



Smart Cities in Emerging Countries

Smart Cities and Prospective: a contribution to Rio+20

Paris, 04 June 2012

Content

- Overview
- Why smarter cities
- Example at the city level
- Example at the country level
- City to City learning
- Key messages

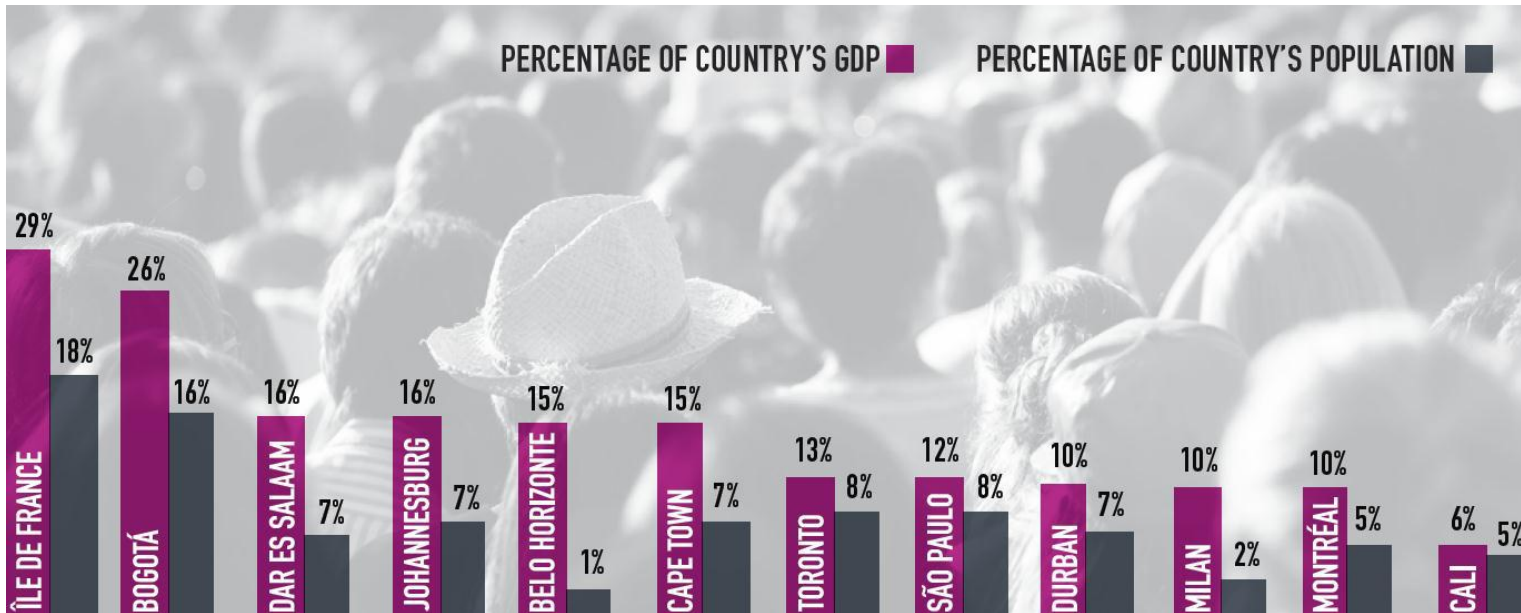
Overview



Cities in emerging countries

- Why Focusing on Cities ?

- 3.3 billion people live in cities, 5 billion in 2030
- 70% of global GDP is generated by cities
- 37 of the World's largest economies are cities



