



Better Cities in a New Climate Economy

Nick Godfrey
Head of Policy and Urban Development

The Road to Paris: Accelerating international action on
low carbon cities

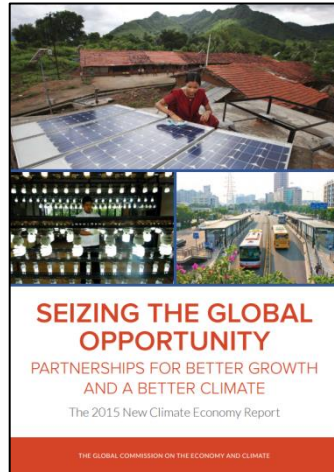
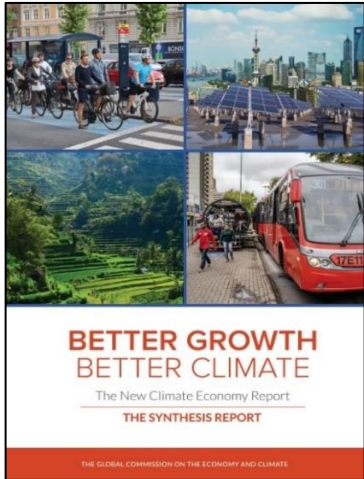
10th November, 2015, CCCEP

THE NEW CLIMATE ECONOMY

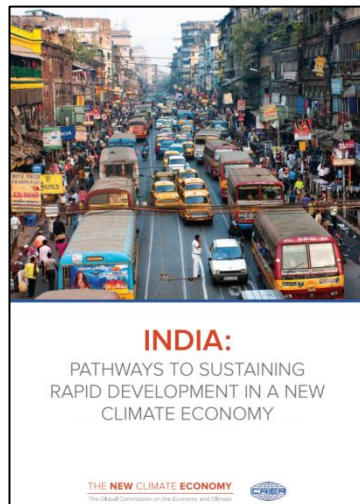
The Global Commission on the Economy and Climate

The New Climate Economy Project

Global Reports



Country Case Studies, including India



Commissioned by 7 countries:

Colombia, Ethiopia, Indonesia, Norway, Sweden, South Korea, United Kingdom

Led by a Global Commission: 28 former heads of state, CEOs and heads of international institutions. Chaired by Felipe Calderon, former President of Mexico

Overseen by an **Economic Advisory Panel** of 14 world leading economists, chaired by **Professor Lord Nicholas Stern**

Delivered by 8 research institutes:

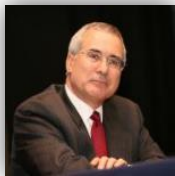


Contributions from 120+ organisations

Members of the Global Commission on the Economy and Climate



Felipe Calderón
(Chair)
Former President,
Mexico



Nicholas Stern (Co-Chair)
IG Patel Professor at the
London School of Economics
and Political Science



Ingrid Bonde
CFO and Deputy
CEO, Vattenfall



Sharan Burrow
General Secretary,
International Trade
Union Confederation



Suma Chakrabarti
President, EBRD



Chen Yuan
Former Chairman,
Chinese
Development Bank



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Administrator,
UNDP



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Former Prime Minister,
Mozambique



Dan Doctoroff
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S. (Kris) Gopalakrishnan
Co-founder, Infosys



Angel Gurría
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Chad Holliday
Chairman, Royal
Dutch Shell



Sri Mulyani Indrawati
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World Bank



Naina Lal Kidwai
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Caio Koch Weser
Vice Chairman,
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Ricardo Lagos
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Chile



Michel Liès
CEO, Swiss Re



Kristin Skogen Lund
Director General,
Confederation of
Norwegian Enterprise



Trevor Manuel
Former Finance
Minister, South Africa



Takehiko Nakao
President, Asian
Development
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Former Minister of
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Jean Pascal Tricoire
CEO, Schneider
Electric

