Compact city policies:
a comparative assessment

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Aim of the study

1. To better understand the compact city concept and the implications of today's urban contexts
2. To better understand potential outcomes, particularly in terms of Green Growth
3. To develop indicators to monitor compact cities
4. To examine current compact city practices in OECD
5. To propose key compact city strategies

Compact City?

At the metropolitan scale:

Dense and proximate development patterns	Urban areas linked by public transport systems	Accessibility to local services and jobs
• Urban land is intensively utilized • Urban agglomerations are contiguous or close together • Distinct border between urban and rural land use • Public spaces are secured	• Effective use of urban land • Public transport systems facilitate mobility in urban areas	• Land use is mixed • Most residents have access to local services either on foot or using public transport

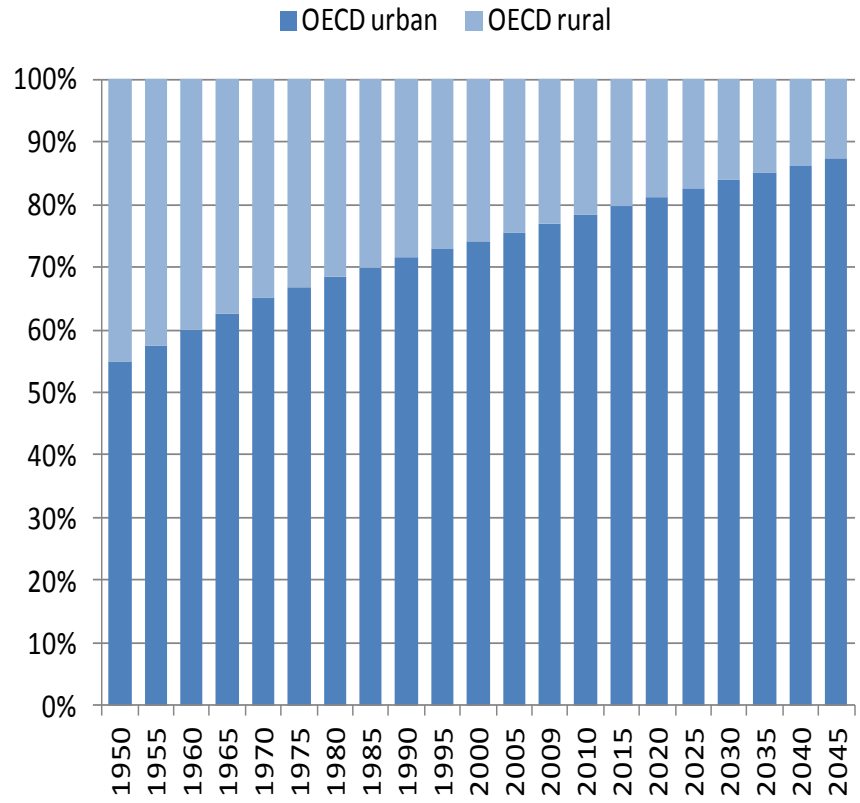
Key findings

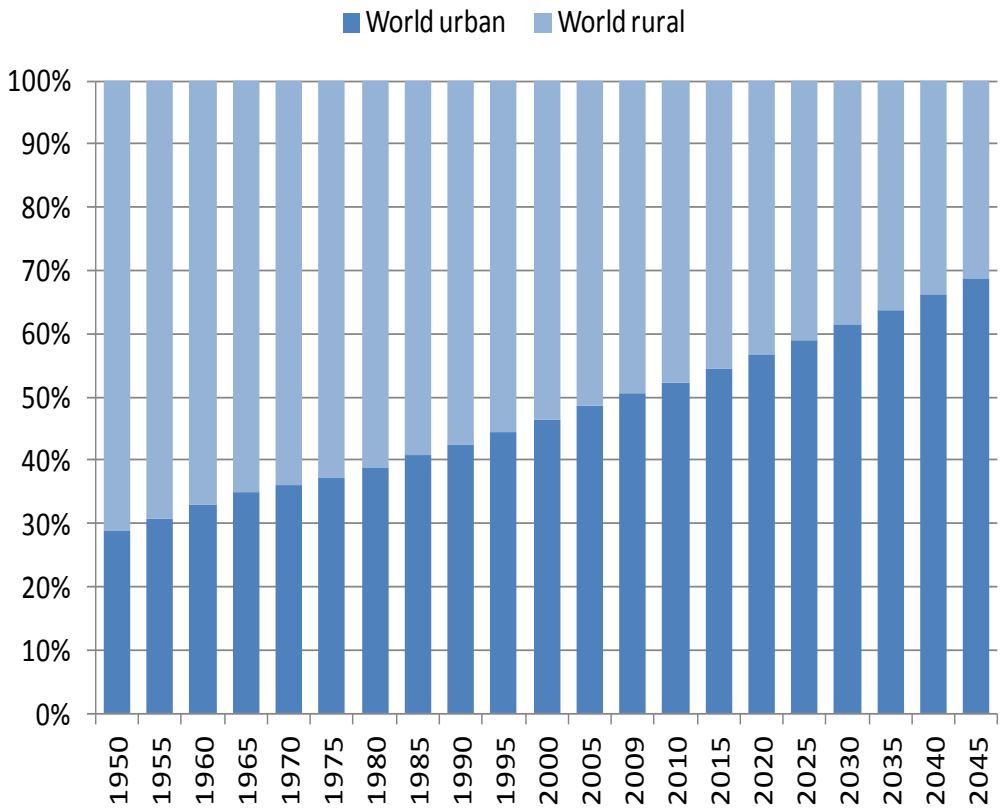
Five key urban trends

1. Urbanisation and the increasing need to conserve land resources
2. The threat of climate change to cities
3. The rise in energy prices
4. The challenge of sustainable economic growth
5. Declining population, ageing and smaller households in cities

