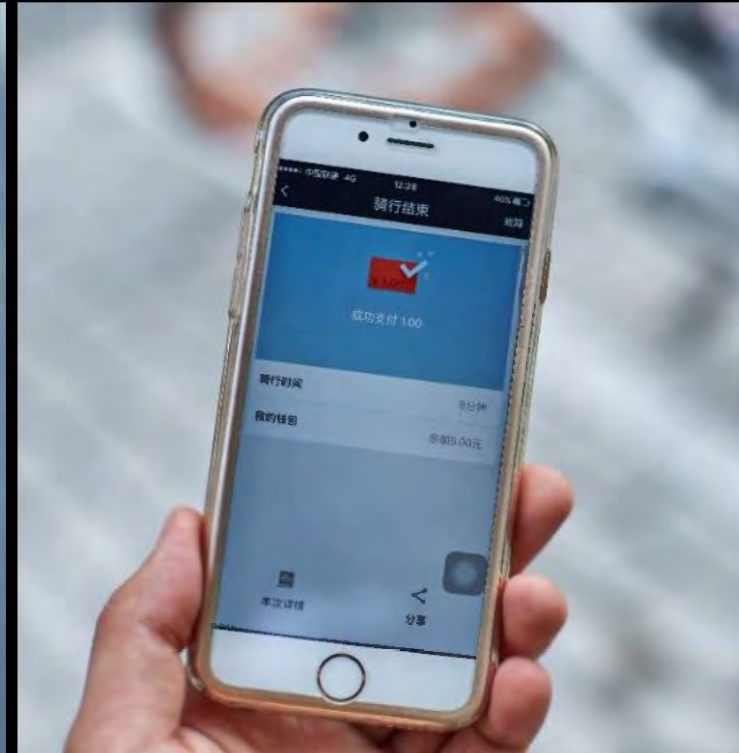
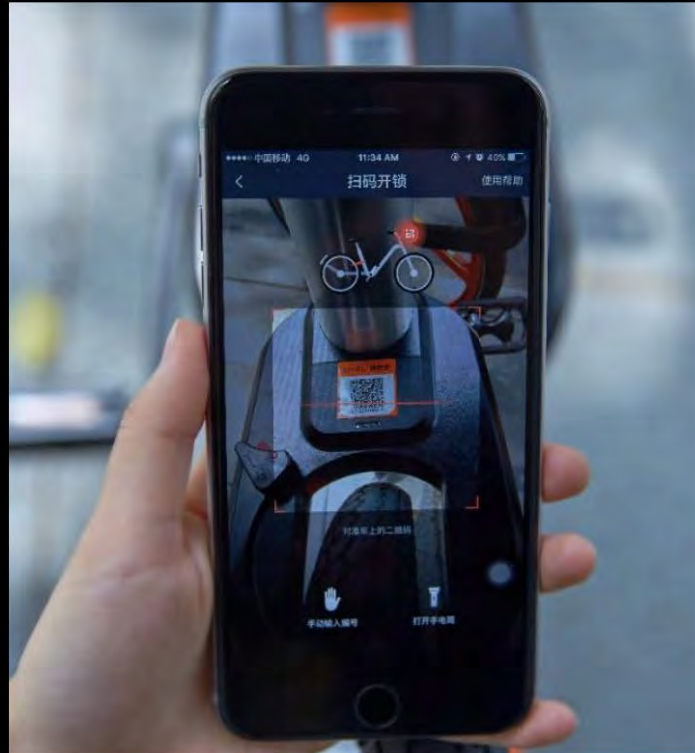
# Smart Street