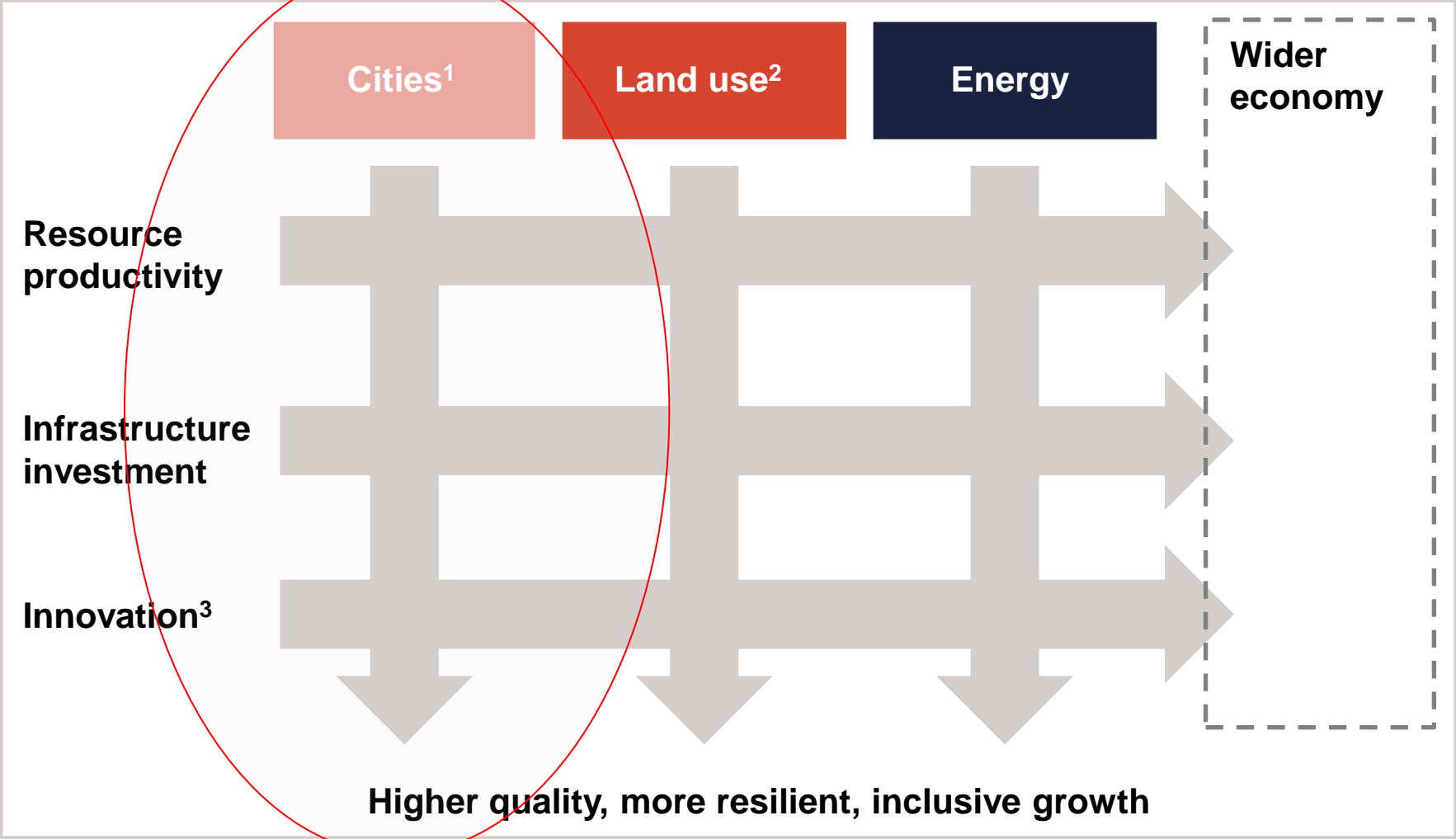


Maria van der Hoeven
Executive Director,
International Energy
Agency



Zhu Levin
Former CEO, China
International Capital
Corporation

Opportunity: NCE identifies key drivers of growth and climate performance



1 Includes urban transport

2 Includes forests

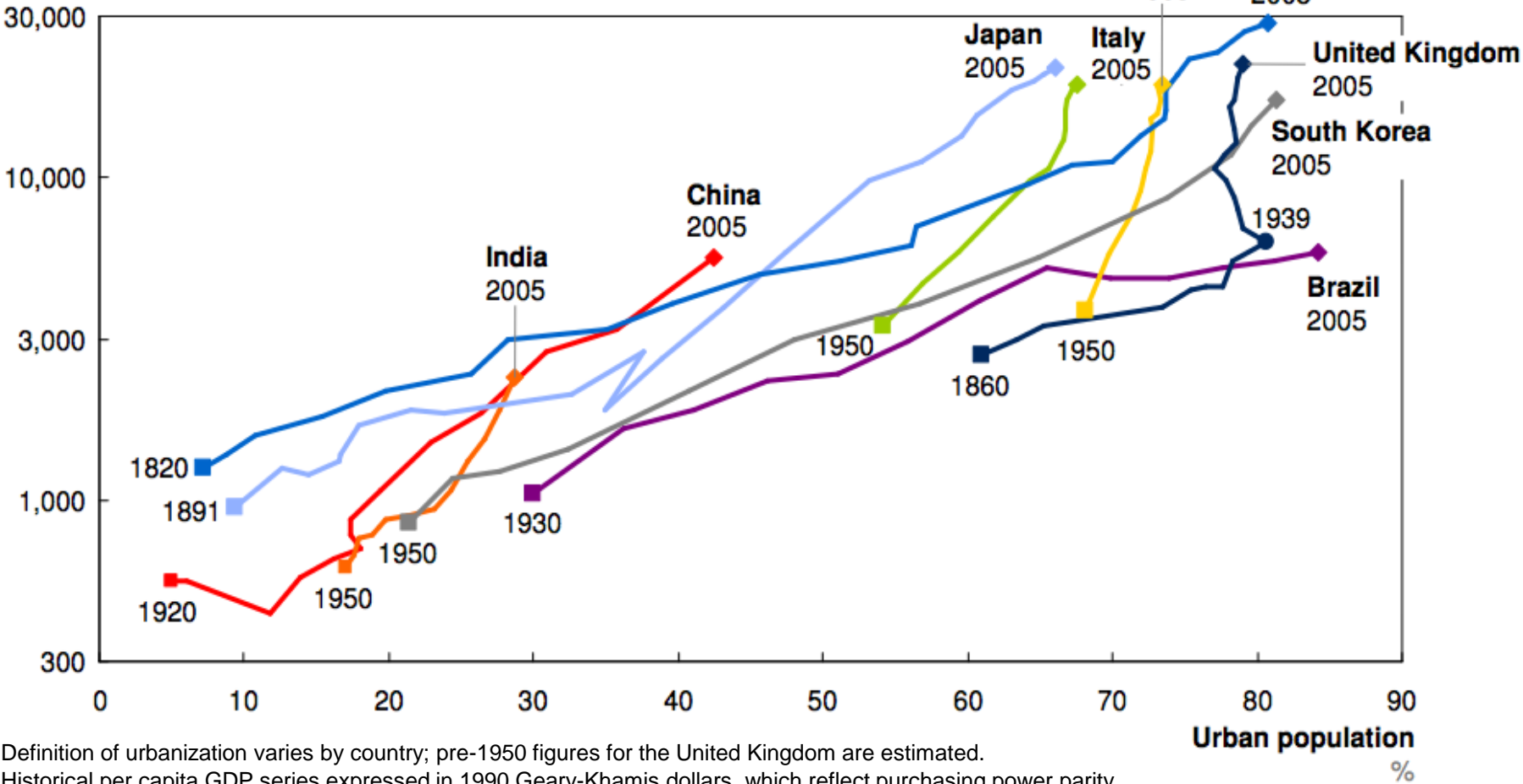
3 Includes economy-wide innovation

Cities are at the heart of successful economic transformation

Per capita GDP and urbanization¹

Per capita GDP

1990 PPP \$ (log scale)²

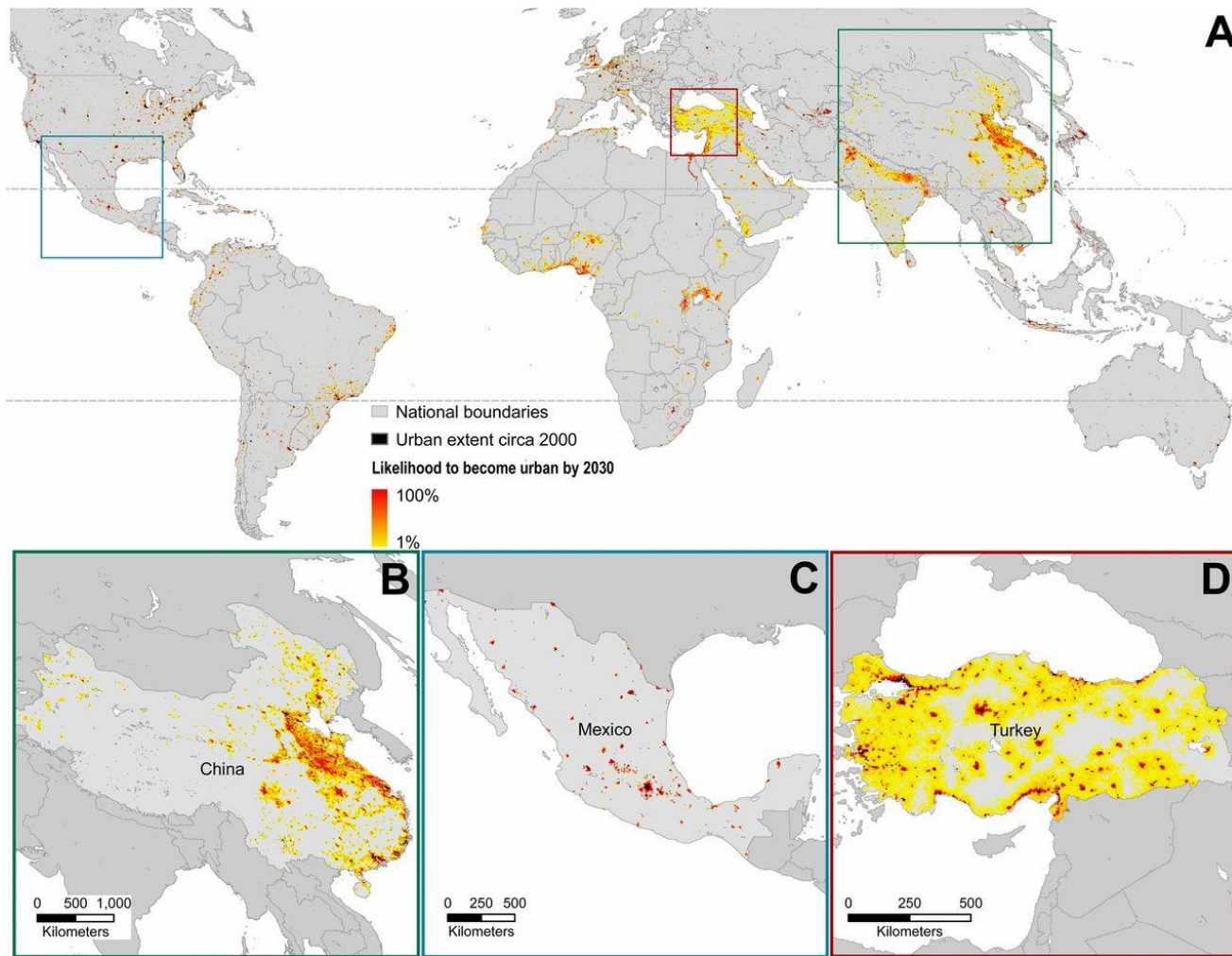


¹ Definition of urbanization varies by country; pre-1950 figures for the United Kingdom are estimated.