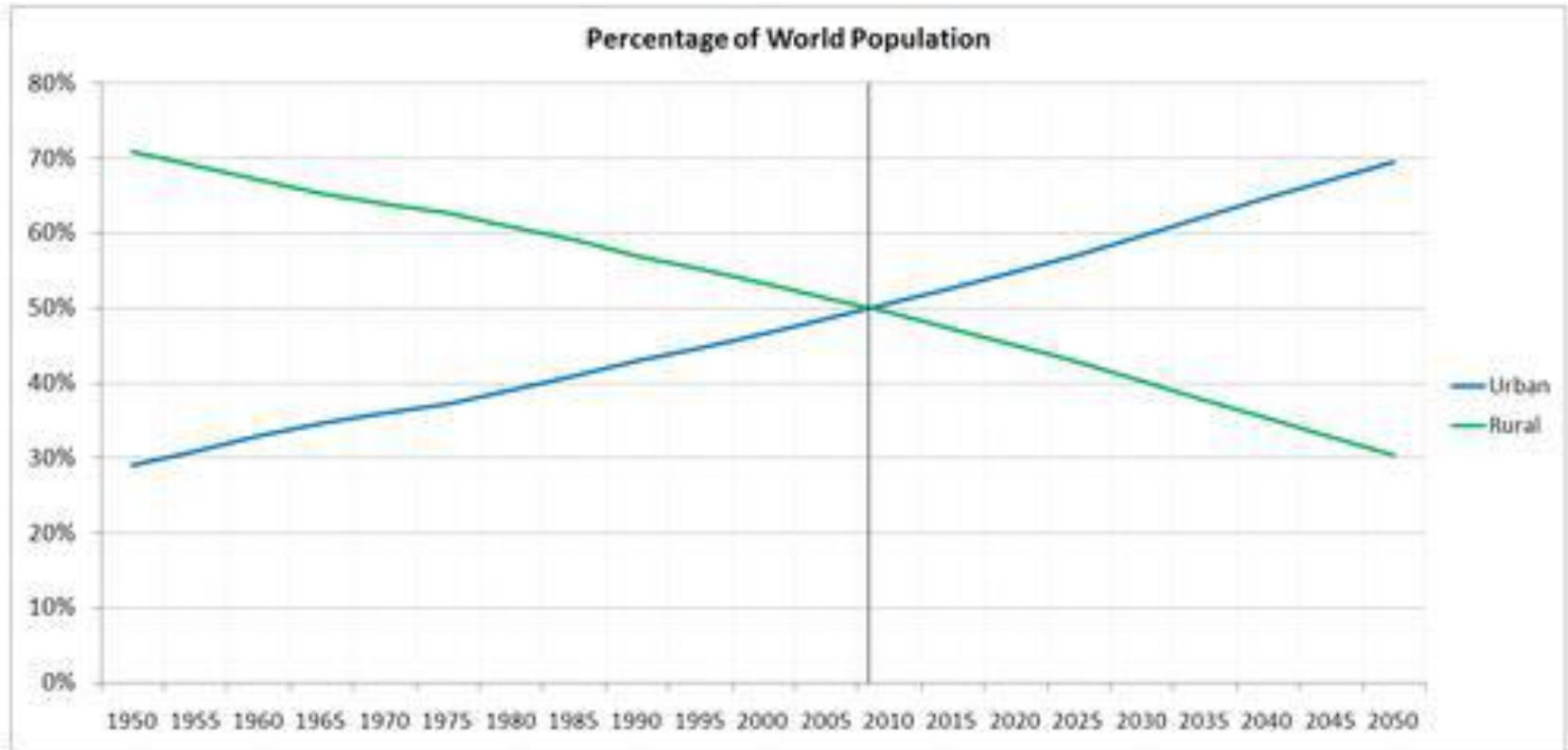
Cities contribute more to their national economy than the relative size of their population suggests.

Source GCIF 2011

- Why Cities in Emerging Countries ?

