

# Land Policy Models and Strategies to Make Housing More Affordable



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**Dr. Frank Friesecke**  
FIG Working Week 2015, Sofia, Bulgaria

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## Land Policy Models and Strategies to Make Housing More Affordable - Table of Contents

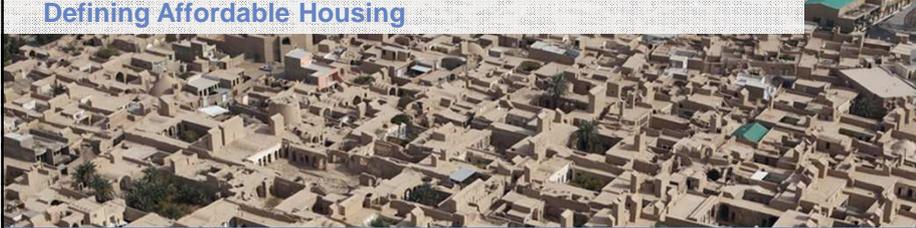
- Defining Affordable Housing
- Affordable Housing as a Global Challenge
- Affordable Housing Strategies
- Conclusion and Future Directions



**Dr. Frank Friesecke**  
Chair of FIG Working Group 8.4  
Sofia, May 19, 2015

© <http://uscombelettings.co.uk/housing-costs-risks-rushing-relationships/>

## Defining Affordable Housing



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### Introduction

- *Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, **housing** and medical care and necessary social services.*

United Nations, Universal Declaration of Human Rights, Article 25, December 1948.

- From London to Lagos, the increasing unaffordability of housing is a growing *challenge to cities and nations.*



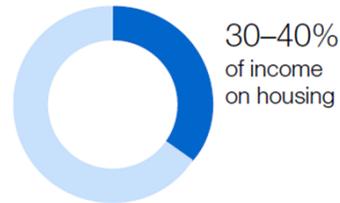
UNITED NATIONS



### Defining Affordable Housing

- The definition of „affordable housing“ varies across economies and cities, but generally it includes a financial component (the share of income devoted to housing).
- In many parts of the world, „affordability“ is defined as housing costs that consume no more than 30 to 40 percent of household income.
- The **housing affordability gap** is equivalent to \$650 billion per year, or 1 percent of global GDP.
- 330 million urban households live in substandard housing or are financially stretched by housing costs.

Affordability threshold



30–40%  
of income  
on housing

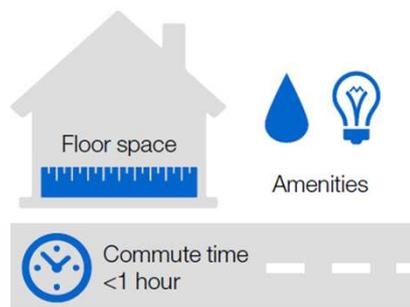
60–70%  
of income on food, health care,  
and other expenses

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### Measuring Affordable Housing

- Affordable housing can be measured by two other parameters:

Standard unit



Income threshold



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## Defining Affordable Housing

- By 2025, about 440 million households – at least 1.6 billion people – would occupy crowded, inadequate, and unsafe housing or will be financially stretched.

The challenge today ...



96 million  
urban households are  
financially overstretched



235 million  
urban households live in  
substandard housing

... and by 2025

106 million additional low-income households  
will face the affordability housing challenge



... affecting 1.6 billion people or  
one-third of urban population

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## Causes of the Affordable Housing Crisis

- Population growth
- Increased life expectancy
- Rapid urbanization (54 percent of the world's population residing in urban areas in 2014, 66 percent in 2050)
- Declining number of people per dwelling
- Young adults delaying forming their own household (in advanced economies)
- Mismatch between demand for, and the supply of, housing
- Inefficiencies in urban land markets



Rio de Janeiro/Brazil

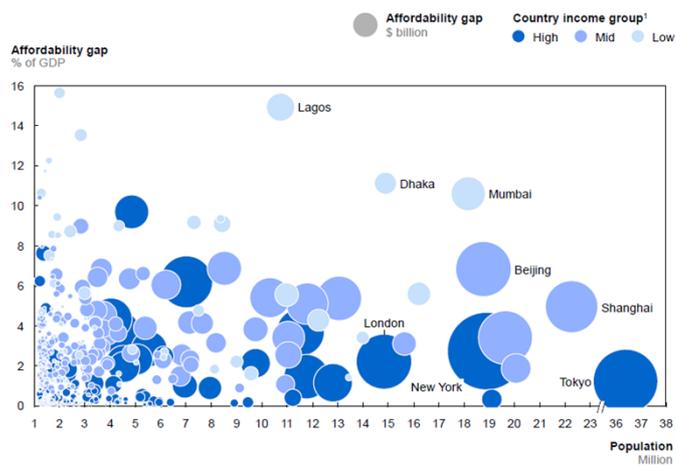
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## Affordable Housing as a Global Challenge