² Historical per capita GDP series expressed in 1990 Geary-Khamis dollars, which reflect purchasing power parity.

Source: McKinsey Global Institute, Population Division of the United Nations; Angus Maddison via Timetrics; Global Insight; Census reports of England and Wales; Honda in Steckel & Floud, 1997; Bairoch, 1975

The global urban area will triple by 2030: equivalent to adding an area greater than the size of Manhattan each day



Sources: Seto, K.C., Güneralp, B. and Hutyra, L.R., 2012. Global forecasts of urban expansion to 2030 and direct impacts on biodiversity and carbon pools. *Proceedings of the National Academy of Sciences*, 109(40). 16083-16088. DOI: 10.1073/pnas.1211658109.

THE NEW CLIMATE ECONOMY

The Global Commission on the Economy and Climate

Stock of motorcars

250 million

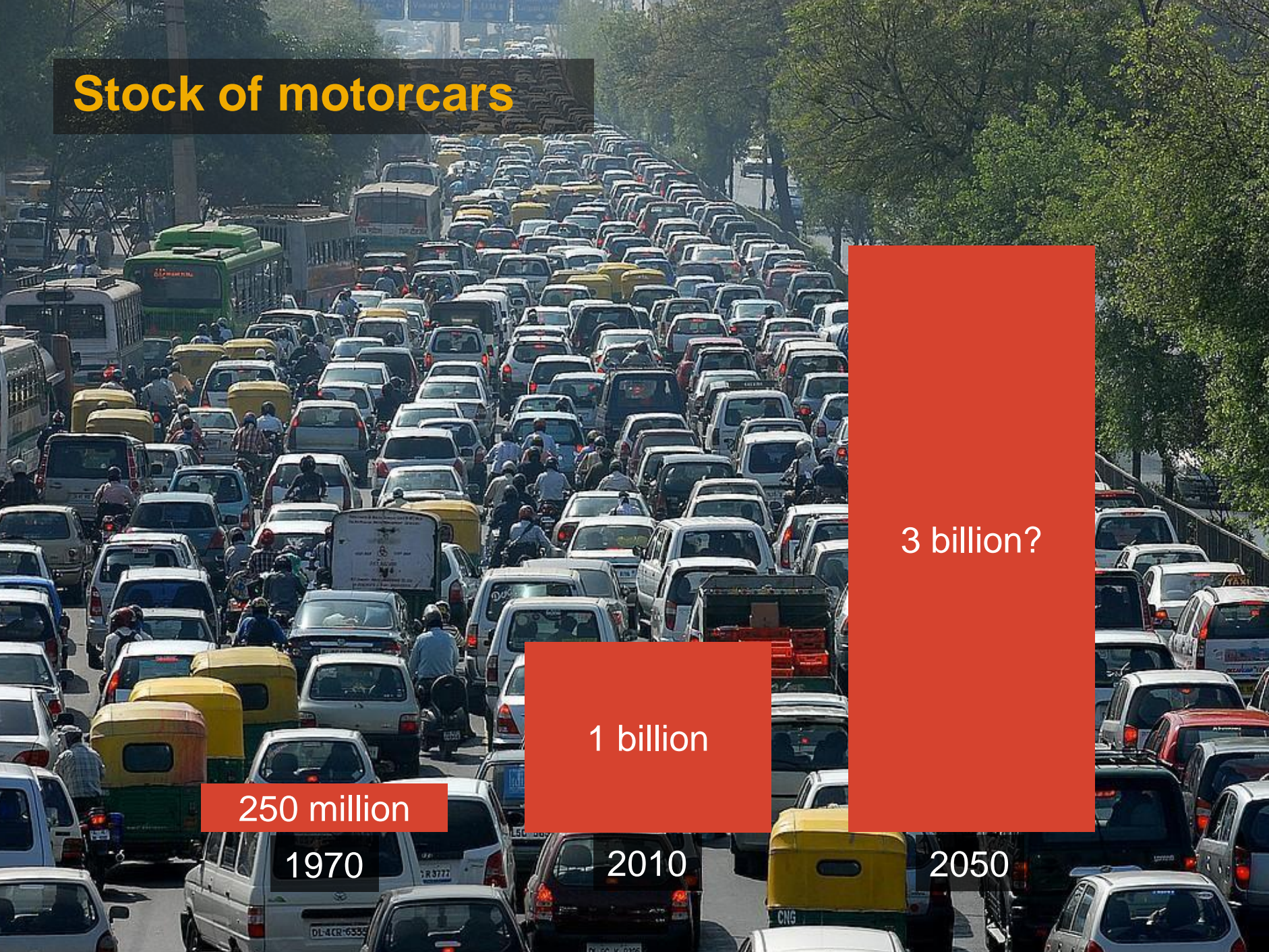
1970

1 billion

2010

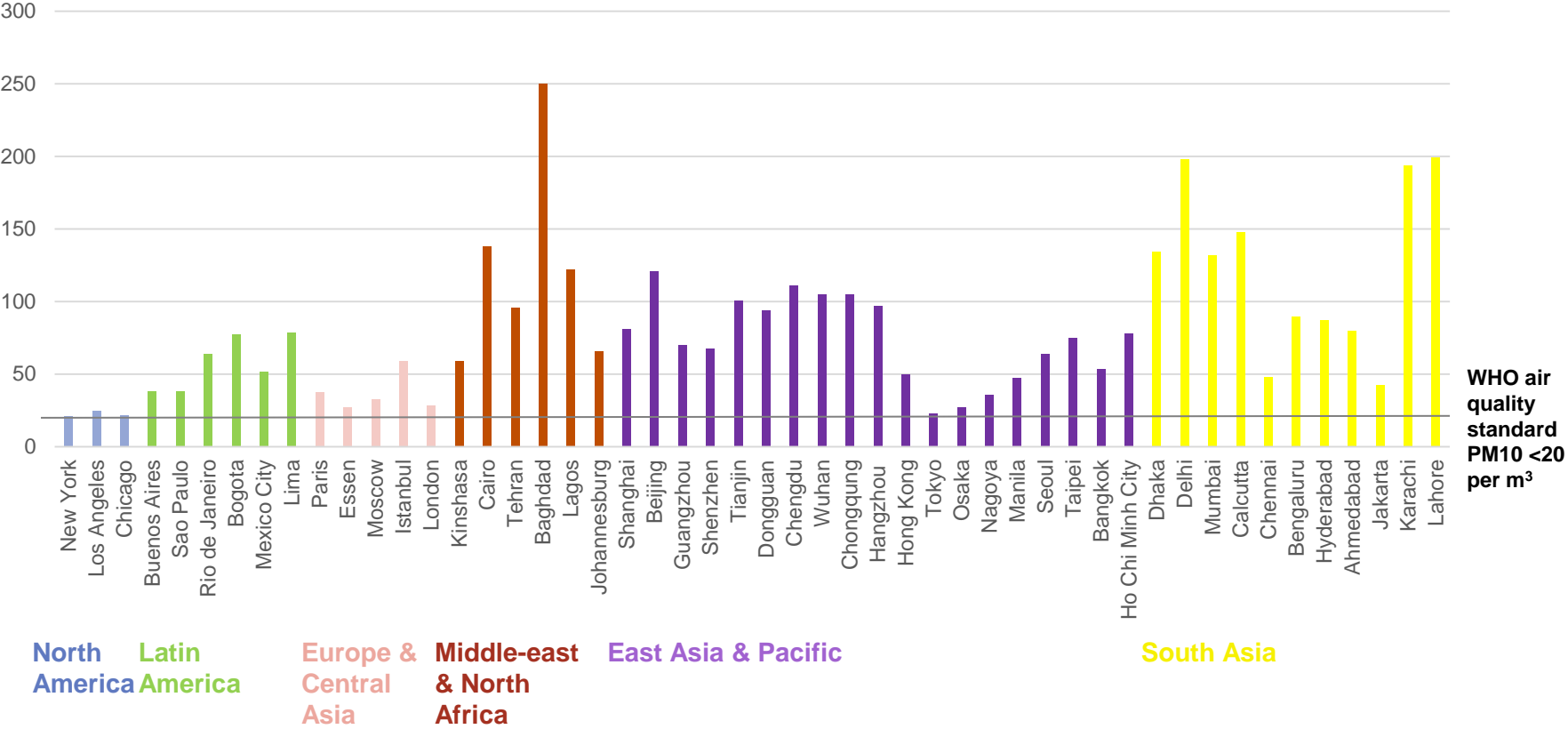
3 billion?