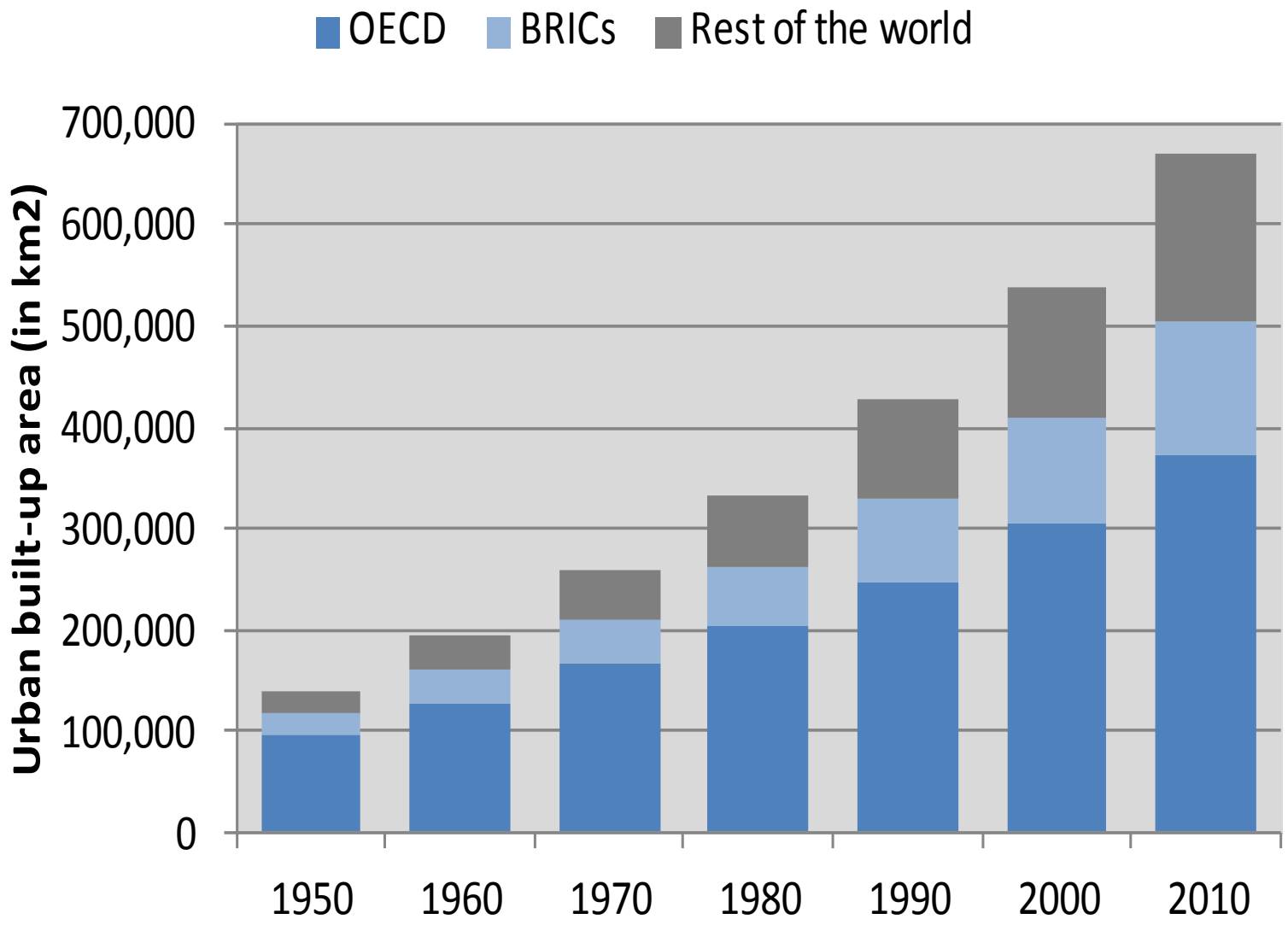
Urban population keeps increasing

OECD countries (left) and World (right)