## Affordability Gap in approx. 2.400 Cities Worldwide

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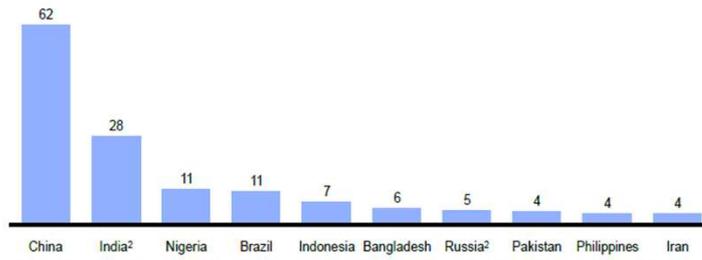
<sup>1</sup> As defined by World Bank.

SOURCE: World Bank; UBS Prices and Earnings Report 2012; Numbeo; CEIC; Deposits.org; Global Banking Pool; Royal Bank of Scotland; Zillow; Metrosclubicos; Exame; Notaires Paris Ile de France; Jones Lang LaSalle; McKinsey Global Institute Cityscope database; US Census Bureau; national statistics offices; McKinsey Global Institute analysis

### Developing Countries

- About 60 percent of substandard housing is concentrated in 10 nations

Substandard housing units in urban areas<sup>1</sup>  
Million



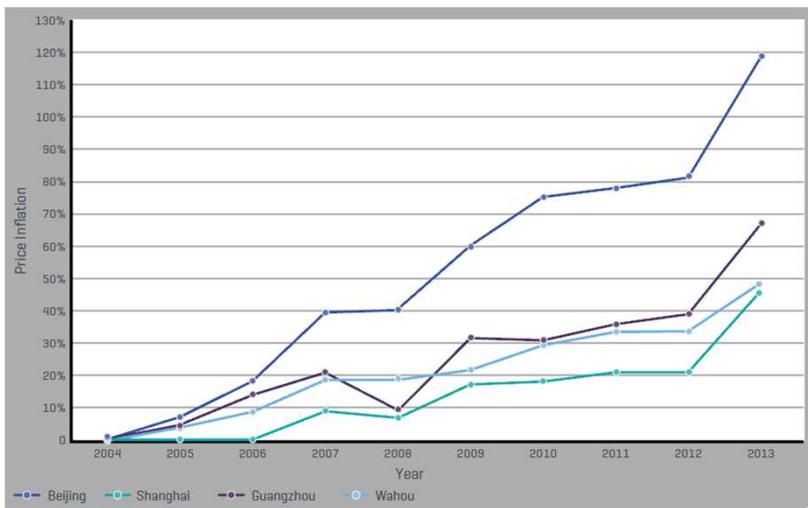
Share of total urban households in each nation<sup>1</sup>



1 Based on 2009 data (latest available).  
2 Based on 2012 data.

SOURCE: United Nations Millennium Development Goal Indicators; Census India; Rosstat; McKinsey Global Institute analysis

### Housing Price Inflation in China



Source: National Bureau of Statistics of China: 2004-2013 press releases on housing price inflation

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### New York City: Affordable Housing Crisis

- Supply and demand among extremely low income and very low income renter households

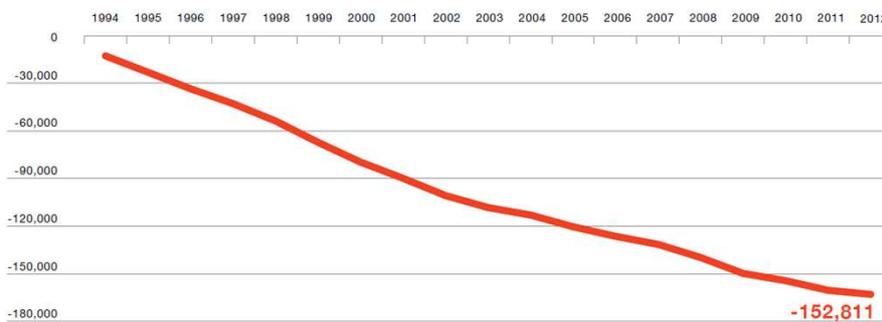


Data Source: Housing and Vacancy Survey (U.S. Census), 2011.

### New York City: Affordable Housing Crisis

- The city has lost more rent regulated units than it has gained

#### Net Loss of Rent Stabilized Units, 1994 – 2012



Data Source: Rent Guidelines Board Reports, Changes to the Rent Stabilized Housing Stock in NYC in 2012.