2050



None of the world's top 50 cities by population meet WHO air quality standards

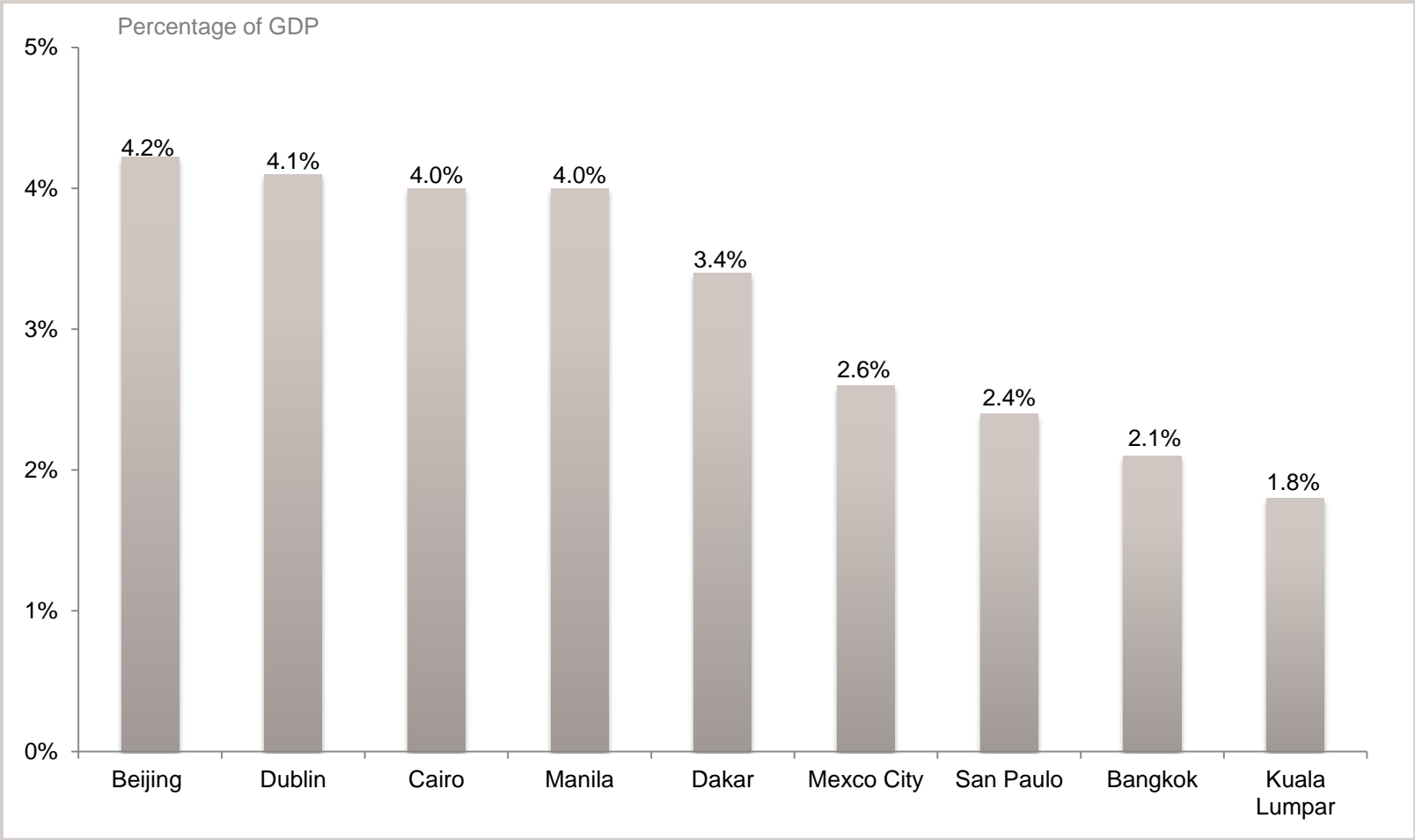
Particulate matter per m³ for top 50 cities – higher particulate matter means worse air quality



Source: World Health Organisation: <http://apps.who.int/gho/data/node.wrapper.ENVHEALTH3>

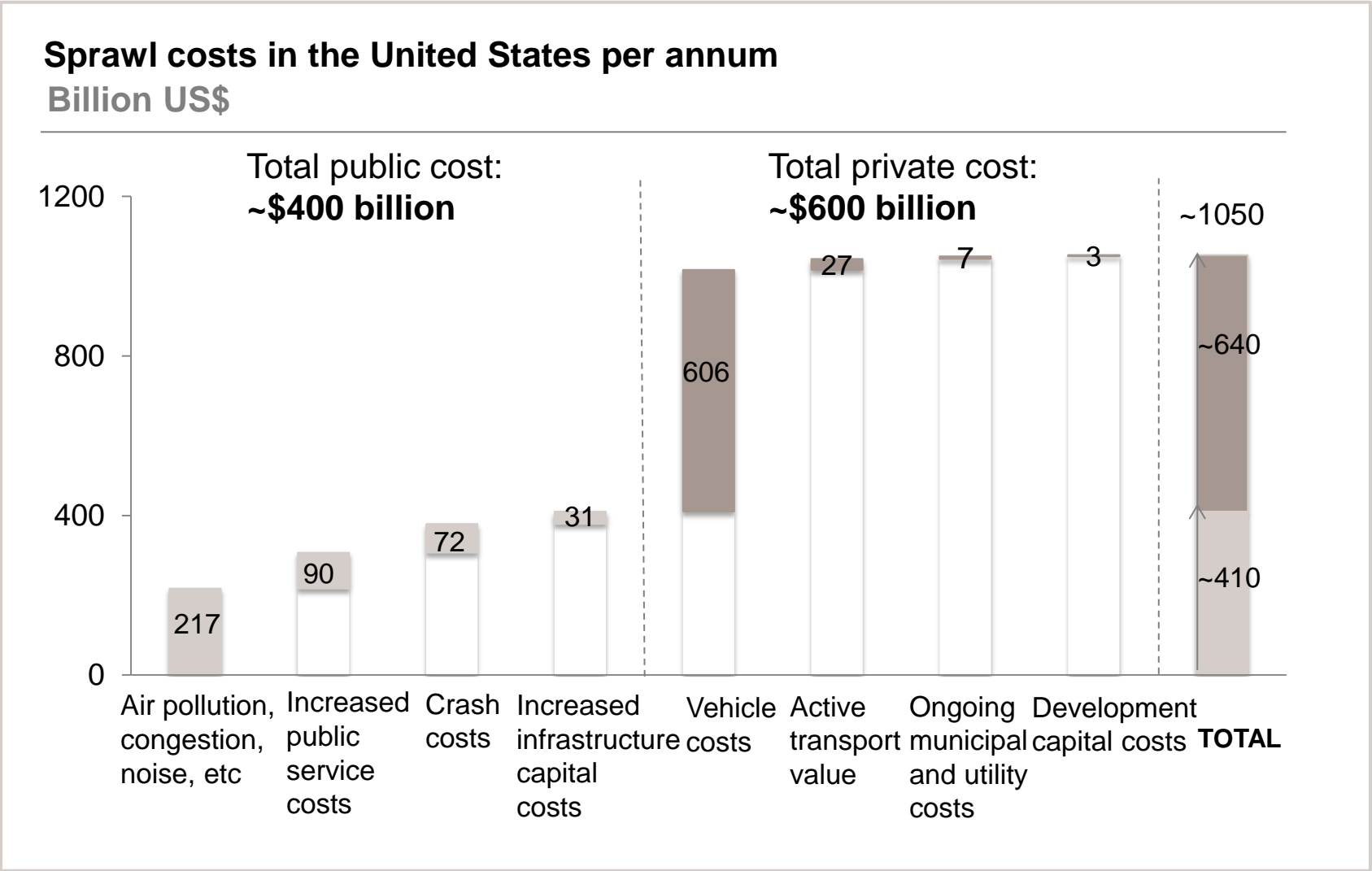
Traffic congestion is costing some cities greater than 4% of GDP