- 95% of population growth in the developing world
- 2 billion additional human beings in cities by 2030, 1 bn in Africa (UN, 2011) ⁴

The World's Largest Migration raises challenges



Data Source: United Nations, <http://esa.un.org/unup/p2k0data.asp>

- **Increasing Urbanisation:** every 2nd inhabitant lives in a city (1/3rd 50 years ago), 57% in 2025 (Frost Sullivan)
- **Pressing global challenges :** CO2 emission increased 7x over the past century (globalissues.org), world primary energy demand increases by 36% between 2008 and 2035, or 1.2% per year on average (IEA 2010 fact sheet), Water scarcity affecting 1 in 3 people on every continent of the globe (WHO, 2009)

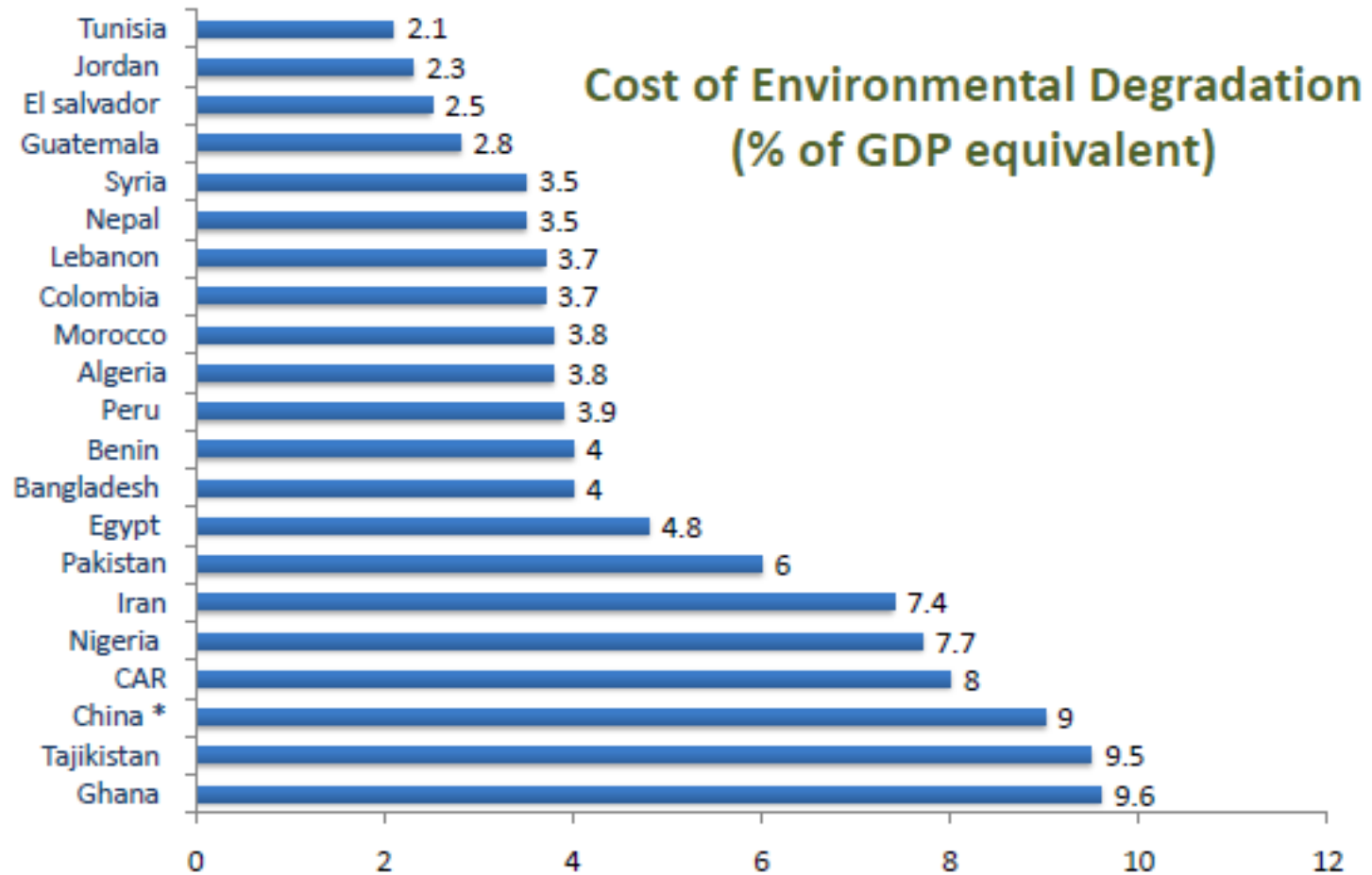
Number of Cities

| Size Range (mils) | World Total | | | Less Developed | | | Developed | | |
