



Lessons from China: A Blueprint for Collaborative Mobility in Emerging Economies?

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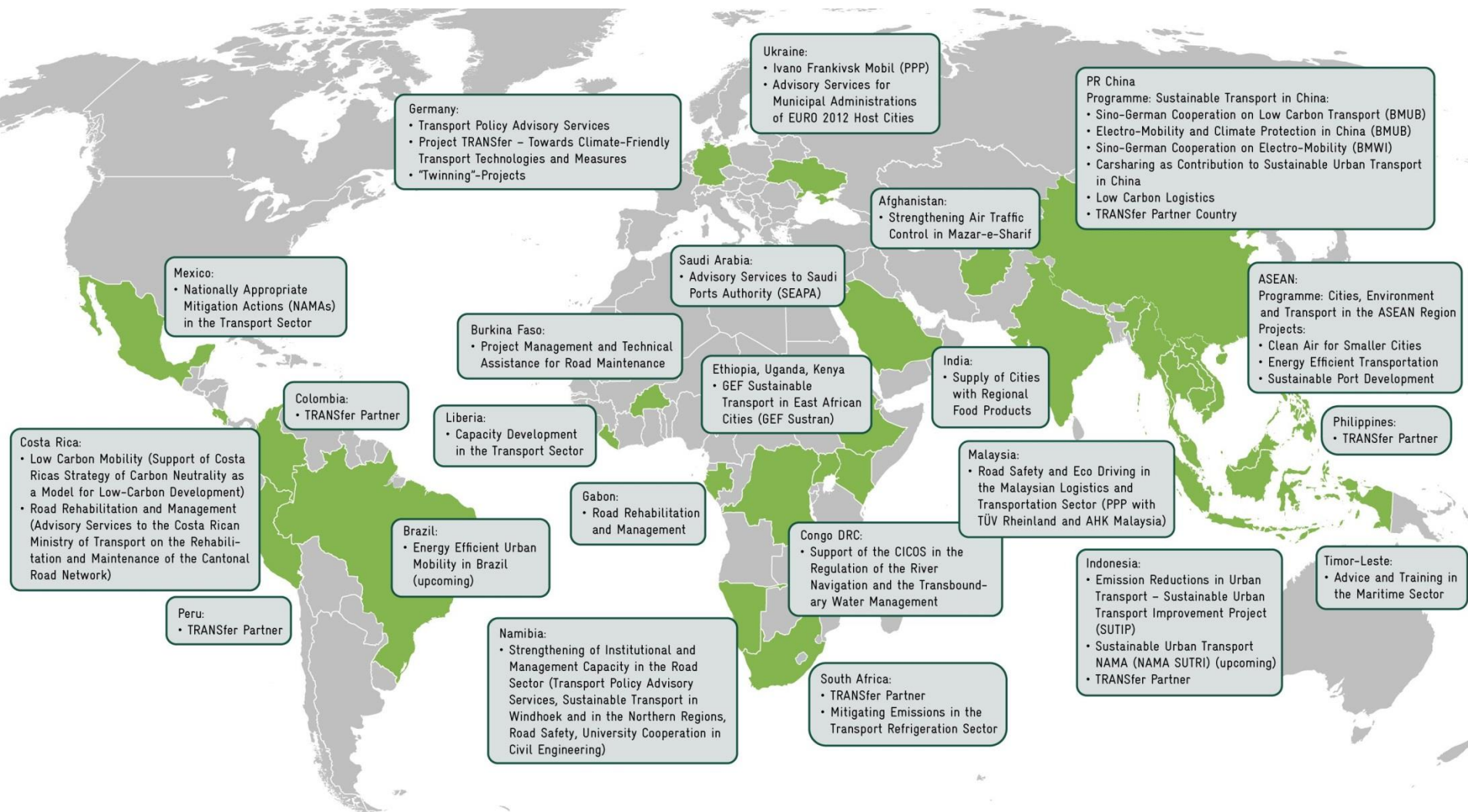
3rd World Collaborative Mobility Congress
Innsbruck, Austria
June 25, 2015



- GIZ operates throughout Germany and **in more than 130 countries worldwide**. Our registered offices are in Bonn and Eschborn. We have more than **16,000 staff** across the globe, some **70 per cent** of whom are **employed locally** as national personnel. There are also **890 development workers** working for GIZ.
- In addition, **CIM** – which is jointly run by GIZ and the German Federal Employment Agency – places experts with local employers. At the end of 2012, almost **542 integrated experts** had employment contracts with organisations and companies in the field, while 454 returning experts were receiving financial support and advice.



GIZ Mobility and Transport Projects Worldwide





W.W.J.D.? – Laudatio Si. Pope Francis promotes Shared Mobility



Photo credits: PhilStar



Humbleness: Shanghai in 1985 and 2010



circa 1985



circa 2010



Challenges – The example of China

Rapidly increasing need for new mobility solutions in cities

Urbanisation challenge

600 million people in China live in cities.

About **1 billion** people will live in China's cities by 2030.

More than **220 Chinese cities** will have at least one million inhabitants.

By 2025 **90%** of China's GDP will be generated in the cities.



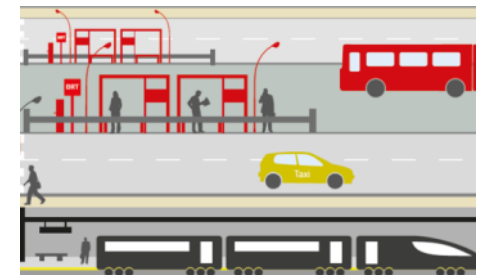
Urban Transport challenge

Every day **35.000 cars** are registered in China. Most of them in cities.