Cost of traffic congestion as a percentage of GDP in selected cities



Sources: IBM Institute for Business Value, Smarter cities for smarter growth. Li-Zeng Mao, Hong-Ge Zhu, and Li-Ren Duan (2012) The Social Cost of Traffic Congestion and Countermeasures in Beijing. Sustainable Transportation Systems: pp. 68-76.

Sprawl costs the United States over \$1 trillion per annum



Source: Litman (2014) for New Climate Economy commissioned by LSE Cities.

Note: these denote the potential savings from smart growth policies. See Litman, T., 2014 (forthcoming). *Analysis of Public Policies that Unintentionally Encourage and Subsidize Urban Sprawl* for detail of underlying data sources.



“Business as Usual” urbanisation is creating economic and wider costs which risk undermining prosperity

An increase in the urban infrastructure gap due to unplanned urban growth

Growing costs of traffic congestion

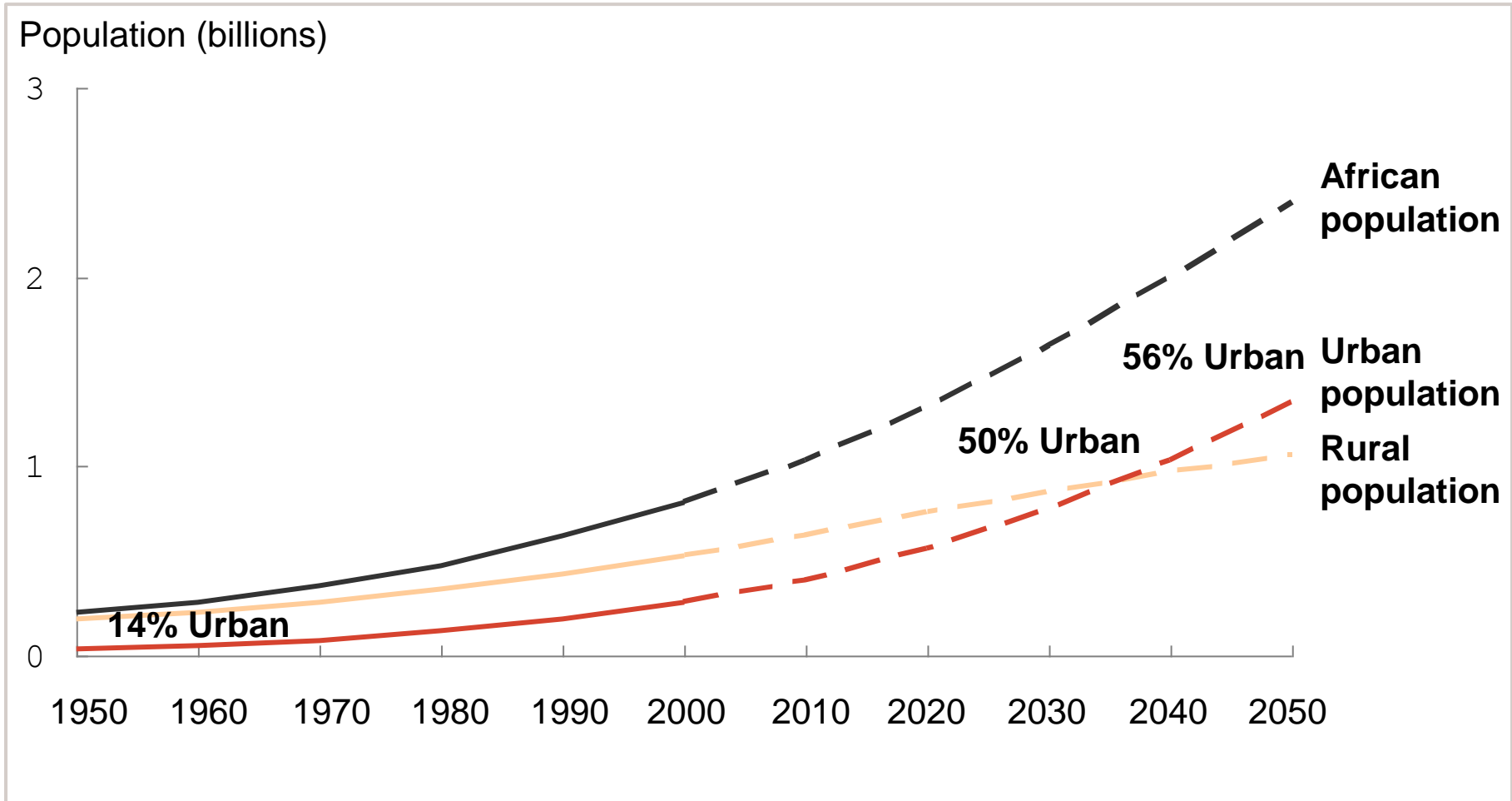
Rising cost of air pollution

Lock-in of inefficiently high levels of energy consumption

Increasing social exclusion

Other costs: road safety, health costs, reducing ecosystem services

Rapidly urbanizing countries have an opportunity to pursue a different model of urban development: most of urban Africa is yet to be built