|----------------------|-------------|------|------|----------------|------|------|-----------|------|------|
| | 1995 | 2010 | 2025 | 1995 | 2010 | 2025 | 1995 | 2010 | 2025 |
| >10 | 13 | 21 | 29 | 9 | 15 | 22 | 4 | 6 | 7 |
| 5 to 10 | 19 | 33 | 46 | 14 | 26 | 36 | 5 | 7 | 10 |
| 1 to 5 | 263 | 385 | 502 | 170 | 282 | 393 | 93 | 103 | 109 |
| .5 to 1 | 337 | 512 | 664 | 222 | 388 | 531 | 115 | 124 | 133 |
| .1 to .5 | 2507 | 2717 | 2741 | 1614 | 1783 | 1769 | 893 | 934 | 972 |
| Total | 3139 | 3668 | 3982 | 2029 | 2494 | 2751 | 1110 | 1174 | 1231 |

Rationale for Smarter and Greener Cities



Unsustainable (urban) development is costly



Source: Country Environmental Analyses, World Bank

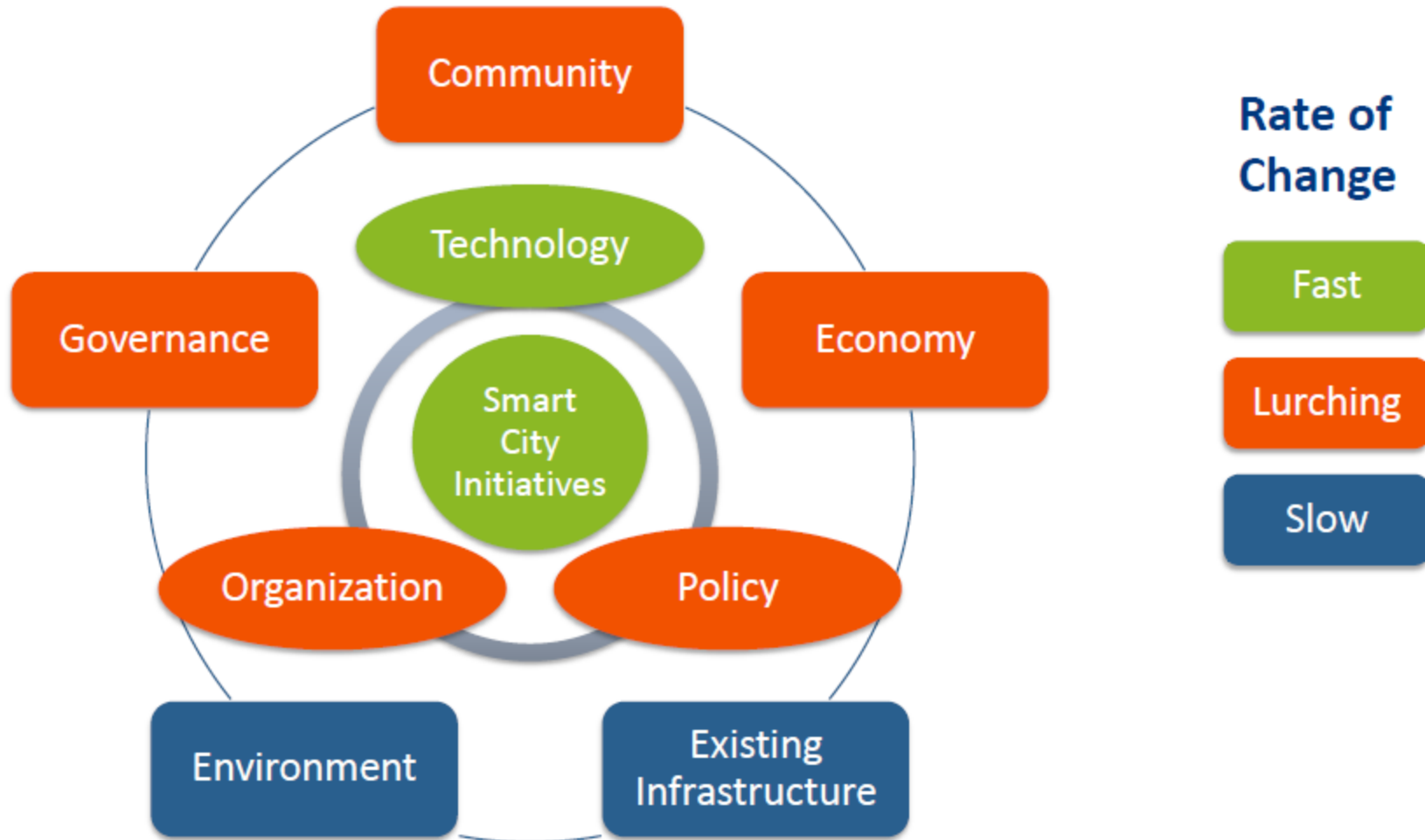
Potential Benefits of Building Smart and Connected Communities