### New York City

- Supply and demand among extremely low income and very low income renter households

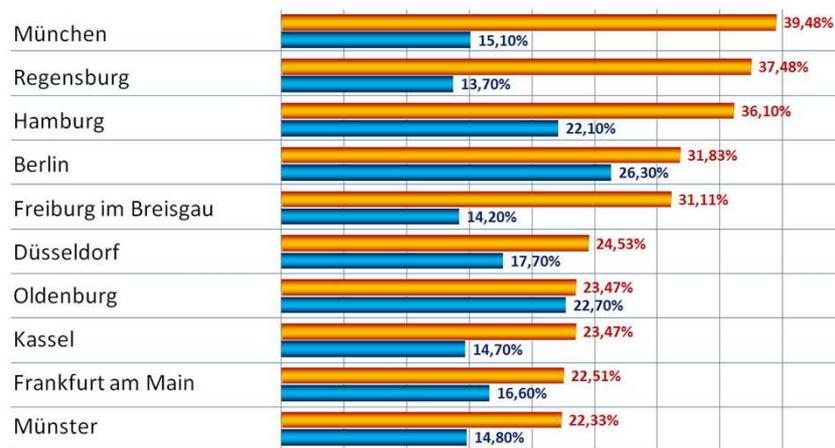
#### Income and Rent Requirements by Income Band

Income Band	Percentage of AMI	Monthly Rent Required to Prevent Rent-Burden	Annual Income (for a four-person household)
Extremely Low Income	0- 30%	Up to \$629	< \$25,150
Very Low Income	31 - 50%	\$630 - \$1,049	\$25,151 - \$41,950
Low Income	51 - 80%	\$1,050 - \$1,678	\$41,951 - \$67,120
Moderate Income	81 - 120%	\$1,679 - \$2,517	\$67,121 - \$100,680
Middle Income	121 -165%	\$2,518 - \$3,461	\$100,681 - \$138,435

Based on the U.S. Department of Housing and Urban Development's Estimate for Area Median Income (AMI) in 2014 (\$83,900 for a four-person household)

### Development of Purchasing Prices and Rental Rates in Germany

Year 2007 - 2012



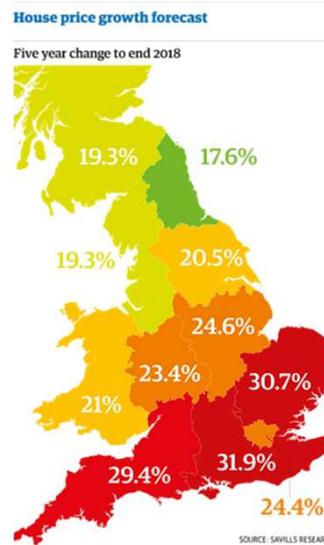
■ purchasing price increase ■ rental rate increase

Quelle: fc.finanzconsult, SZ, immoscout24

### House Price Growth Forecast in the UK (2013 – 2018)

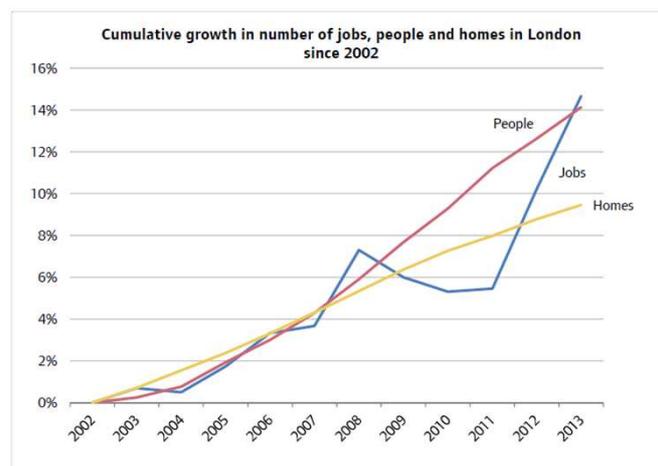
- Prices in the south-east will rise 32% over the next five years, with London making gains of 24.4%,
- By 2018, 5.8m households will be in rented accommodation, a million more than today, while the number of home owners will continue to decline.
- Average rents are set to go up by 21% in the next five years and by 26% in London.
- January 2015: Thousands gather in London to protest against lack of affordable housing