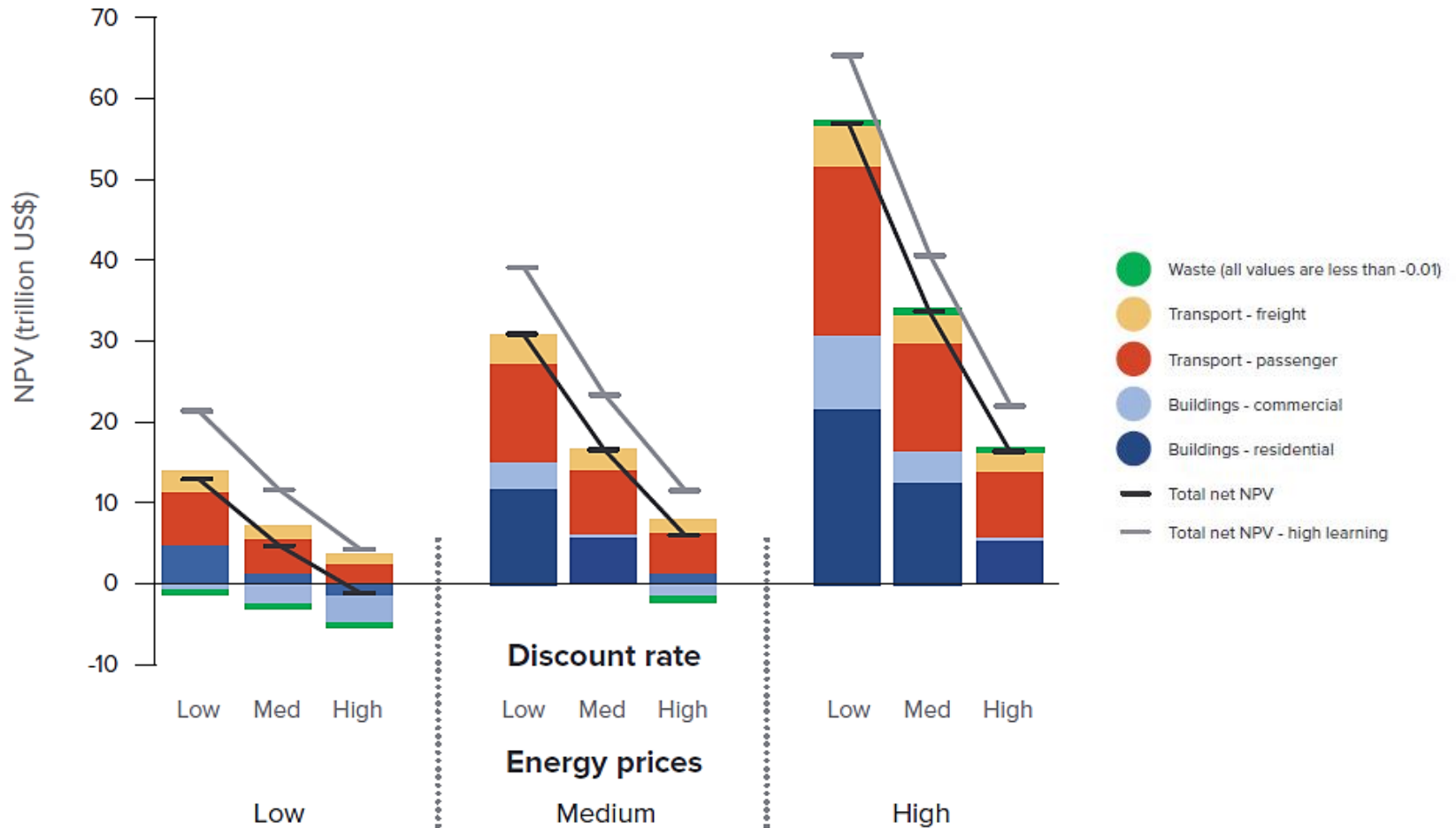


About 56% of the African population is expected to be urban by 2050 – an additional 1 billion people

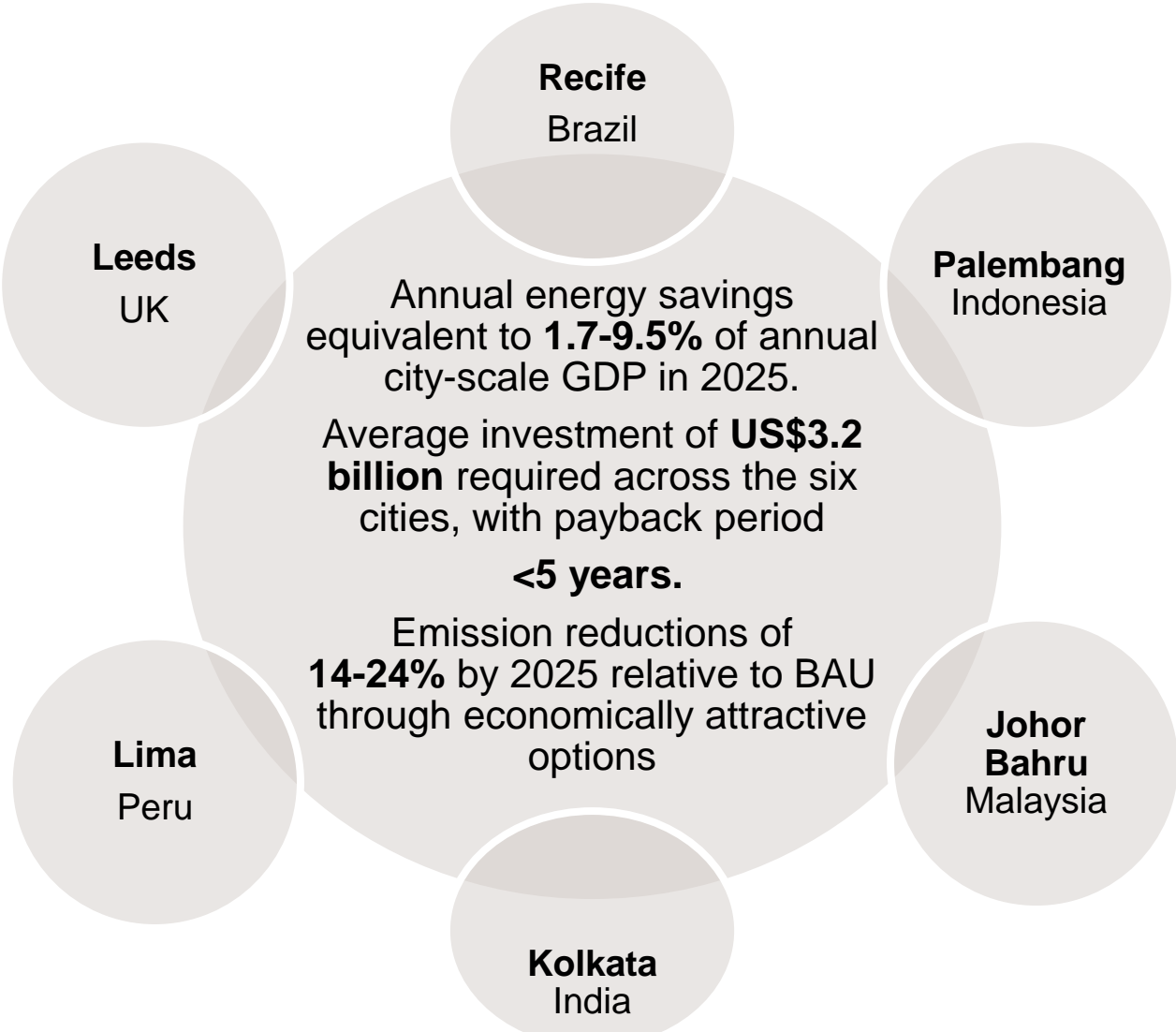
The Global Commission recommends 10 transformative actions

- 1 Integrate climate risk into strategic decisions
- 2 Secure a strong international climate agreement
- 3 End perverse subsidies
- 4 Price carbon to send a clear market signal
- 5 Scale-up low-carbon innovation
- 6 Reduce the cost of capital for low-carbon investment
- 7 Move toward more compact, connected, efficient cities
- 8 End deforestation
- 9 Restore degraded lands
- 10 Phase out unabated coal fast

Driving low carbon urban development is a \$17 trillion global economic opportunity to 2050 based on energy savings alone