Source: IBSG Study

Some best practice projects/cities: Seoul, Chongqing (China), Songdo (South Korea), Curitiba (Brazil), Lavasa (India),...

Smoothing the road



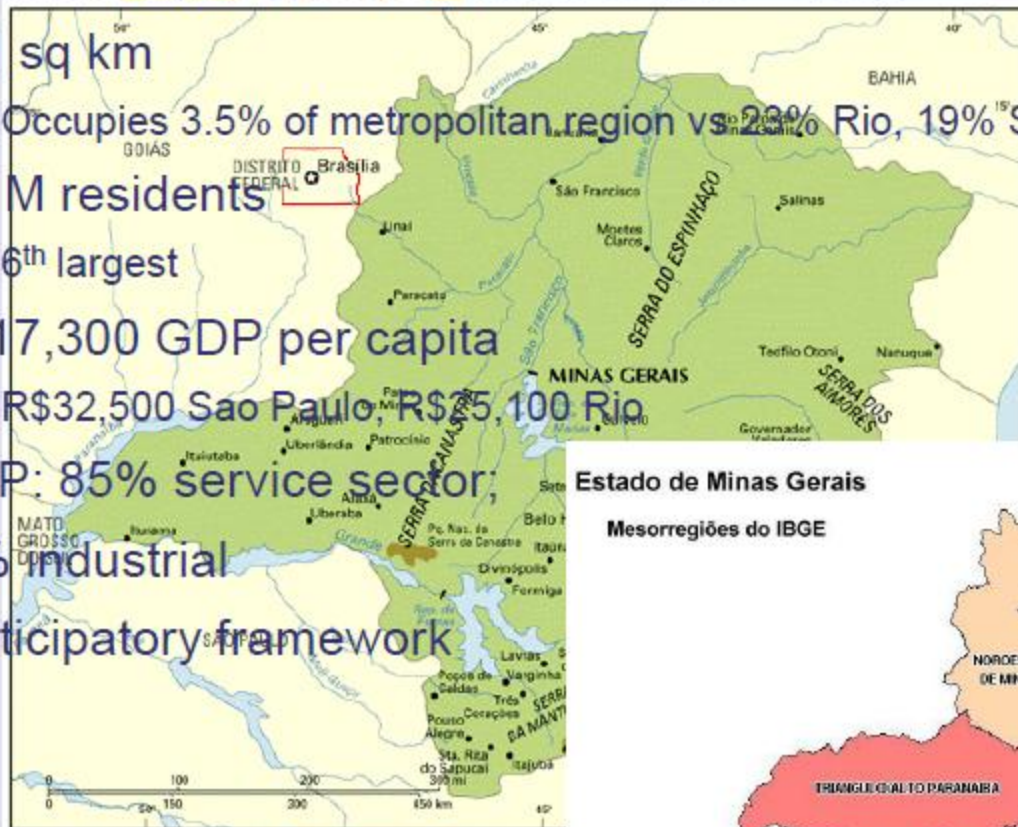
Source: "Understanding Smart Cities: A Integrative Framework," Chourabi, et al. (2012)