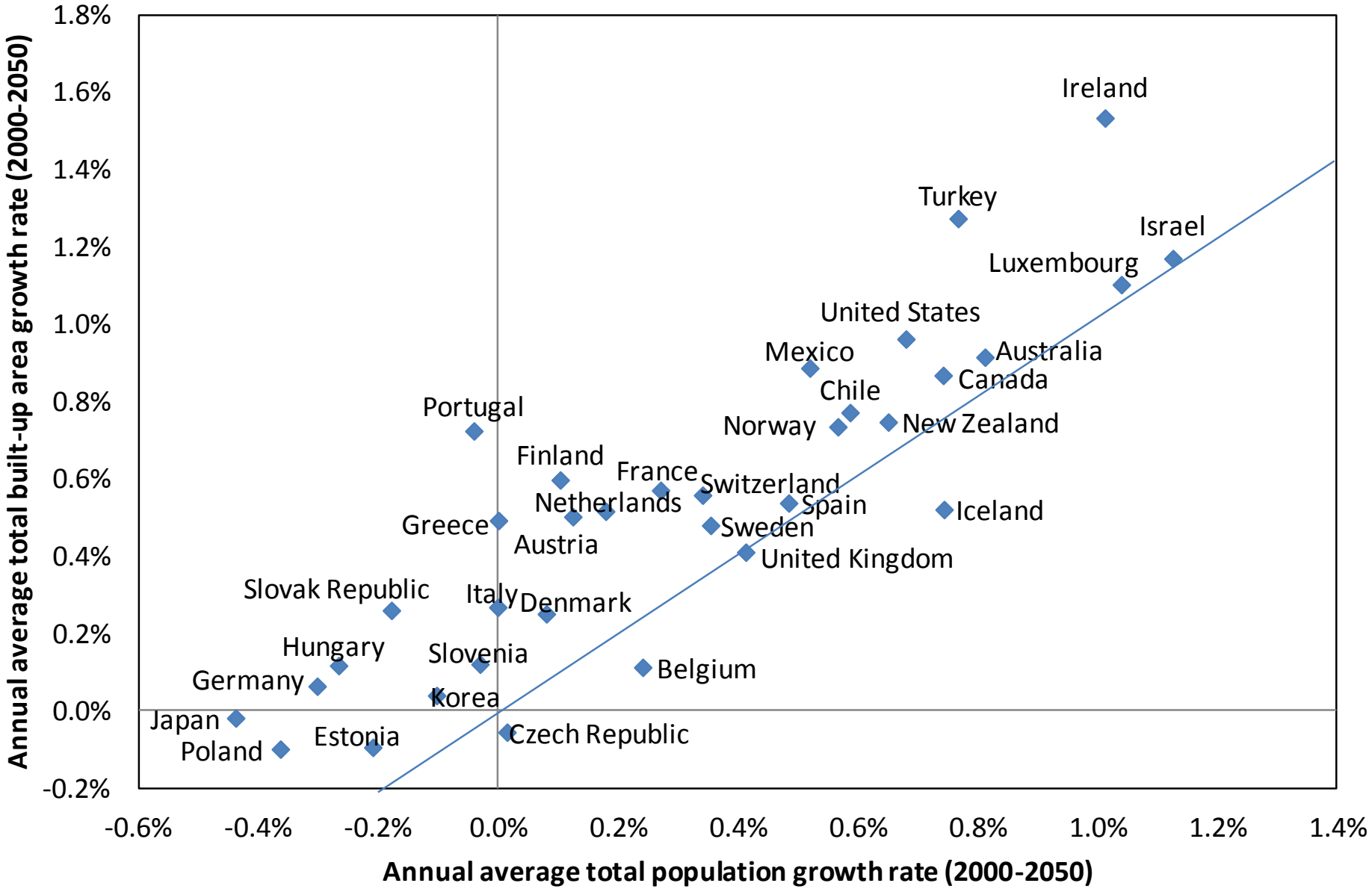




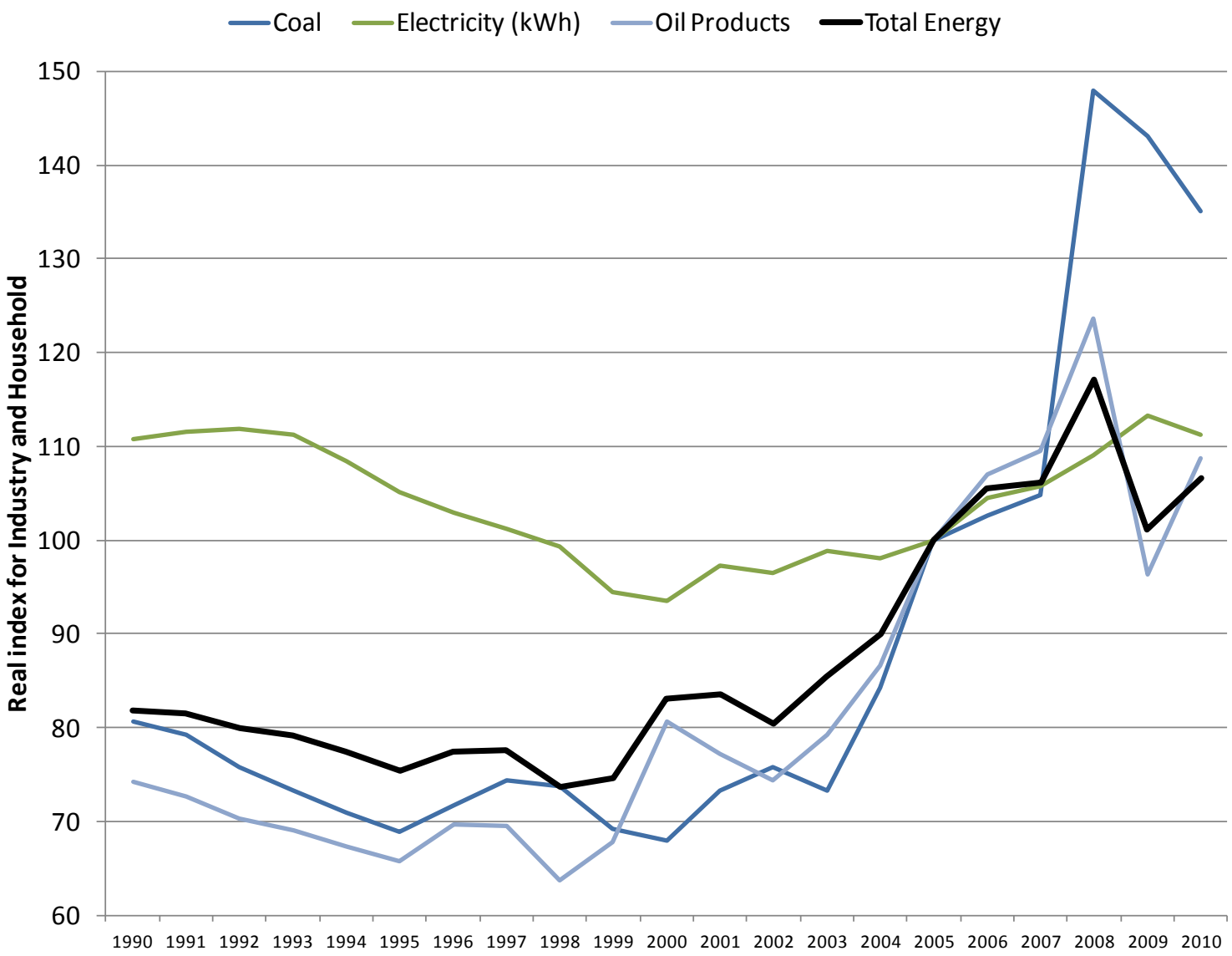