This story is corroborated by city level evidence

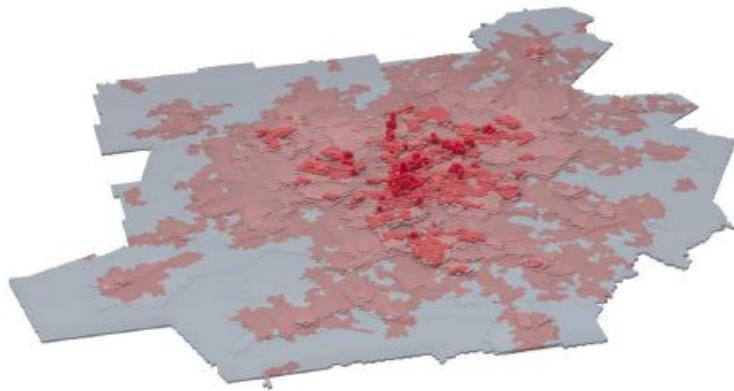


SOURCE: Gouldson A, Colenbrander S, McAnulla F, Sudmant A, Kerr N, Sakai P, Hall S, Papargyropoulou E, Kuylenstierna J. 2014. *The Economic Case for Low Carbon Cities*. New Climate Economy contributing paper. New Climate Economy and Stockholm Environment Institute, Stockholm Available from <http://newclimateeconomy.report/misc/working-papers/>

A different model of urban development is possible: Compact, connected, coordinated urban growth

ATLANTA

Atlanta's built-up area

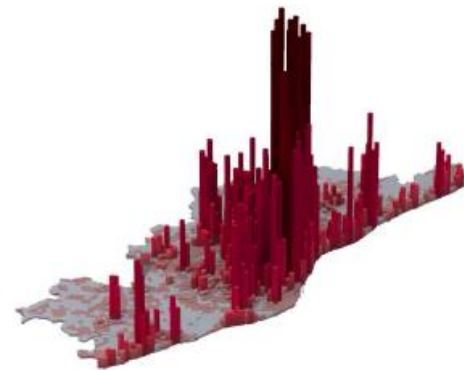


0 20 Kilometers

Population: 5.26 million
Total area: 16,605 km²
Urban area: 7692 km²
Transport carbon emissions: 6.9 tonnes
CO₂ p.c.

BARCELONA

Barcelona's built-up area



0 20 Kilometers

Population: 5 million
Total area: 3263 km²
Urban area: 648 km²
Transport carbon emissions: 1.2
tonnes CO₂ p.c.

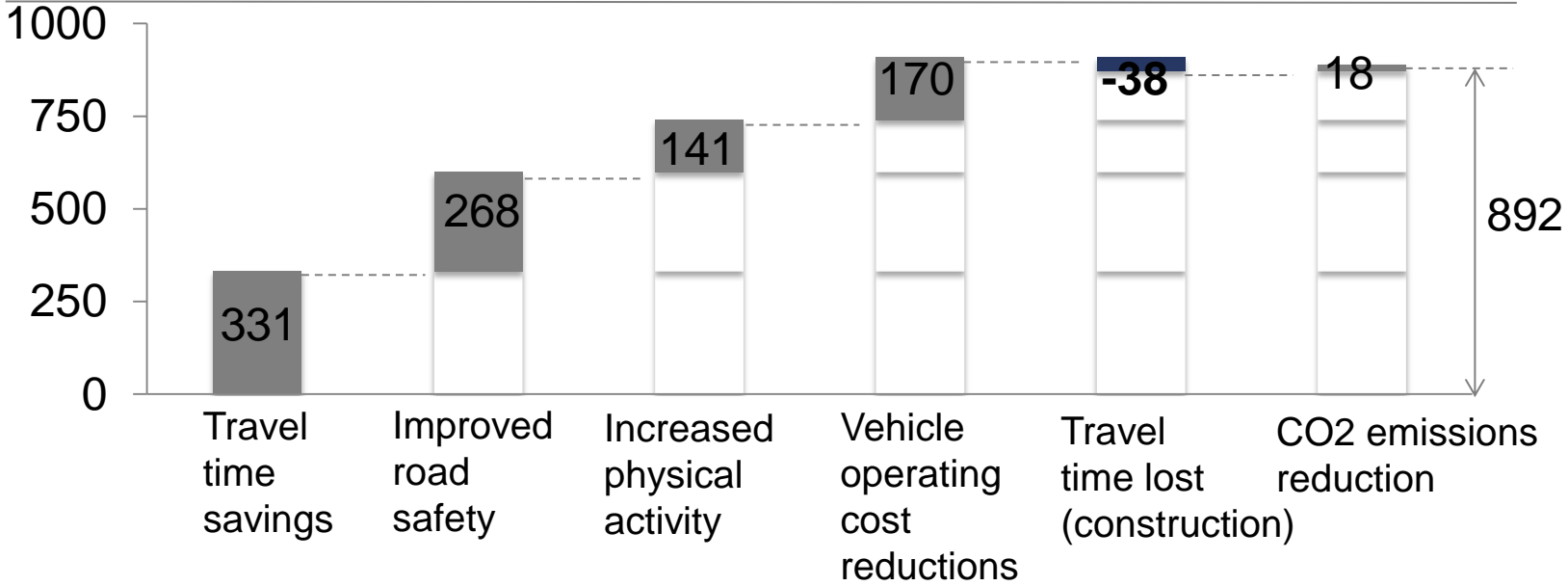
Transformative transport investments have significant economic benefits



Wider benefits of the Rea Vaya BRT system in Johannesburg

Total benefits:
US\$892 million

USD million

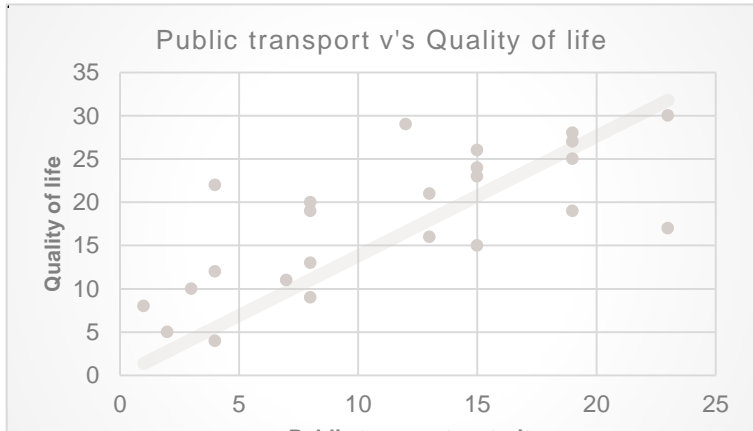
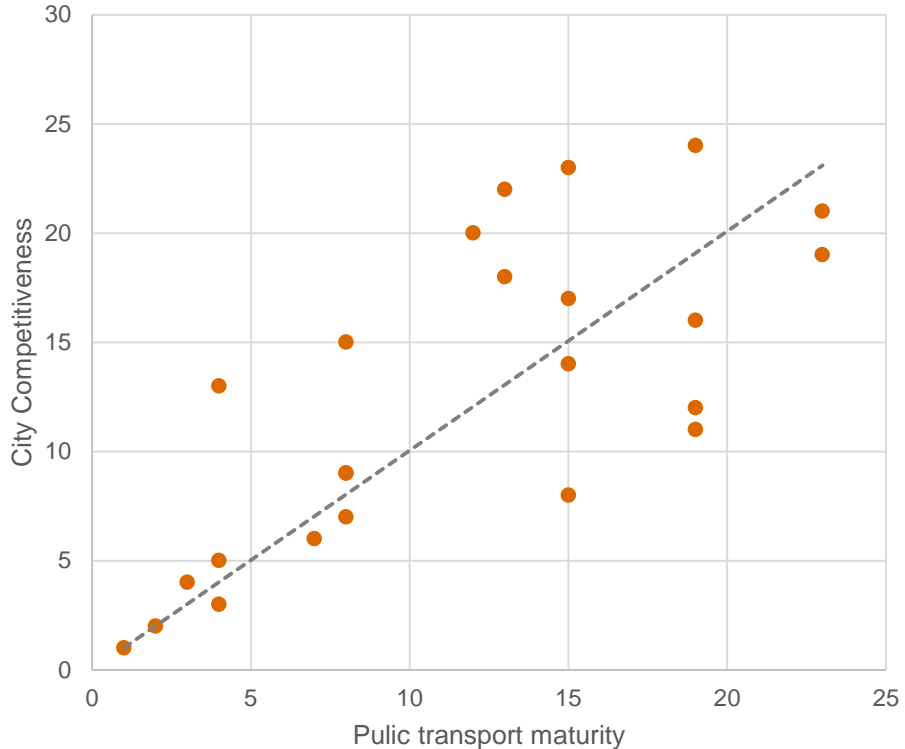