# Dockless Bike Sharing



# Case study of DBS-mobike

## Operation Mode



## Charging Mode

- Mobike-1 RMB/0.5h
- Mobike lite-0.5 RMB/0.5h
- 299 RMB Deposit

# Current situation of DBS

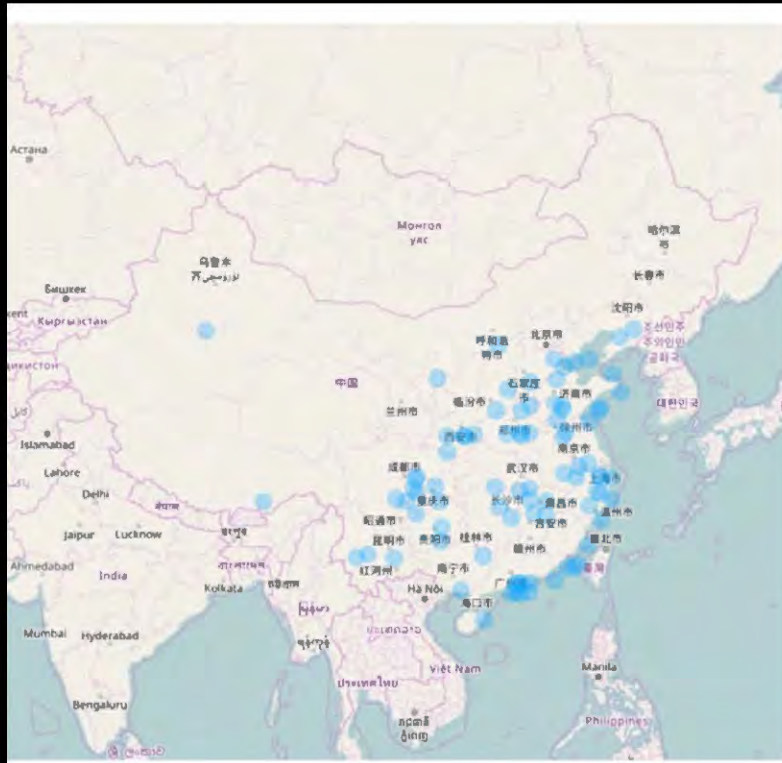
Until July, 2017

**70+** DBS companies

**16 million+** bikes

**130 million+** registered users

**1.5 billion+** riding in China.



## Over supply



## Blocking sidewalk

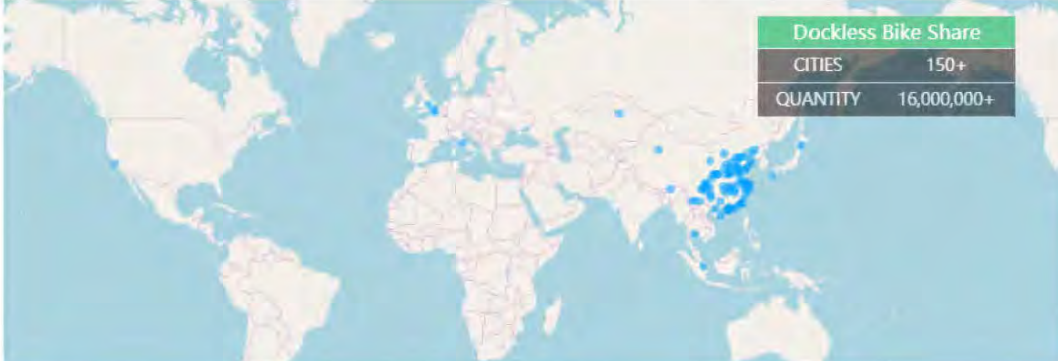


# http://www.itdp-china.org/dbs

ITDP Institute for Transportation & Development Policy

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












**PRIMARY CITIES**

SHANGHAI	BEIJING	GUANGZHOU	CHENGDU	SHENZHEN
Companies :	Mobike, ofo, Xiaoming, Youon, Ubicycle, Xiangqi, Baibike, Coolqi, Gongbai, Jiujiu, 1bu, Qical(201706)			
Quantity :	450,000(201703), 1,000,000(201706)			
Users :	4,500,000(201703), 13,000,000(201706)			
Average Daily Cycling :	1,000,000(201703)			


Policy : 'Dockless Shared Bike Service Standards', 'Dockless Shared Bike Technical Conditions Part 1: Bikes' and 'Dockless Shared Bike Technical Conditions Part 2: Electric Bikes'(20170705) Among them, 'the Dockless Shared Bike Technical Conditions' mainly involves in the product quality and safety requirements of dockless shared bikes. It not only requires dockless shared bikes to meet the national mandatory standards, but also increases the bike maintenance requirements and scrapping time requirements according to the characteristics of shared bikes to achieve the whole-process product quality management.' 'Dockless Shared Bike Service Standards' includes the platform construction, operating requirements, facilities and equipments maintenance requirements, charging methods, deposit management, complaint and report user integrity system management, user injury compensation, etc. among the concerns of the public.