Example of Belo Horizonte



Belo Horizonte: City Overview

- Planned city - Capital of Minas Gerais - 1897
- 331 sq km
 - Occupies 3.5% of metropolitan region vs 20% Rio, 19% SP
- 2.4 M residents
 - 6th largest
- R\$17,300 GDP per capita
 - R\$32,500 Sao Paulo, R\$25,100 Rio
- GDP: 85% service sector; 15% industrial
- Participatory framework



Estado de Minas Gerais

Mesorregiões do IBGE



Belo Horizonte: A results-oriented service delivery model

Municipal Performance-Based Management Instruments

- New framework to manage and track urban development and service delivery policy initiatives
- Multi-sectoral approach to addressing the municipality's challenges and vulnerabilities

Organizational management tool

- Set baseline, goals, systematic method of reaching, measuring results
- Contrast to 'old way' of focus on rules & process
- Short- and long-term performance measures, on a regular basis
- Modify program design, government activities as needed to enhance performance
- Feedback loop and report progress publicly

Belo Horizonte : Complementary Long Term Municipal Strategy



Establishing a Long Term RBM Governance System

12 Results Areas and 25 (Sustainable Development guided) Objectives by 2030



BH Vision 2030 sets 6 overall long term objectives*

- To guide transformation and implementation of the vision, BH listed 25 indicators, with established objectives through sub-indicators
- The management efforts of the municipality were divided among 12 results areas – each with a number of flagship projects
- The municipality sets its strategic planning and capital expenditure around short / medium and long term actions guided by the Vision 2030

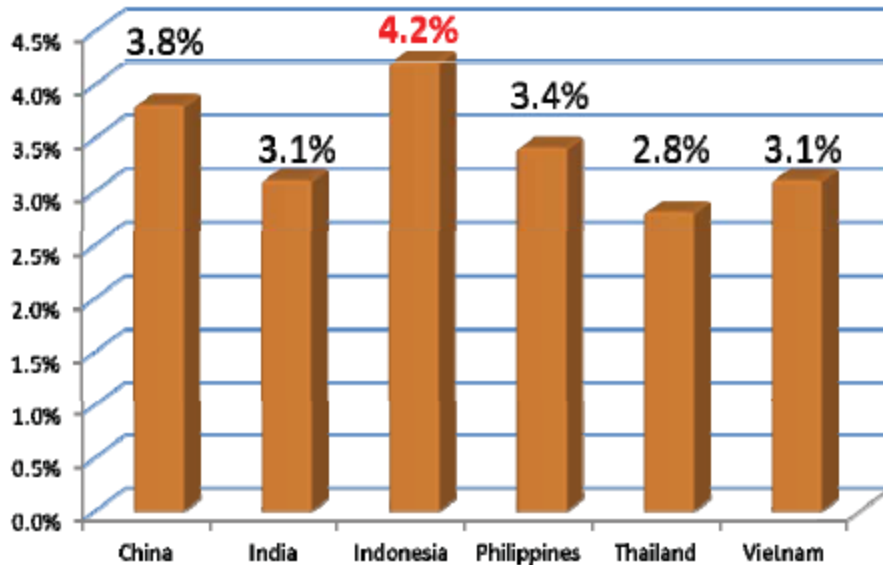
*Equal Opportunities, Quality of Life, Environmental Sustainability, Mobility, Quality of the Political and institutional environment, and Healthy and happy living standards