20-30% of urban air pollution can be traced back to road transport.

On an average day Beijing's air pollution is **3.5 times higher** than recommended by WHO.

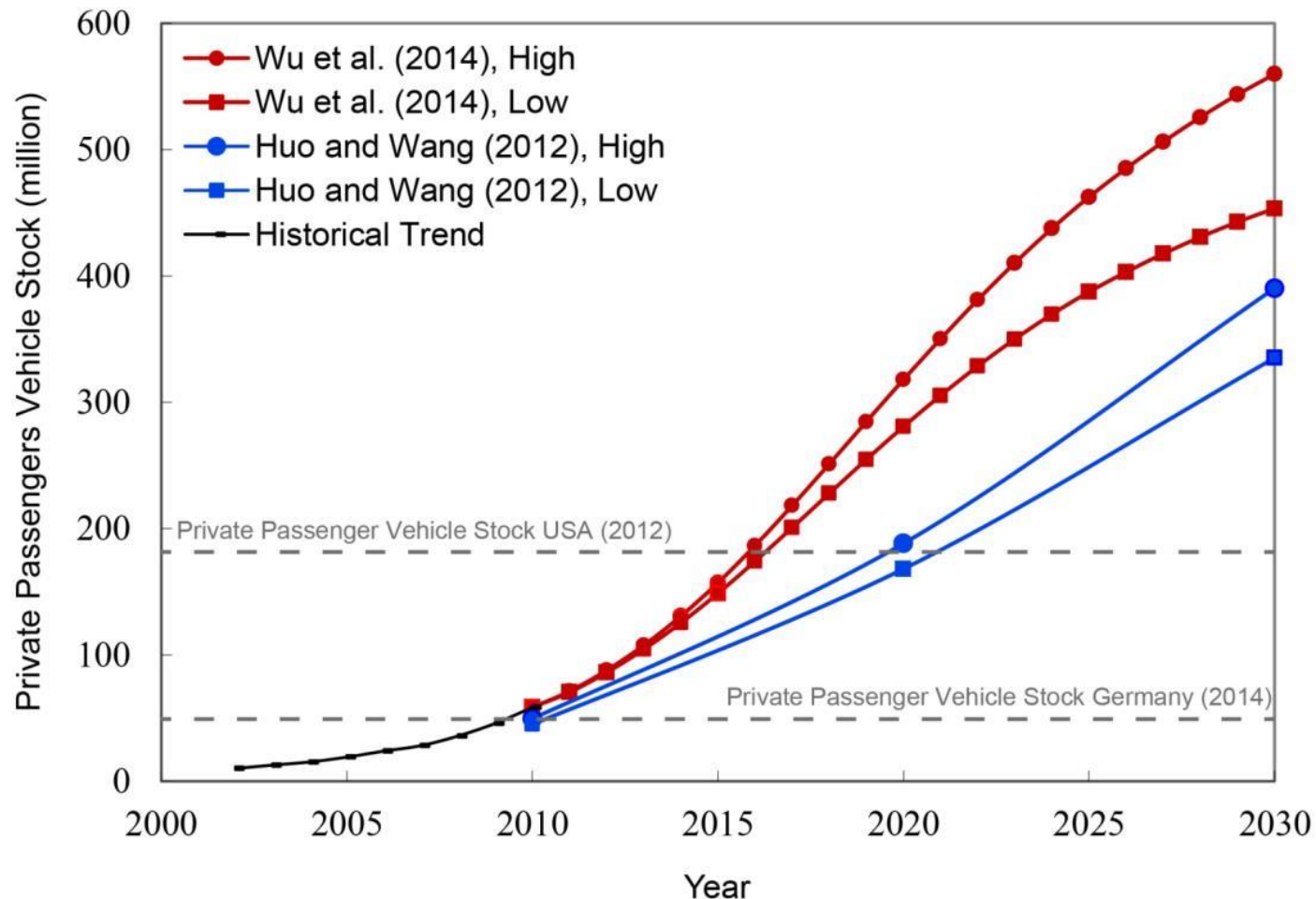
Car ownership rate in Beijing already **240 cars per 1000** residents.





Challenges – The example of China

Rapidly increasing motorisation





5 FACTS
AIR POLLUTION
IN CHINA

30%

Emissions from motor
vehicles contribute to 30%
of Beijing's air pollution



SOURCE: Ministry of Environmental Protection of the People's Republic of China PHOTO: REUTERS/China Daily

THOMSON REUTERS
FOUNDATION



2004-2014 The Decade of Transport Demand Management in Beijing





Challenges – The example of China

Restrictions on motorized individual transport



Driving Ban

- ▶ Monday to Friday, 7 am to 8 pm
- ▶ 20% of private vehicle fleet banned per day based on the last digit of the license plate