Sources: The Guardian



### Supply is not Meeting Demand (London / UK)

- Population and employment growth have outpaced housing supply

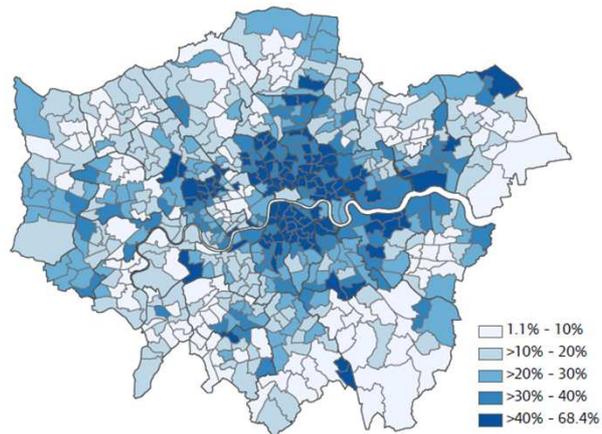


© 2014 London Housing Strategy

### Social Rented Housing in London

- In 2011, 24% of the households lived in social rented housing

Social tenants as a proportion of all households in London by ward, 2011



© 2014 London Housing Strategy

### Affordable Housing Strategies



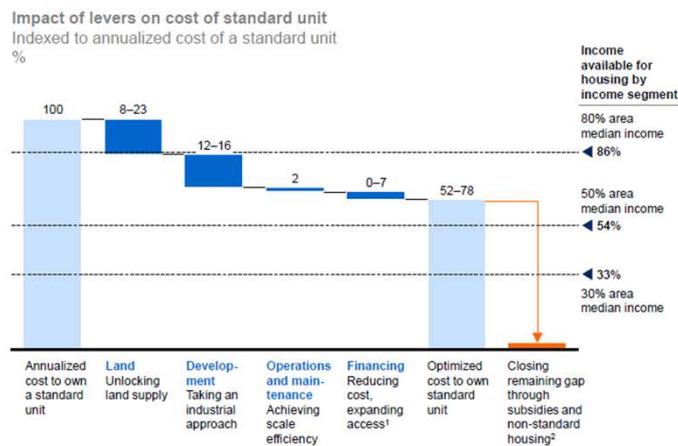
### Affordable Housing Strategies

1. **Analysis and targets:** define income and affordability thresholds, set standard unit sizes along the housing ladder, set targets for volumes and gaps to bridge
2. **Cost-reduction areas:**
  - a. Securing **LAND** for affordable housing at the right location
  - b. **DEVELOPING** and building housing at lower cost
  - c. **OPERATING** and **MAINTAINING** properties more efficiently
  - d. Improving access to **FINANCING** for home purchases, development, and rental assistance
3. **Housing delivery platform:** Manage stakeholders and rigorously qualify beneficiaries; create mechanisms to pursue all possible funding options; build local governance with dedicated delivery units



### Affordable Housing Strategies

- Four areas can narrow the affordability gap

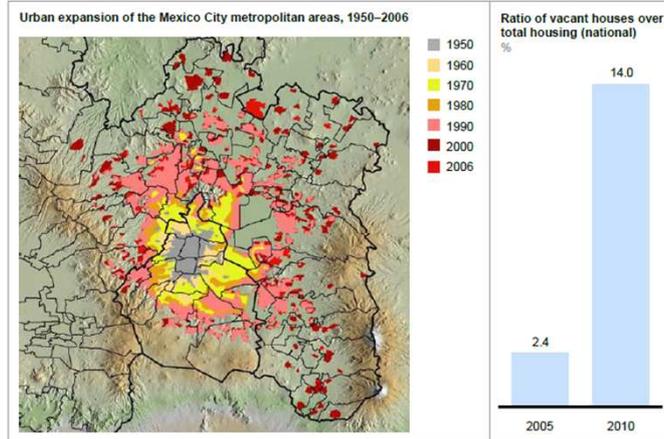


1 Impact of reduced origination and funding costs is quantified; impact of increased access to financing is not.  
 2 Transitional use of basic housing (with communal toilets and kitchens, for example) to serve very low-income households.  
 NOTE: Numbers may not sum due to rounding.  
 SOURCE: McKinsey Global Institute analysis

## 2a. Securing Land for Affordable Housing

- Building on the wrong land: The price of sprawl

Building too many low-income housing units without adequate infrastructure ... led to vacant houses

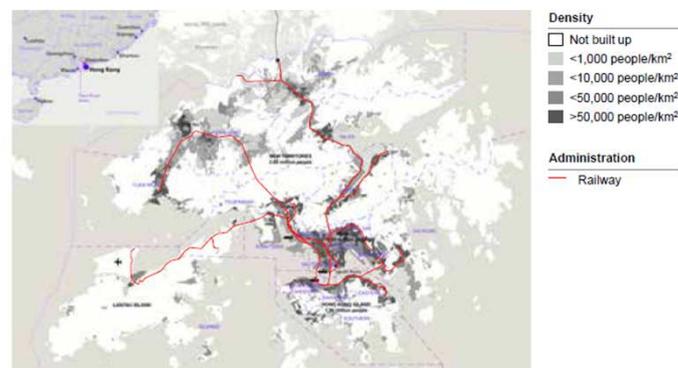


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## 2a. Securing Land for Affordable Housing