Example of Indonesia

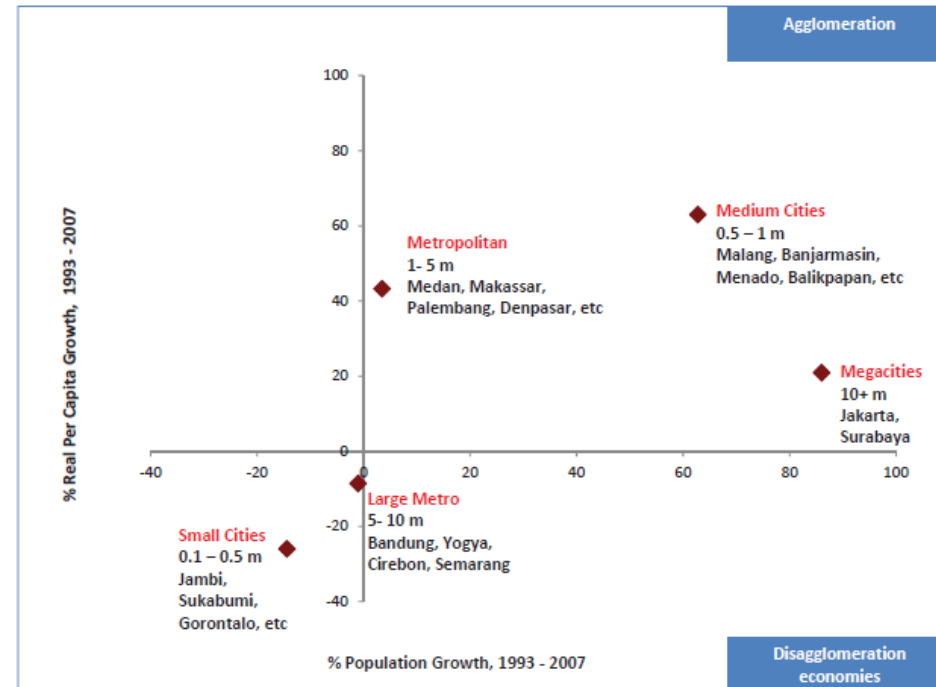


A Dynamic but Inequal Urban Growth

Compound Annual Growth Rates of Urban Population,
1970-2010



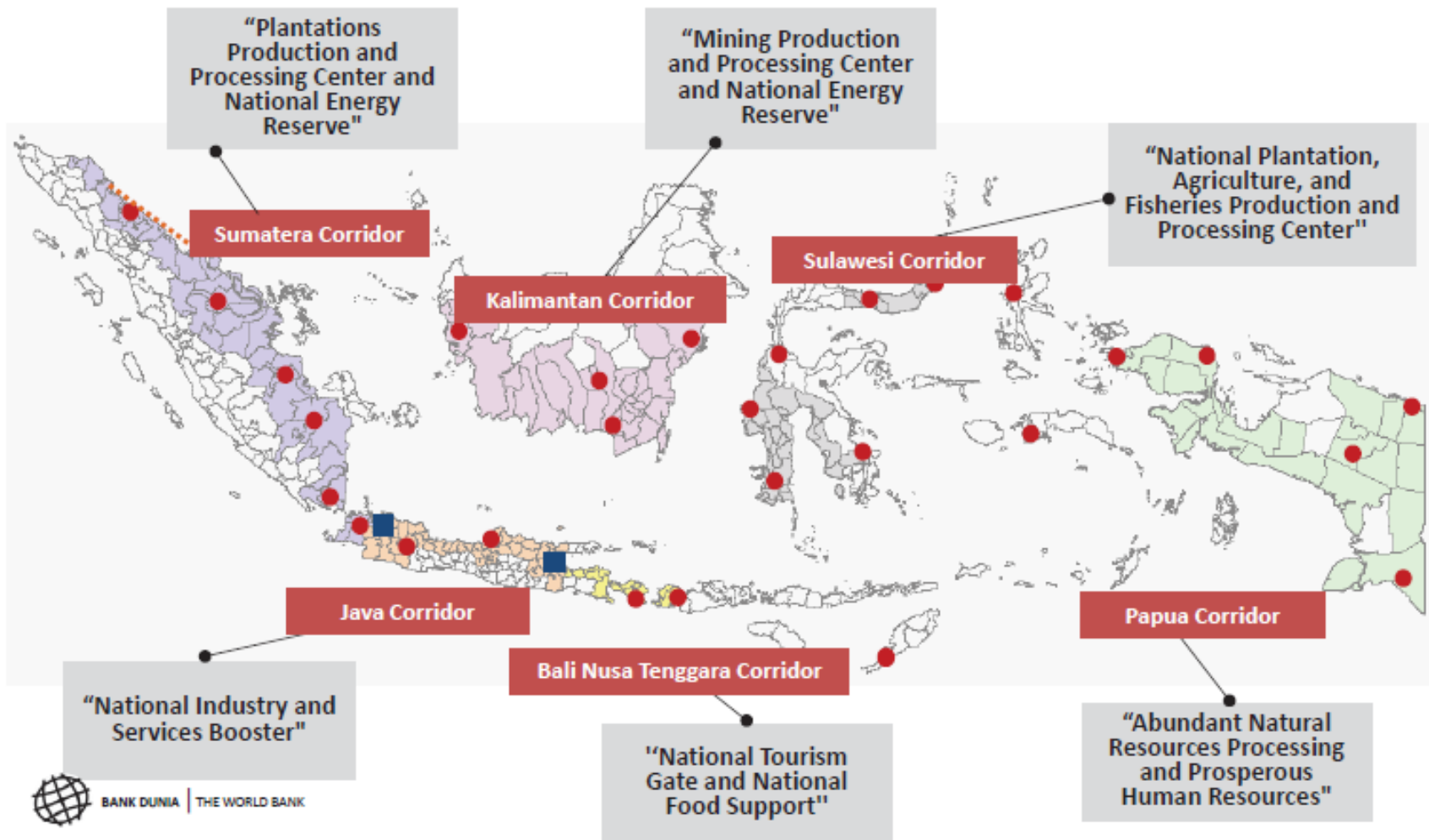
In 2010, 54% of Indonesia's population is urban.