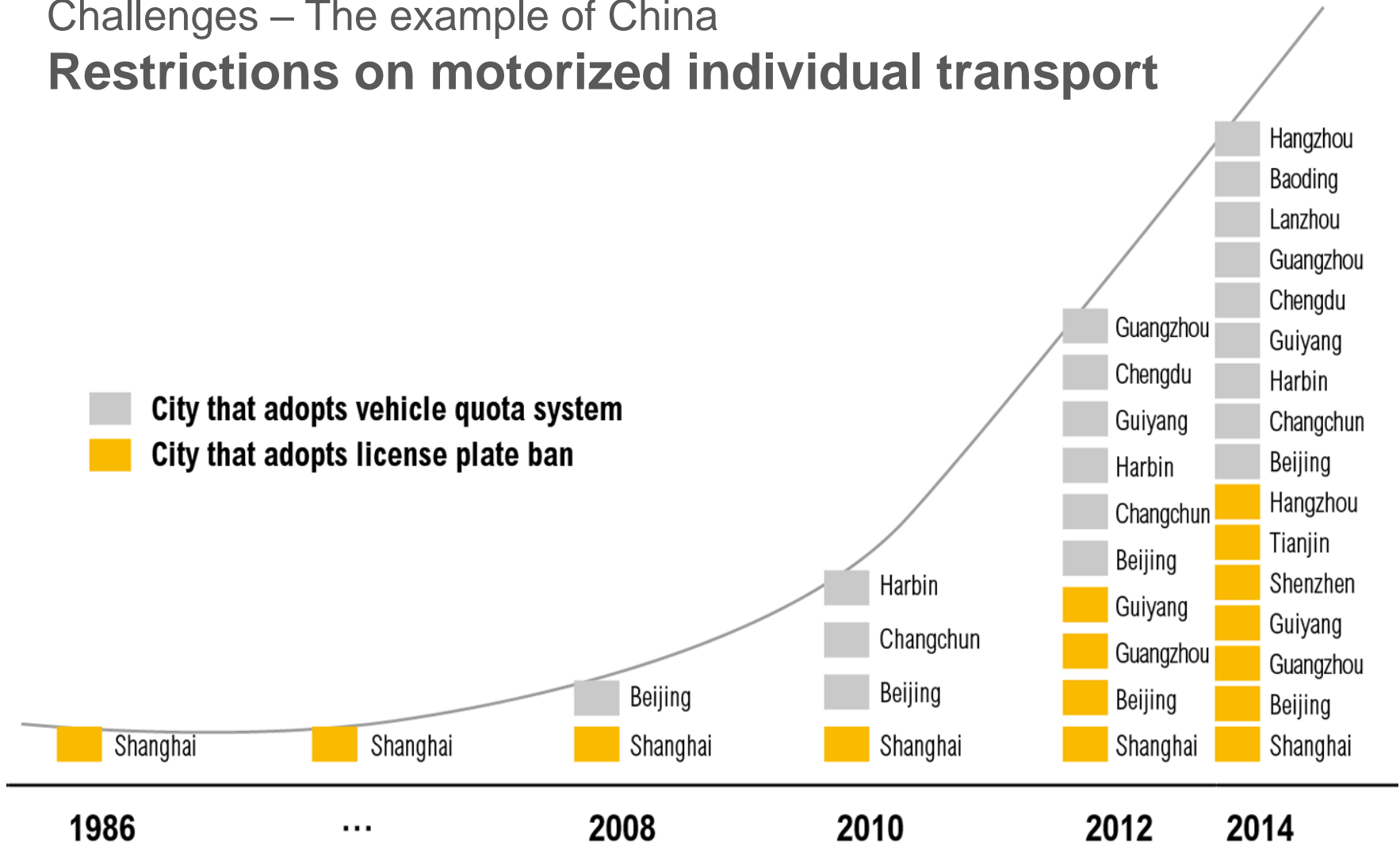
License Plate Limitation

- ▶ License plate auction: Shanghai (100.000 licenses/year, ~70.000 RMB/10.000EUR)
- ▶ License plate lottery: Beijing (120.000 licenses/year)
- ▶ Mixed scheme: Guangzhou (120.000 licenses/year)