- Hong Kong developed new housing and neighborhoods along railway lines

Built area and railway of Hong Kong metropolis



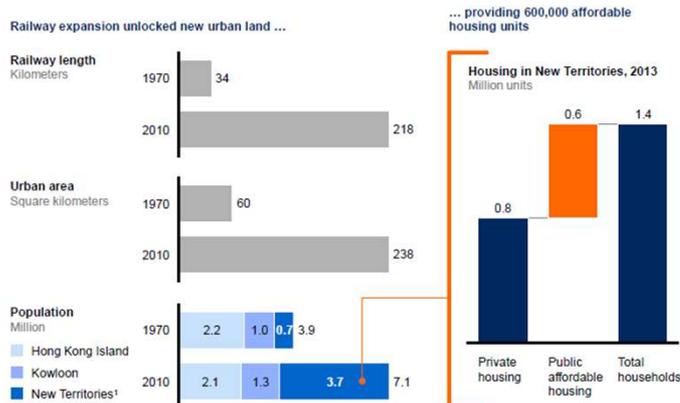
SOURCE: Jens Kandt, *Hong Kong's spatial DNA*, LSE Cities, November 2011; Earth Observation and Remote Sensing Applications, 2008; Government of Hong Kong; McKinsey Global Institute analysis

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## 2a. Securing Land for Affordable Housing

### ■ Hong Kong: transit-orientated development

#### Hong Kong's transit-oriented development unlocked land for new housing



<sup>1</sup> Includes Kwai Tsing, North, Sha Tin, Sai Kung, Tai Po, Tuen Mun, and Yuen Long.  
 SOURCE: 2008 International Workshop on Earth Observation and Remote Sensing Applications; Government of Hong Kong; Langdon & Seah; McKinsey Global Institute analysis

## Public Housing in Hongkong



© Wikipedia

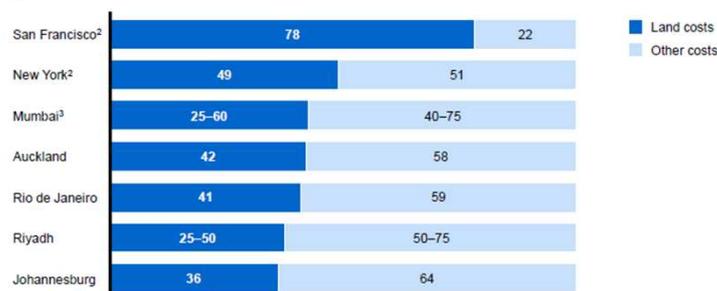
## 2a. Ways to make land available

- Nothing has greater impact on the success of affordable housing initiatives than acquiring land in the right place at the right price.
- **6 major policy approaches** to develop or unlock land or to increase the density of land to create affordable housing at the right location (MGI 2014):
  1. Smart, transit-oriented development (see Hong Kong)
  2. Release public land at the right location for housing (see Turkey)
  3. Unlock vacant serviced land through regulatory measures such as idle-land regulations (see Riyadh)
  4. Start development through land assembly or readjustment (see India)
  5. Unlock land by formalizing informal settlements and registering unregistered land
  6. Reform urban land-use regulations with inclusionary planning elements (see Germany)

## Urban Land Shortages and High Costs

- Many cities have high land costs as a share of total housing unit costs

Average share of land costs in unit price<sup>1</sup>  
%



<sup>1</sup> Mumbai, Rio de Janeiro, and Riyadh, 2009; Auckland, Johannesburg, New York, and San Francisco, 2013.

<sup>2</sup> New York and San Francisco figures represent "land value share of home value."

<sup>3</sup> Range land transaction data were available. Assumed floor-area ratio = 1.33 as average of Mumbai city.

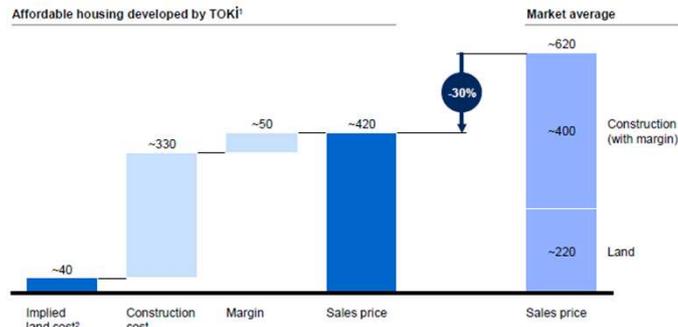
SOURCE: *Land and property values in the US*, Lincoln Institute of Land Policy; Guanyu Zheng, *The effects of Auckland's metropolitan urban limit on land prices*, New Zealand Productivity Commission, March 2013; TOKI website; expert interviews; ABSA Report; Mumbaipropertyexchange.com; Sulekha.com; McKinsey Global Institute analysis