**DBS COMPANIES**

	Name :	Mobike
	Time :	2015.01
	Features :	1. The company that ignited bicycle sharing; 2. Unique design in the first generation of the bikes; 3. mobike has obtain substantial financing
	CEO :	Co-founder: Hu Weiwei, ex- media worker; CEO: Wang Xiaofeng, former GM of Uber Shanghai
	Company Name :	Mobike Technology Co., Ltd.
	Address :	Room 1231, Building B south, No. Jia5, Road Xueyuan, Haidian District, Beijing, China
	Operation :	It is operated in 100 domestic and foreign cities e.g. Beijing, Shanghai, Guangzhou, Shenzhen, etc and totally 5 million bikes have been launched, 20 million orders per day nationwide, the number of users reaches 100 million(2017.06)
	Financing :	A unclear ; B 10,000,000+ USD ; B+ 10,000,000+ USD ; C 100,000,000 USD ; C+ unclear ; D 215,000,000 USD ; strategic investment ; Equity investmen ; E 600,000,000 USD
	Registration :	1
	Deposit :	299 RMB
	Fee :	1 RMB/30 min ( Classic Mobike ) ; 0.5 rmb/30 min ( Mobike lite )
	Website :	<a href="http://mobike.com/cn/">http://mobike.com/cn/</a>


**DBS ARTICLES**

**The Development and Policy Recommendations for Dockless Bike Share (DBS) in China**




In 2014, the ofo was established by a Peking University graduate Dai Wei and 4 partners, which aimed at serving the internal transportation needs within the campus. In June 2015, the Peking University witnessed more than 2000 ofo bikes being shared, and then the dockless bike share (DBS) market has boomed over the entire country .....

**Study on Development and Parking Management of Dockless Bike Share (DBS) and in Tianjin**



Tianjin, one of the four municipalities directly under the administration of the central government in China, is adjacent to the capital Beijing. It is the largest port city in the northern China and the key to the sea. In 2016, its permanent population has reached 15.62 million with a total built area of 11.946 thousand square kilometers. ....

**The Market does not Believe in Tears-Brutal Growth of Bike-sharing Vs Well-Behaved Public Bicycles**



With the rise of sharing economic concepts, and great development of payment technology on smart phone via the Internet as a medium in recent years, bike-sharing quickly entered the major cities in China in 2016. Virtually overnight, red, yellow, blue and other colors shared bikes spring up in every corner of the street. Same as the solution for "the last kilometer" .....



# Approaches



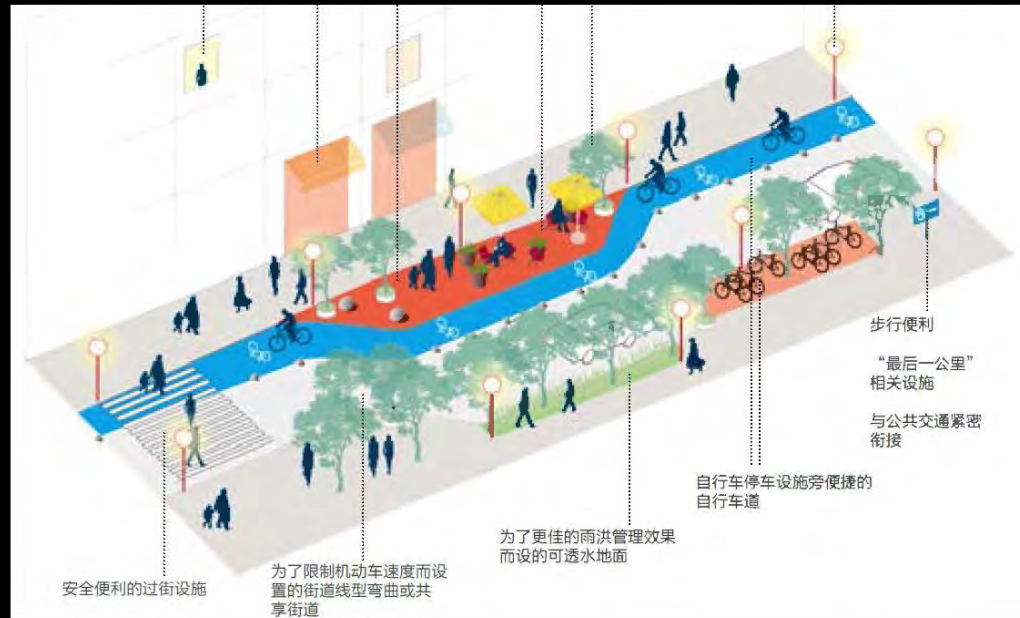
## Access for All:

Guidance Note on Inclusive Street Design for Asia and the Pacific

Final Report, December 2016



# Approaches



# General

Policy Guidance  
Application Criteria

**GOVERNMENTS**

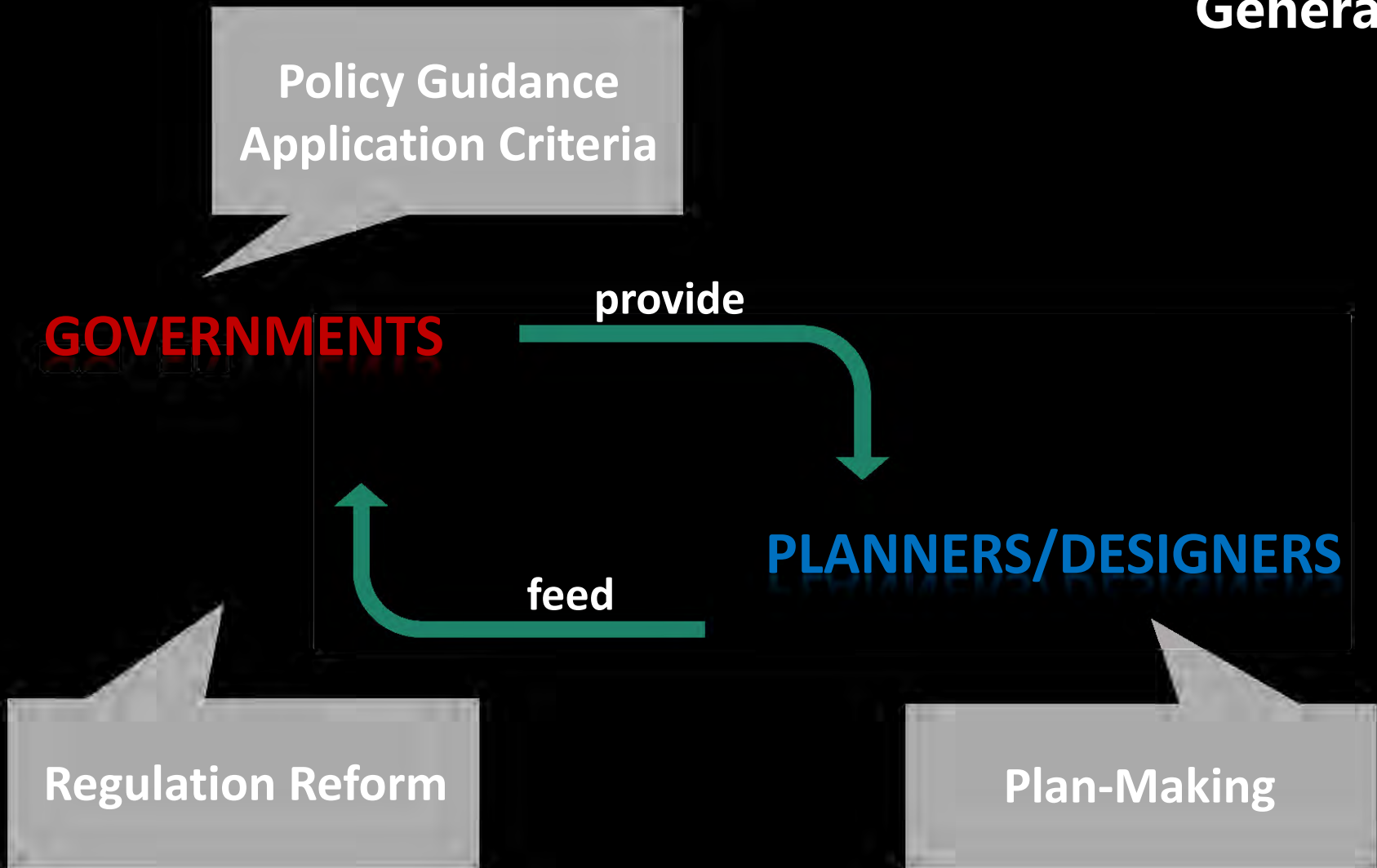
provide

**PLANNERS/DESIGNERS**

feed

Regulation Reform

Plan-Making



# Suggestion

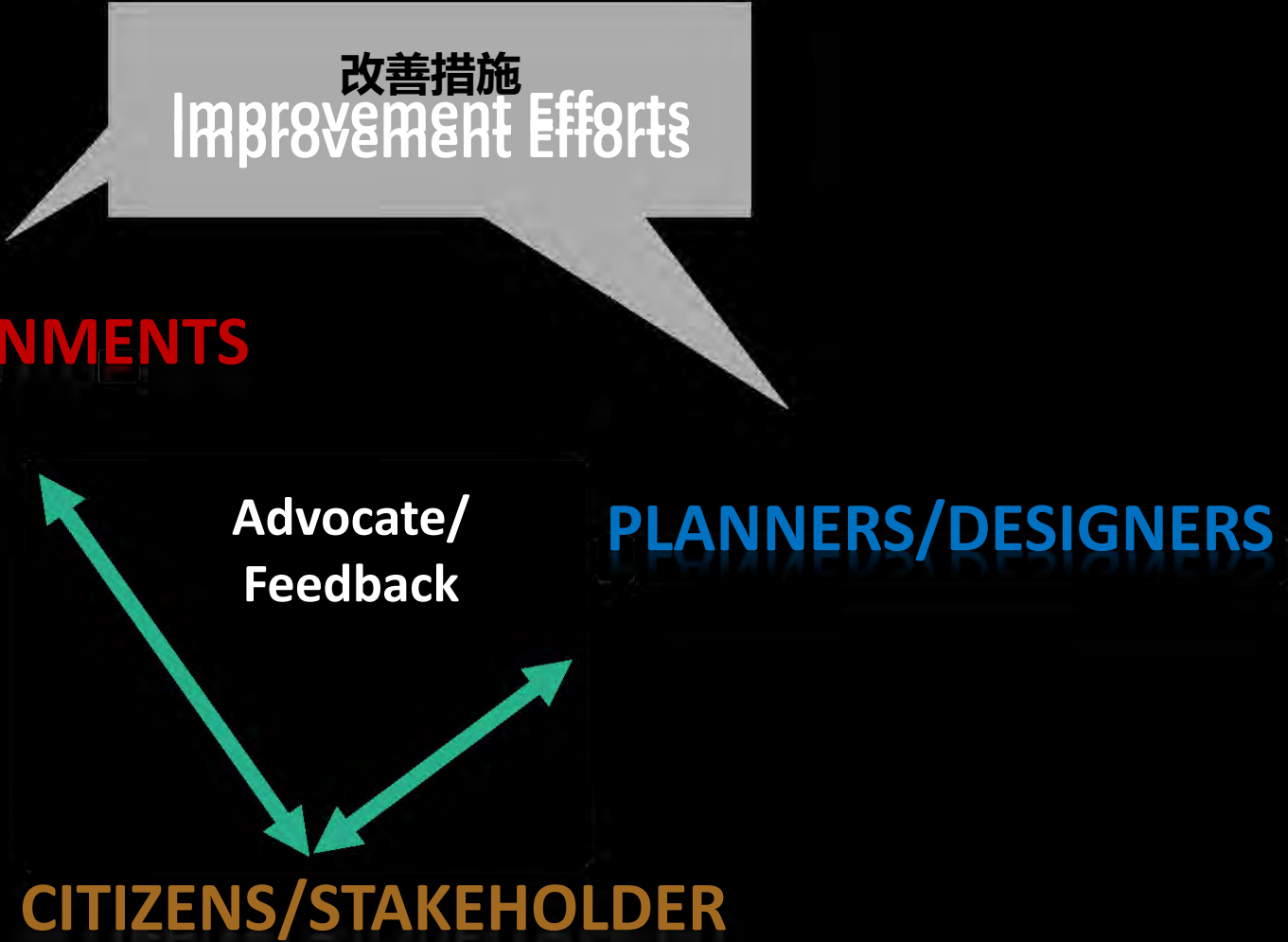
改善措施  
Improvement Efforts

**GOVERNMENTS**

**PLANNERS/DESIGNERS**

Advocate/  
Feedback

**CITIZENS/STAKEHOLDER**





Vientiane, Lao PDR





ເມືອງນາ  
ນະພາວິ  
Naphavong  
Central Building  
Tel: 857 231 41

P

東京

Coca-Cola

ສາມ ພັນ ຫາກ  
Sengkhon Mahle

ນາພາວິ  
Naphavong

Vientiane, Lao PDR

A young child in a colorful jacket is running through a water fountain in a public square. The child is smiling and looking towards the camera. The fountain has several jets of water spraying upwards. In the background, other people are walking around, and there are some plants and a sign with Chinese characters. The ground is wet and reflective.

# THANK YOU

[www.itdp-china.org](http://www.itdp-china.org)