Challenges – The example of China

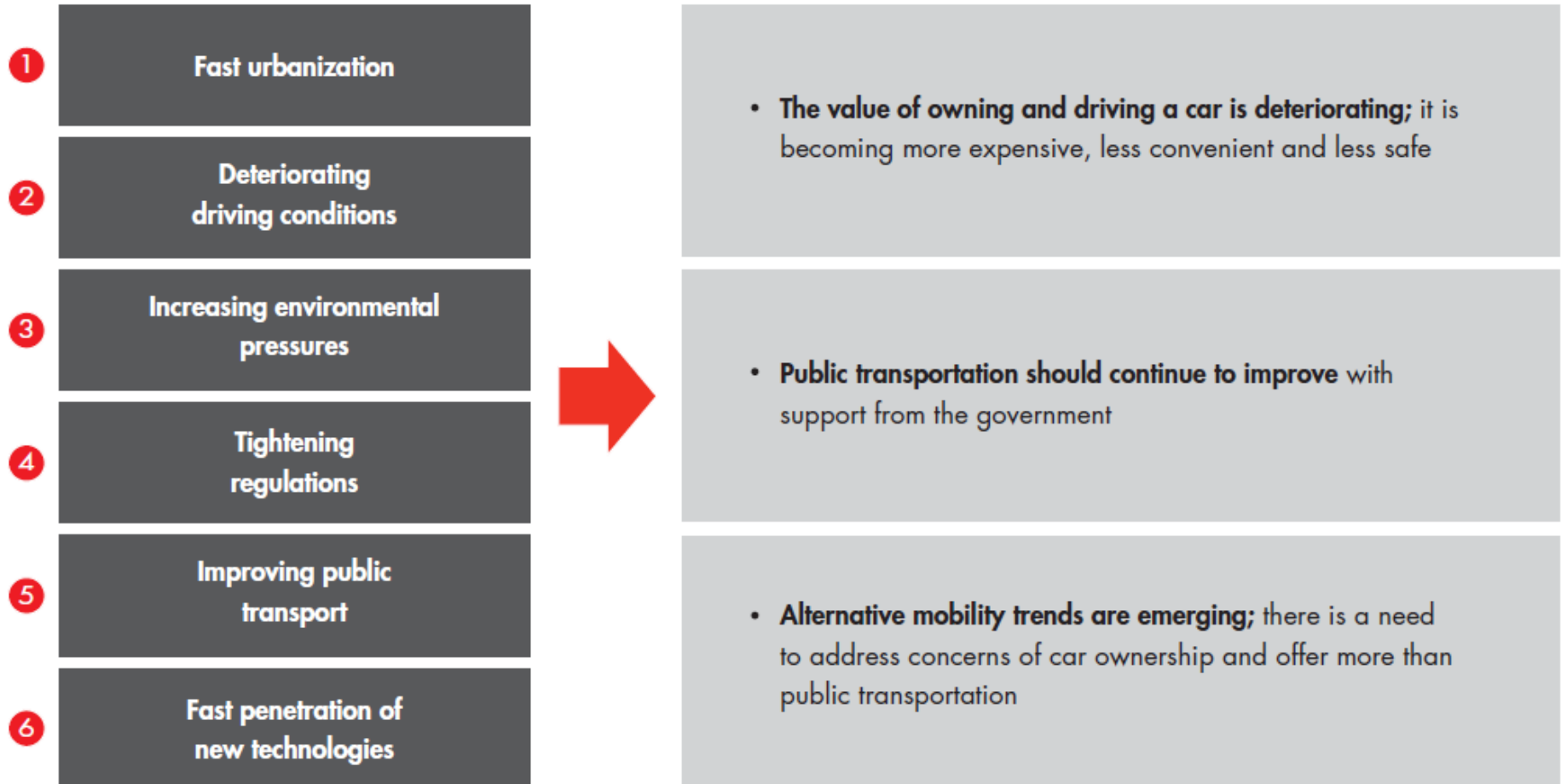
Restrictions on motorized individual transport



Source: World Resources Institute (<http://ow.ly/Lj733>)



Trends are reducing the value of owning a car...



Source: Bain & Company



E-Carsharing – A Driver for Electro-Mobility?

- ▶▶ Carsharing does not need electro-mobility – electro-mobility needs carsharing
- ▶▶ Carsharing overcomes TCO, limited range and charging time of electric vehicles
- ▶▶ Electro-mobility alone does not impact on passenger transport related problems in megacities (e.g , congestion, parking demand and space consumption)
- ▶▶ Fleet applications can leverage the second-hand EV market





NEV Promotion Policies in China

Monetary policies

BEVs, PHEVs, FCVs are
exempted from the **vehicle
purchase tax**.

The **national** government
provides **NEV purchase
subsidies**.

88 NEV demonstration **cities**
provide additional **purchase
subsidies**.

Some cities offer **free of
charge license plates** for
NEVs. (e.g. Shanghai).

By 2016, government owned
vehicle fleets need to include
at least **30% NEVs**.

Various cities include a
special quota for **NEV license
plates** in their registration
restrictions.

Beijing excludes NEVs from
its weekday **driving ban**.

Non-monetary policies

IN CHINA, THERE ARE OVER

700,000,000

ACTIVE SMART MOBILE DEVICES

DEVICES THAT CHINESE
NETIZENS USE TO GO ONLINE



81%

MOBILES



70%

DESKTOPS



44%

LAPTOPS

THERE ARE OVER

500,000,000

MOBILE INTERNET USERS IN CHINA

NUMBER OF PEOPLE USING MOBILE
TAXI BOOKING APPS EACH MONTH:



14 M

KUAI DI



9 M

DIDI

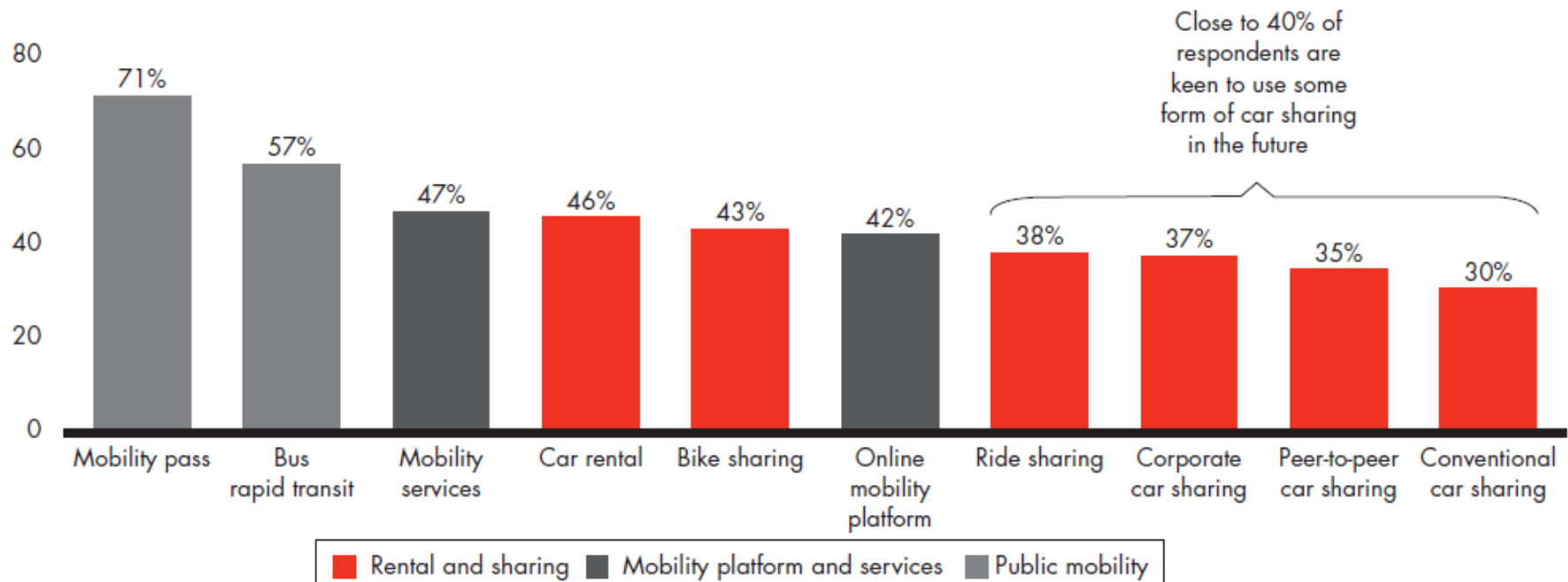


Importance of Collaborative Mobility Solutions in China

Which mobility solutions will become a significant part of your urban mobility in the next three years?

% of potential respondents who believed these new mobility concepts will become a significant part of their mobility in three years

100%



Note: Potential usage in three years is defined as answering "definitely" and "rather yes" for question "I can imagine new mobility concept becoming one of my significant ways of urban traveling in the next three years..."

Source: Bain China New Mobility Study



Collaborative Mobility services in emerging economies





Worldwide Carsharing development

North America

Approx. 15,800

Approx. 909,000

The market is relatively consolidated with 46 active commercial programs and 10 P2P programs in 2013



South America

Approx. 60

Approx. 1,500



Europe

Approx. 20,500

Approx. 692,000

The market is relatively fragmented with more than 200 active commercial programs and 24 P2P programs in 2012



Asia

Approx. 6,200

Approx. 161,000



Australia

Approx. 1,100

Approx. 26,000



No. of vehicles (2012)

No. of members (2012)



Carsharing in China



Beijing

Yantai



Shang-
hai



Hang-
zhou



Shen-
zhen



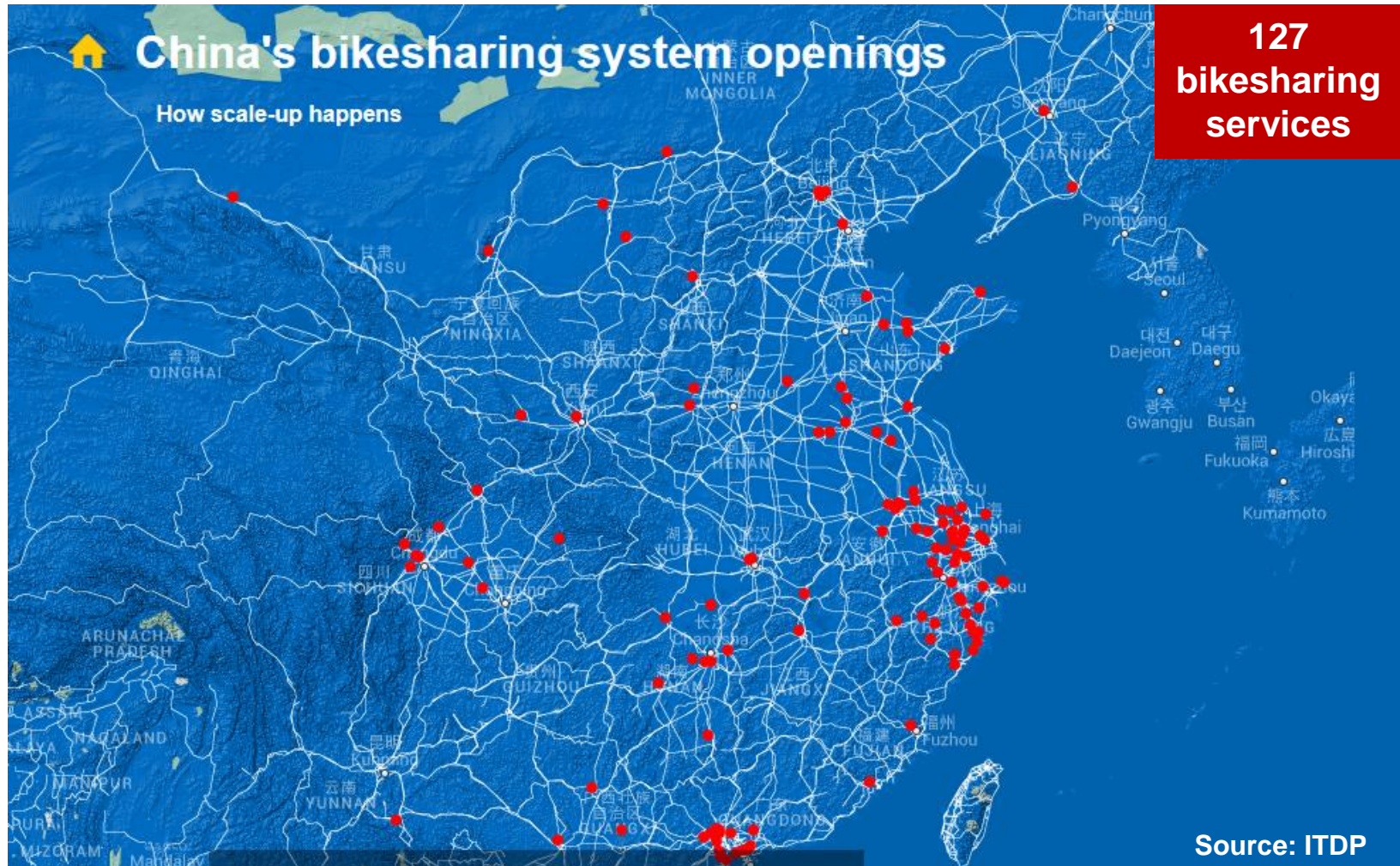
- ▶▶ 350.000 Members
- ▶▶ 4.665 Vehicles (~70% EV)
- ▶▶ 1.012 Stations
- ▶▶ 13 Cities