## Affordable Housing Strategy in Turkey

- TOKI housing agency as land developer

**Release of public land at marginal cost can help deliver units at affordable prices**

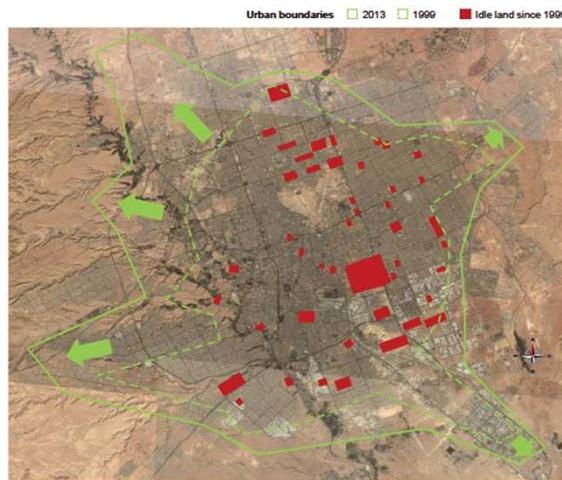
Estimated cost per square meter  
\$



1 Turkey's Mass Housing Administration.  
 2 Theoretical cost of land reverse engineered calculated by "sales price-construction cost-margin."  
 SOURCE: TOKI website; expert interviews; *Real Estate News Turkey*; Gardiner and Theobald; McKinsey Global Institute analysis

## Affordable Housing Strategy in Saudi Arabia

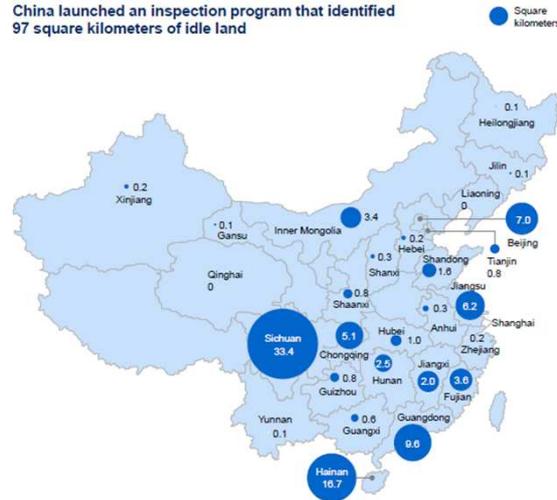
**A sampling of land parcels in Riyadh indicates at least 30 to 40 square kilometers of idle, serviced residential land**



SOURCE: Google Earth Pro; McKinsey Global Institute analysis

### Affordable Housing Strategy in China

China launched an inspection program that identified 97 square kilometers of idle land



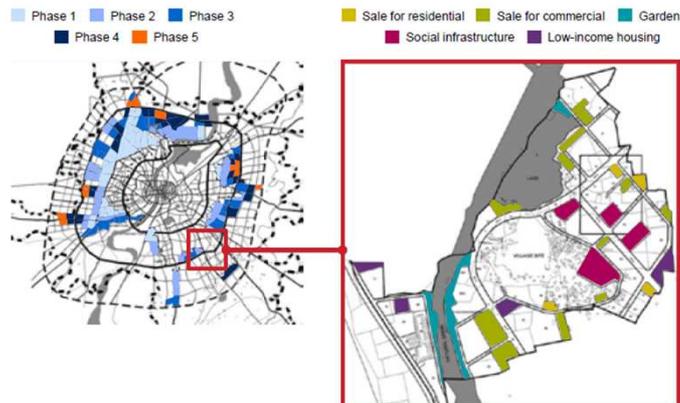
SOURCE: China Ministry of Land and Resources; NetEase; Feng Zhe, "China issues land hoarding blacklist," Caixin Online, August 13, 2010; McKinsey Global Institute analysis

### Affordable Housing Strategy in India

Ahmedabad has expanded its built area by 3 percent a year through a town planning scheme

Sequence of town planning schemes in Ahmedabad Development Plan, 1999–2009

Developed on average ~700 hectares, equivalent to 3.2% of built area



SOURCE: Shirley Ballaney, *The town planning mechanism in Gujarat, India*, World Bank, 2008; McKinsey Global Institute analysis