Based on performance, each class of city requires a different policy treatment and response.

Economic Transformation Master Plan

Differentiated Regional Development Themes



Urbanization Represents an Opportunity

- Urban areas are key drivers for non oil growth
- Link implementation of Economic Transformation Master Plan (MP3EI) to urbanization and metropolitan development
- Focus on making agglomerations perform better, rather than create new growth centers
- Differentiate strategy by metropolitan class size.

Knowledge and the Cities

City to City Exchange is the most efficient learning tool (Tim Campbell, Urban Age Institute)

- Emerging Cities are aware of a new, open environment
- They are seeking cost-effective ways to learn
- Smart cities are deliberate about innovation
- Need to do more to document conditions and context
- Collective learning, not technical exchange, leads to transformational change
- Learning strategies can help
 - Improve efficiency of learning; invest in knowledge
 - Build foundations for learning

Knowledge Groups and Platforms

- GCIF (Global Cities Indicators Facility): harmonized indicators, methodologies and benchmark studies.
- Metropolis Initiatives: metropolitan section of United Cities and Local Governments (UCLG)
- Urbanization Knowledge platform, Cities Alliance, Eco2 Cities (World Bank)
- 57 cities exchange organization, up from 8 in 1982 (Keiner, 2007): Eurocities, ICLEI, Healthy Cities,...



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Urbanization Knowledge Platform

Fostering a Global Urban Community of Practice



Building a Network of Partners



Key Messages



Smarter and Greener Emerging Cities

- Smart Cities main principles **already included** in World Bank projects by construction
- Smart Cities concept in line with the World Bank **Inclusive Green Growth** agenda (Rio+20)
- Huge leapfrog opportunity for a **sustainable urban development** in emerging countries
- **Governance/Decentralization** and **land management** are key
- **Implementing** is less obvious, not only a design problem.

...for the models designers

It's all about having the good assumptions:

“The evidence from censuses and satellite imagery is increasing that the rate at which many countries are becoming more urban in sub-Saharan Africa **has slowed or is even stagnating**. That has major policy implications...data used are frequently erroneous...”, (D. Potts 2012)



Backup: Network of related initiatives