Data from April 2015

Service	Operator	Founding Year	Business Model	Vehicles	Stations	Members	Cities	Website
 一点租车 Yi Dian Zuche YiDianzc.com (EduoAuto)	EduoAuto (Beijing) Technology Co., Ltd	2009	Station-Based Carsharing	1000	769	278,419	Beijing, Changsha, Chengdu, Chongqing, Hangzhou, Nanjing, Shenzhen, Shijiazhuang, Suzhou, Wuhan	www.yidianzc.com
 车纷享 China Car Clubs 电动 • 分时 • 智能	Hangzhou Cherry Intelligence Co. Ltd.	2010	Station-Based Carsharing	200 (incl. 50 EV)	78	38,000	Hangzhou (Membership cooperation with Green Go in Beijing)	www.ccdubs.com
 CAR2SHARE	Daimler Greater China Ltd.	2013	Station-Based Corporate Carsharing	90	3	Membership limited to pilot partners during initial phase.	Guangzhou Shenzhen	car2sharedaiying.com
 VRENT	Volkswagen New Mobility Services Investment Co., Ltd	2013	Station-Based Corporate Carsharing	25	5	Membership limited to pilot partners during initial phase.	Beijing	www.vrent.cn
 微公交 Wei Gong Jiao	Zhejiang Kandi Electric Vehicles Co., Ltd. (Joint Venture of Zhejiang Geely Holding Group and Kandi Technologies Group)	2013	Station-Based E-Carsharing	~2500 (estimated, EV only)	34	n.d.	Hangzhou	No website available. Booking only via WeChat.
 EVCARD EVCARD 电动汽车租赁	New Energy Vehicles Operating Services Co., Ltd.	2013	Station-Based E-Carsharing	50 (EV only)	53	n.d.	Shanghai	www.evcardchina.com
 恒誉租车 GreenGo	Beijing Hang Yu New Energy Car Rental Co. Ltd. (Joint Venture between BAIC New Energy Co., Ltd. and Foxconn Technology Group)	2014	Station-Based E-Carsharing	700 (EV only)	20 (6 currently under construction)	15,000	Beijing (Membership cooperation with China Car Clubs in Hangzhou)	www.green-go.cn
 共享租车 GX Zuche 分时自助·智能租车	Car-sharing Rental Co.,Ltd.	2014	Station-Based Carsharing	100 (incl. 10 EV)	50	2,000	Yantai	www.gx-zuche.com



Bikesharing in China





Carpooling in China

Carpooling Policy introduced in Beijing

- ▶▶ Introduced by Beijing Municipal Commission of Transport (BMCT) in 2013
- ▶▶ Requirements:
 - ▶▶ Carpoolers must be neighbours
 - ▶▶ Carpooling is only permitted for long-term sharing of daily commuting and short-term, long-distance holiday trips
 - ▶▶ Gaining profit from carpooling services is illegal.



Wodache Carpooling App, introduced 2011 in Beijing



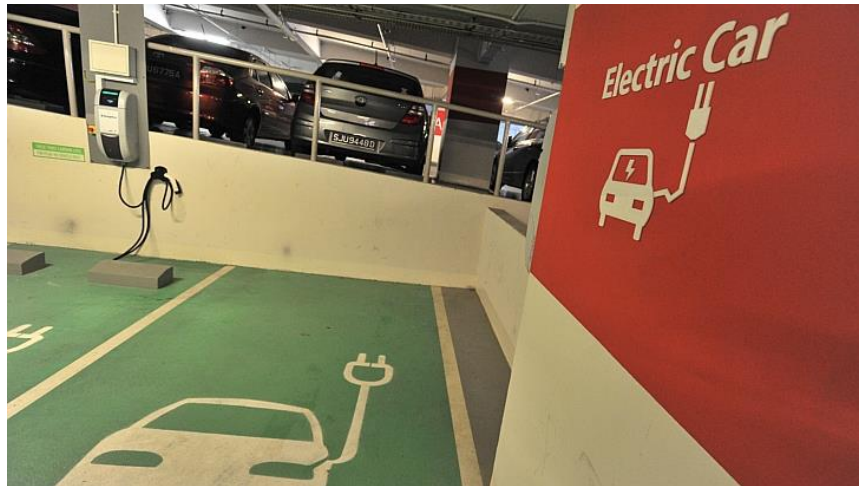
Is there light in the darkness?





Tendering New Mobility Services: The Singapore Case

- 10 year one-way E-carsharing trial
- Up to 1.000 E-carsharing vehicles
- The EVs are exempt from Certificate of Entitlement (COE)
- Project consortium should include carsharing operators, charging infrastructure service providers and EV manufacturers
- Up to 5 per cent of the EV fleet will be used to test cutting-edge technologies (e.g. smart sensors, autonomous driving and inductive charging)
- Call for proposals issued by Electro-Mobility Singapore Taskforce led by the Land Transport Authority (LTA) and Economic Development Board (EDB)



An option for emerging economies?