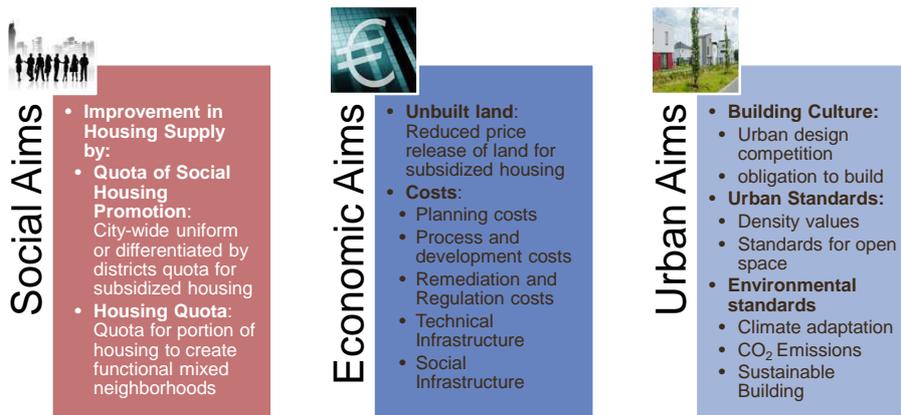
## Land-Registration Systems

### Five elements of an effective government land assembly program



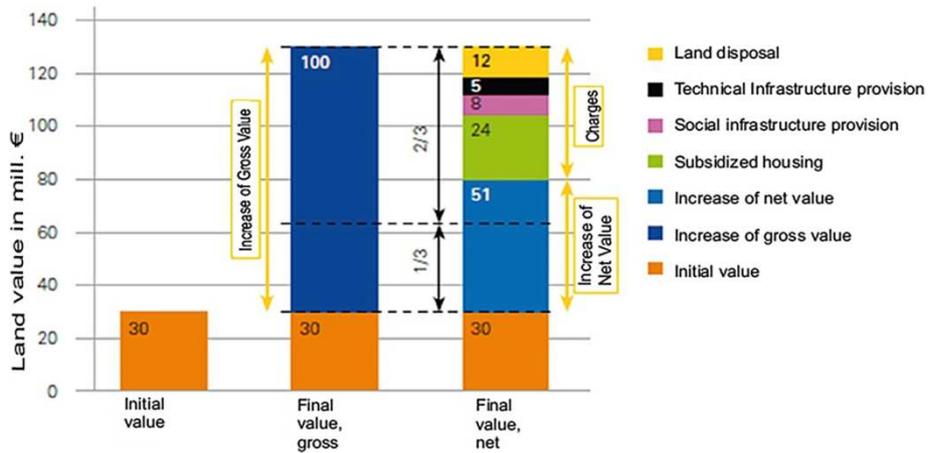
## Land Policy Models in Germany

### The three pillars



### Land Policy Models in Germany

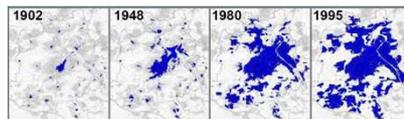
#### Real property value model



### Land Policy Models

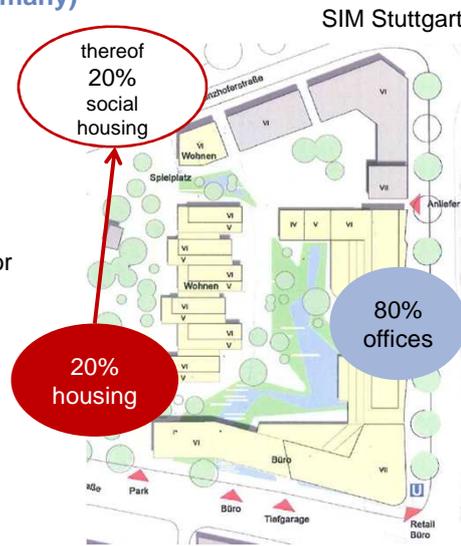
#### Inner urban development model of Stuttgart since 2011

- Applied city-wide as far as new planning law is created in favor of a superior use
- Cost allocation between community and investor
- 20 % of the new buildings have to be used for housing, 20 % for social / affordable housing
- Example: core area with commercial use/ Heilbronner Straße



### Land Policy Model (Stuttgart/Germany)

- 20 percent of floor-area in any residential development must be reserved for affordable housing
- Mandatory architectural and urban planning competitions
- Building obligation
- High quality and energy standards for building projects



### Affordable Housing Strategy in New York City

**Housing New York** is a five-borough, ten-year strategy to address the City's affordable housing crisis (2014 – 2024).

**Key policies and programs:**

- Fostering diverse, livable neighborhoods
- Preserving the affordability and quality of the existing housing stock
- Building new affordable housing for all New Yorkers
- Promoting homeless, senior, supportive and accessible housing
- Refining City financing tools and expanding funding sources for affordable housing

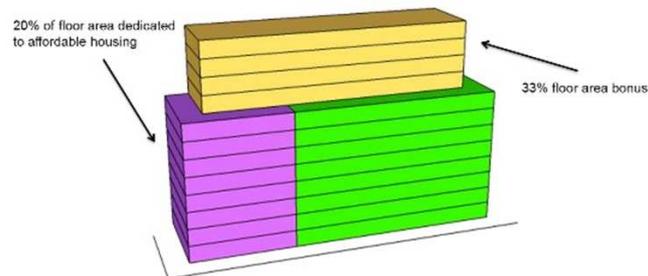


<http://www.vnsizneias.com/>

## Affordable Housing Strategy in New York City

### Density Bonus

- New York City has created zones in which developers can build 33 percent more space on a given plot of land (by building more floors) if they set aside 20 percent of units as affordable housing.
- Developers essentially get free land for the affordable units and for a share of their market-rate units.