Source: Carrigan A, King R, Velasquez JM, Raifman M, Duduta N. 2013. *Social, Environmental and Economic Impacts of BRT Systems: Bus Rapid Transit Case Studies from Around the World*. World Resources Institute <http://www.wricities.org/sites/default/files/Social-Environmental-Economic-Impacts-BRT-Bus-Rapid-Transit-EMBARQ.pdf>

Better transport, better city? How high quality public transport affects city competitiveness

Mass transit plays a major role in reducing urban emissions, and leads to better growth

Is public transport essential for city success?



* Determined by composite rankings against a range of indicators. Based on ranking of 24 international cities with #24 being the top rank. For more information on these see PwC Cities of Opportunity available at <http://www.pwc.com/us/en/cities-of-opportunity/>

Recommendations of Global Commission (1) 2014

1. BETTER URBANISATION

- **Make better planned urban development a central element of national economic development strategies**

2. FISCAL AUTONOMY

- **Consider greater fiscal autonomy for cities to unleash investment in smarter urban infrastructure**

3. TAX REFORM

- **Eliminate fuel subsidies, congestion charging, land and development taxes, density bonuses**

4. REGULATORY REFORM

- **Minimum density standards, maximum parking requirements, growth boundaries**

Recommendations of Global Commission (2) 2014

5. REDIRECT INVESTMENT

- **Redirect existing infrastructure funding towards more compact, connected and coordinated urban infrastructure, including MDB financing**

6. PLANNING AND GOVERNANCE

- **Strengthen role of strategic planning at national, regional, and city levels including setting up integrated land use and transport authorities**

7. FINANCING MODELS

- **Land Value Capture, enhancing own source revenue to boost creditworthiness, 'city bonds'**

The emissions gap (Gt CO₂e) in 2030

Business as Usual

69 Gigatonnes

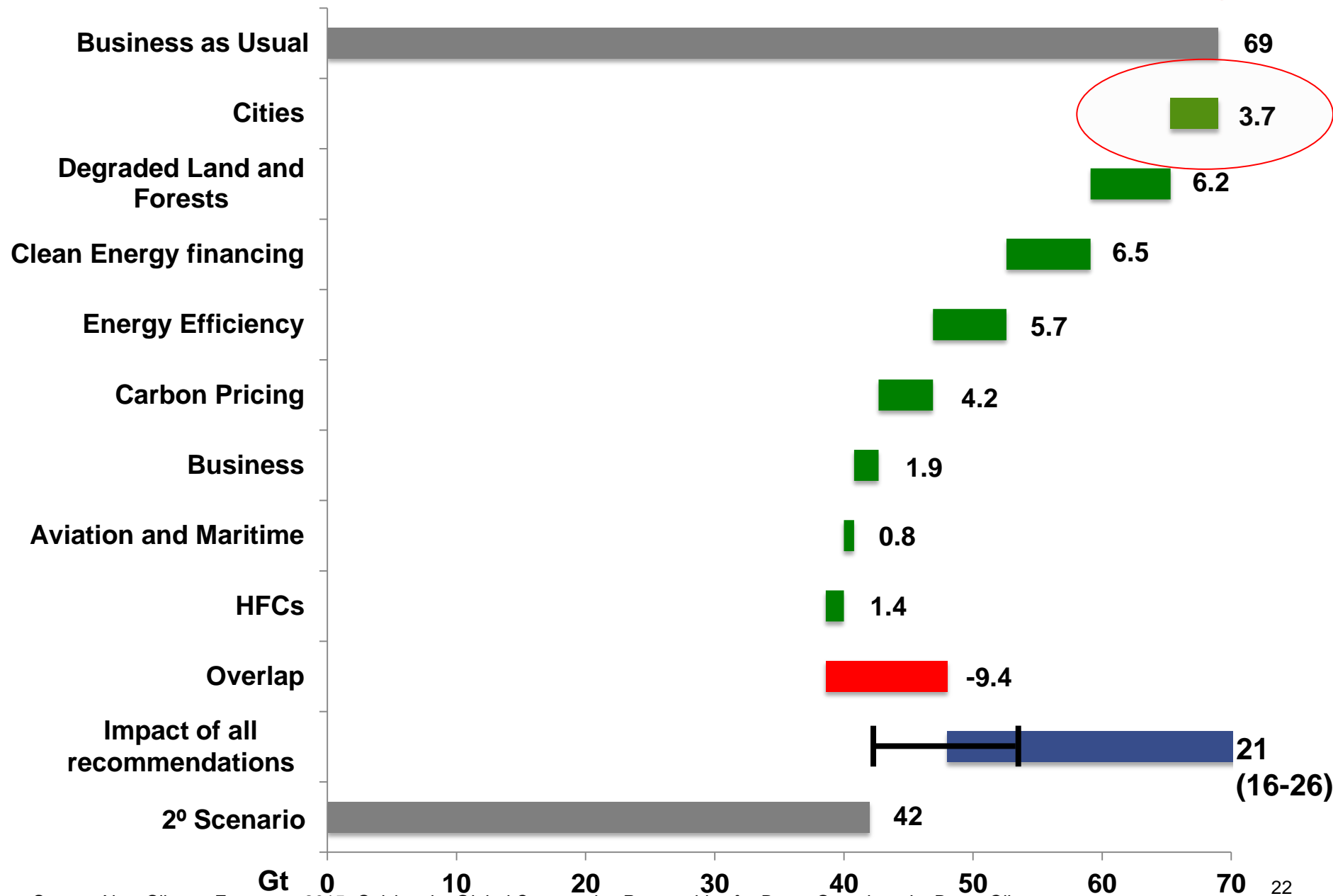
2°C Scenario

42 Gigatonnes

GAP

0 10 20 30 40 50 60 70

10 recommendations can almost close the 2030 emissions gap



International cooperation can help to accelerate climate action to supplement action by cities themselves

- 1. Facilitating knowledge-sharing among cities on policy reform and innovation to inform and inspire action;**
- 2. Utilising common platforms and standards to enable cities to make their commitments public, credibly record their energy use and GHG emissions, develop low-carbon strategies, and measure their results;**
- 3. Building the capacity of local governments, so that political leaders and municipal staff can effectively plan, design and execute low-carbon development plans and strategies;**
- 4. Financing low-carbon urban infrastructure by improving cities' access to domestic and international financial markets; and**
- 5. Supporting national governments to empower cities to invest and innovate.**

Recommendations of Global Commission 2015

CITIES

Commit to developing and implementing low-carbon development strategies by 2020 where possible within the framework of the Compact of Mayors

NATIONS

National legislation to support and incentivise cities to make and report emission reduction targets and place urbanisation at heart of economic development planning

GLOBAL

Develop \$1 billion cities package over 5 yrs to support at least the world's largest 500 cities by 2020 to comply with the Compact of Mayors, strengthen project preparation, enhance creditworthiness, access climate finance, and access enhanced knowledge sharing and tech transfer platforms through city networks

The largest 500 cities cover 100 countries, ~56% of world urban population, ~61% of world urban GDP and ~47% of world emissions

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