Moving Towards Smart Mobility in Beijing



**Combined
ticketing**



**Real-time traffic
information**

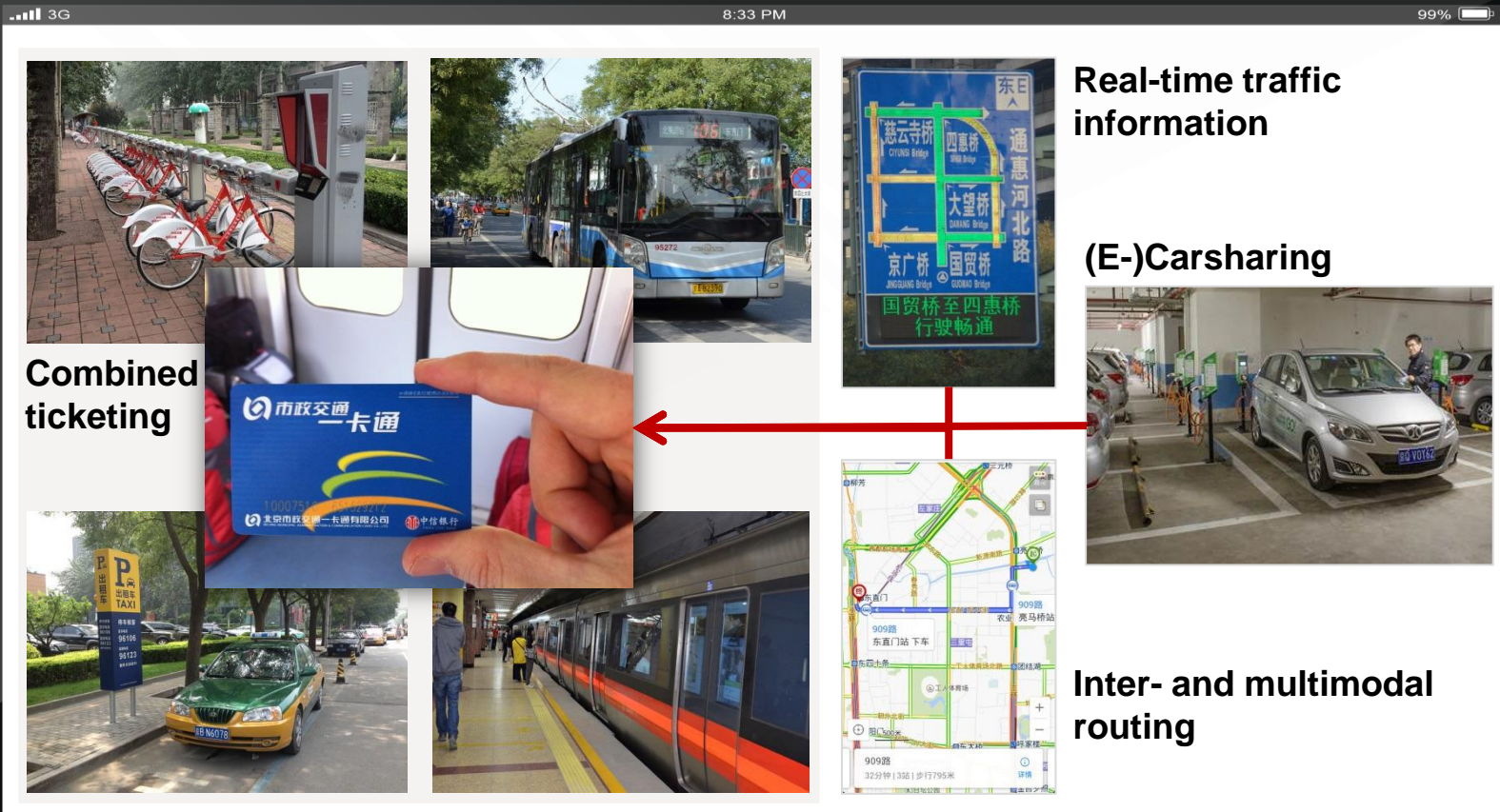
(E-)Carsharing



**Inter- and multimodal
routing**



Moving Towards Smart Mobility in Beijing





Moving Towards Smart Mobility in Emerging Economies



Impact?

An aerial photograph of a large, busy city intersection, likely in China, showing a high density of vehicles, including many buses and cars, moving through the traffic. The image is overlaid with a semi-transparent red rectangle containing the word 'Impact?' in white.

Scale?

A photograph showing a large number of small, white, two-wheeled smart cars parked in neat rows on a paved surface. The image is overlaid with a semi-transparent red rectangle containing the word 'Scale?' in white.

Vision?

A photograph of a futuristic, three-wheeled smart car with a red and white body, parked on a street. The image is overlaid with a semi-transparent red rectangle containing the word 'Vision?' in white.



From the Kingdom of Cars to the Empire of Sustainable Transport?