[http://www.nyc.gov/html/dcp/html/zone/zh\\_inclu\\_housing.shtml](http://www.nyc.gov/html/dcp/html/zone/zh_inclu_housing.shtml)

## Affordable Housing Strategy in London

- Formally adopted in October 2014
- Delivering more than 42,000 new homes a year
- Investing over £5 billion in building and improving homes in London
- Developing Housing Zones across the capital to drive delivery
- Increasing opportunities for home ownership, by improving the private rented sector and by ensuring working Londoners have priority for affordable homes to rent

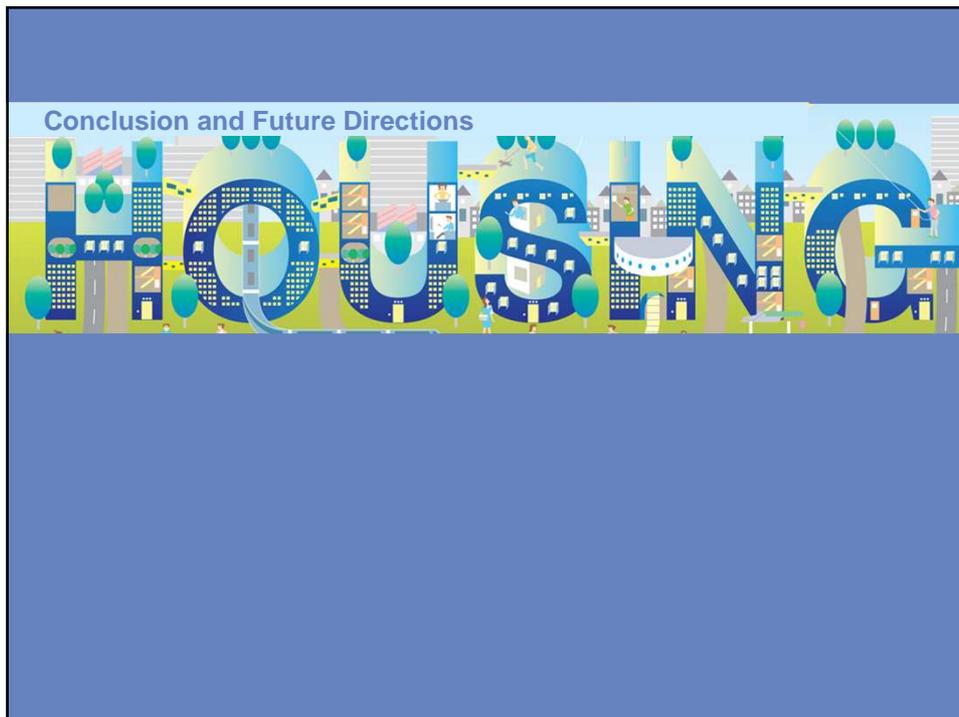
# HOMES FOR LONDON

THE LONDON HOUSING STRATEGY



DRAFT FOR CONSULTATION  
NOVEMBER 2013

MAYOR OF LONDON



die **STEG**

### Conclusion and Future Directions

- 330 million urban households around the world live in substandard housing or are financially stretched by housing costs.
- The housing affordability gap is equivalent to \$650 billion per year, or 1 percent of global GDP.
- Unlock land at the right location is the most important lever.
- Renewal is as important as new building.
- Cities need to think more broadly and creatively about a housing ladder that includes affordable housing but accommodates citizens of all income groups and their changing needs.
- Affordable housing is an overlooked opportunity for developers, investors, and financial institutions.
- **Things must change!**

## The International Perspective

### FIG Working Group 8.4

#### Resilient Urban Development

Chair: Dr. Frank Friesecke (Germany)

#### Terms of References

- To identify and investigate specific areas where surveyors have the professional expertise to contribute to studies related to resilient urban development,
- To identify how and where surveyors can partner with other global agencies (e.g. FAO, UN-HABITAT, World Bank) in developing sustainable solutions to problems arising from urbanization, housing shortage, and climate change.



Bangladesh, the most vulnerable country in the world to the impact of natural disasters

Thank you very much for your attention!



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