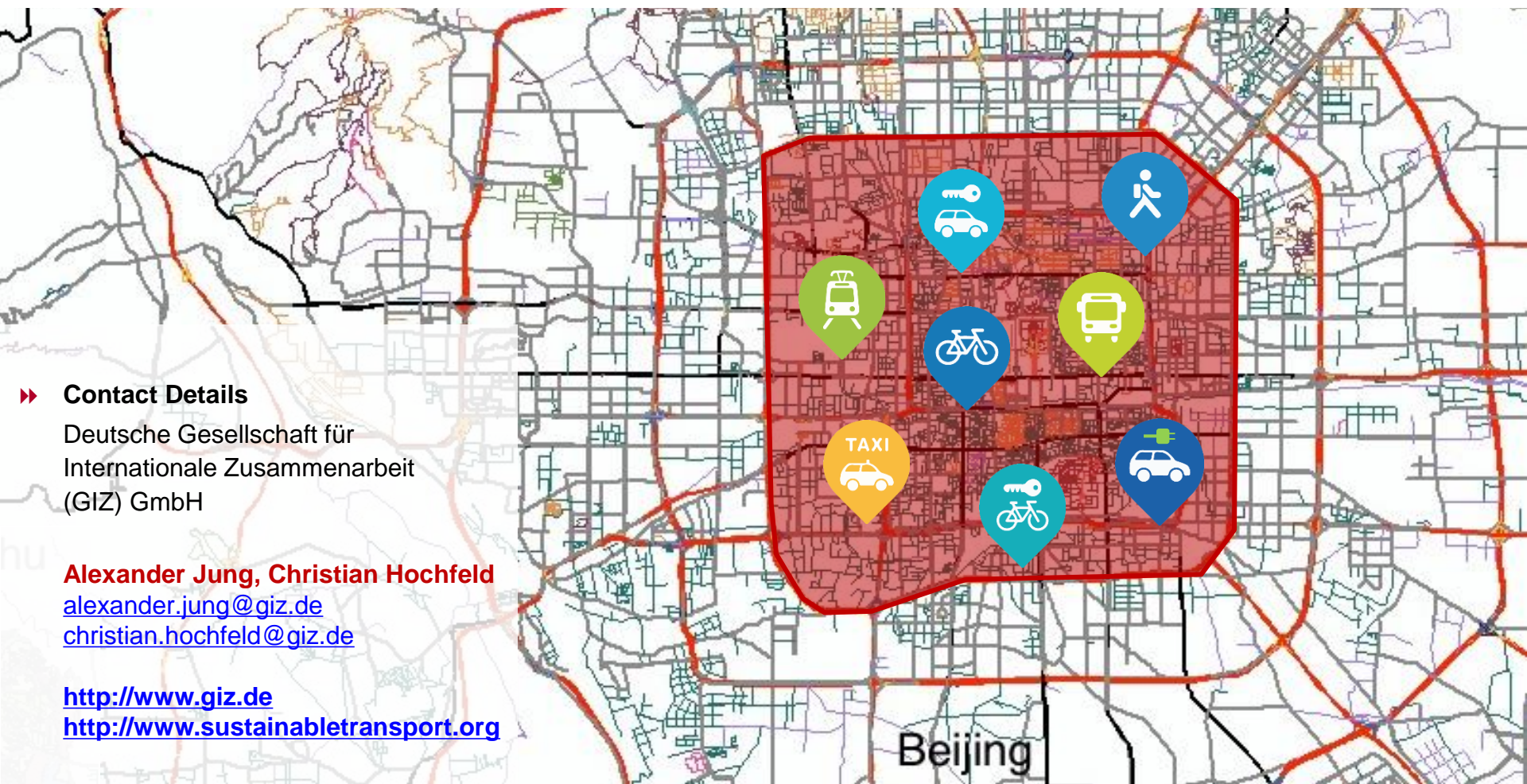


Quintessence...

- | | |
|-----------------|---|
| Thesis 1 | Collaborative Mobility Concepts made dramatic progress over the last five years. |
| Thesis 2 | Urban Environmental and Transport Challenges/Policies will be the main driver of those markets in the future with massive influence on consumer behaviour. |
| Thesis 3 | Electrification will play a key role in the future development of Carsharing in Emerging Economies. |
| Thesis 4 | We will see increasing competition between Global Players and Local Businesses – specific local knowledge will be key to success. |
| Thesis 5 | Due to the huge environmental and transport challenges in Emerging Economies Cities will drive rapid business innovation which may overtake the processes in the western hemisphere aspiring markets in industrial societies. |
| Thesis 6 | Guess: Which city will be the first with a shared fleet with more than 50.000 vehicles? – To be continued @ 5th WoCoMoCo |



Thank you very much for your attention!



» Contact Details

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<http://www.giz.de>

<http://www.sustainabletransport.org>




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Rethinking environmental zones to curb emissions in Beijing

In February 2014, hazardous smog in Beijing once more made headlines across the world. Particulate matter measurements (PM2.5) temporarily exceeded the 25 micrograms 24-hour mean considered safe by the World Health Organization by 15 times...

FEATURED



Financing Sustainable Urban Transport - International Review of National Urban Transport Policies and Programmes

Sustainable urban transport (SUT) systems are urgently needed in developing and emerging

WEEKLY QUOTE

"We will resolutely declare war against pollution as we declared war against poverty."

Li Keqiang, Chinese Premier, 06/03/2014

DOWNLOADS

- [\[PPT\] Turning the Trend in Germany. Daniel Bongardt at CCICED](#)
- [\[PPT\] Financing Public Transport in Germany Case Study Berlin](#)
- [\[PPT\] Financing Public Transport in Germany](#)



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**Sustainable
Transport in China**



“Confidence is what you have, before you understand the problem.”

Woody Allen



“Confidence is what you have, **because you understand the problem.”**

Woody Allen