Land is consumed at a faster rate…



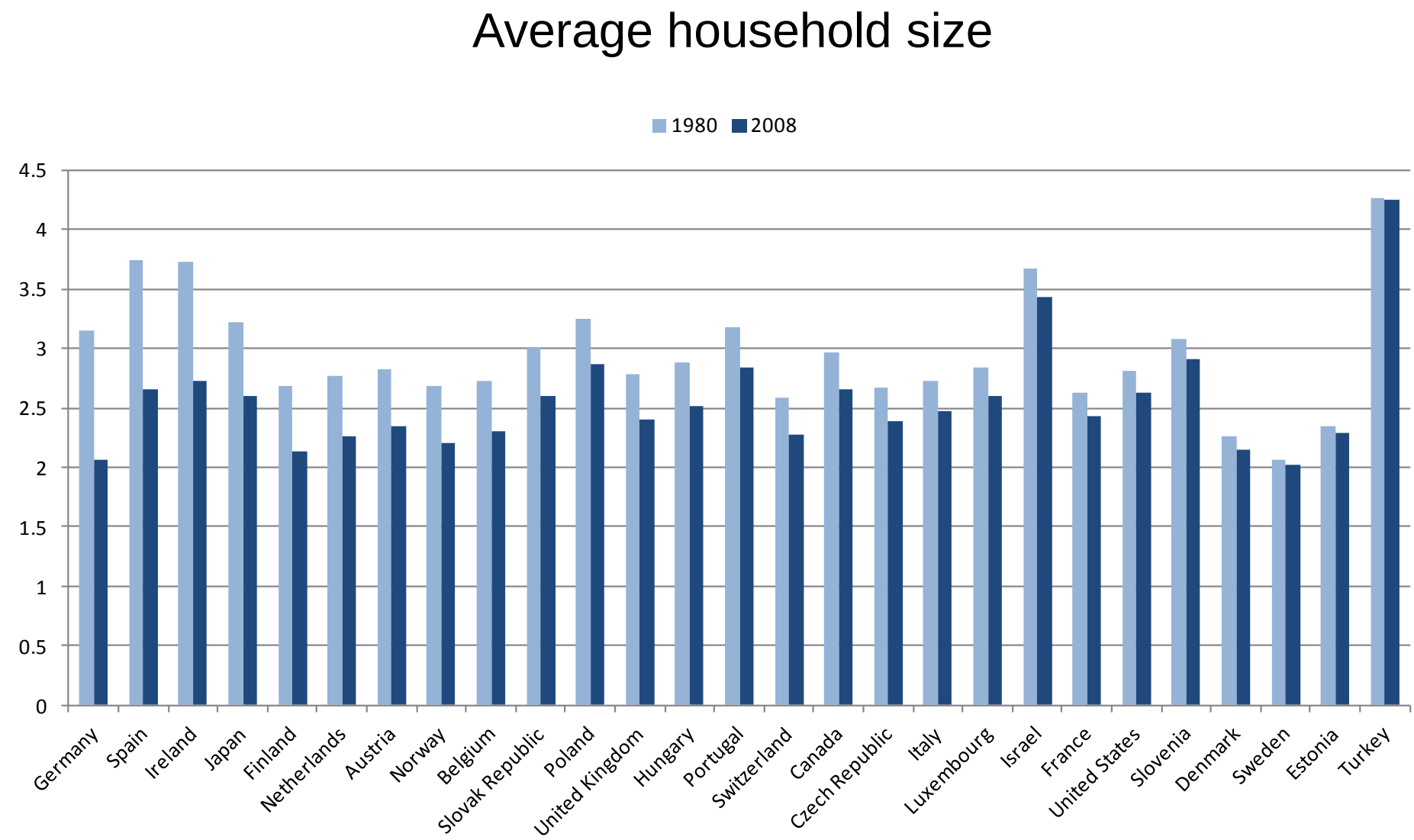
…than population growth



Energy price affects location choice

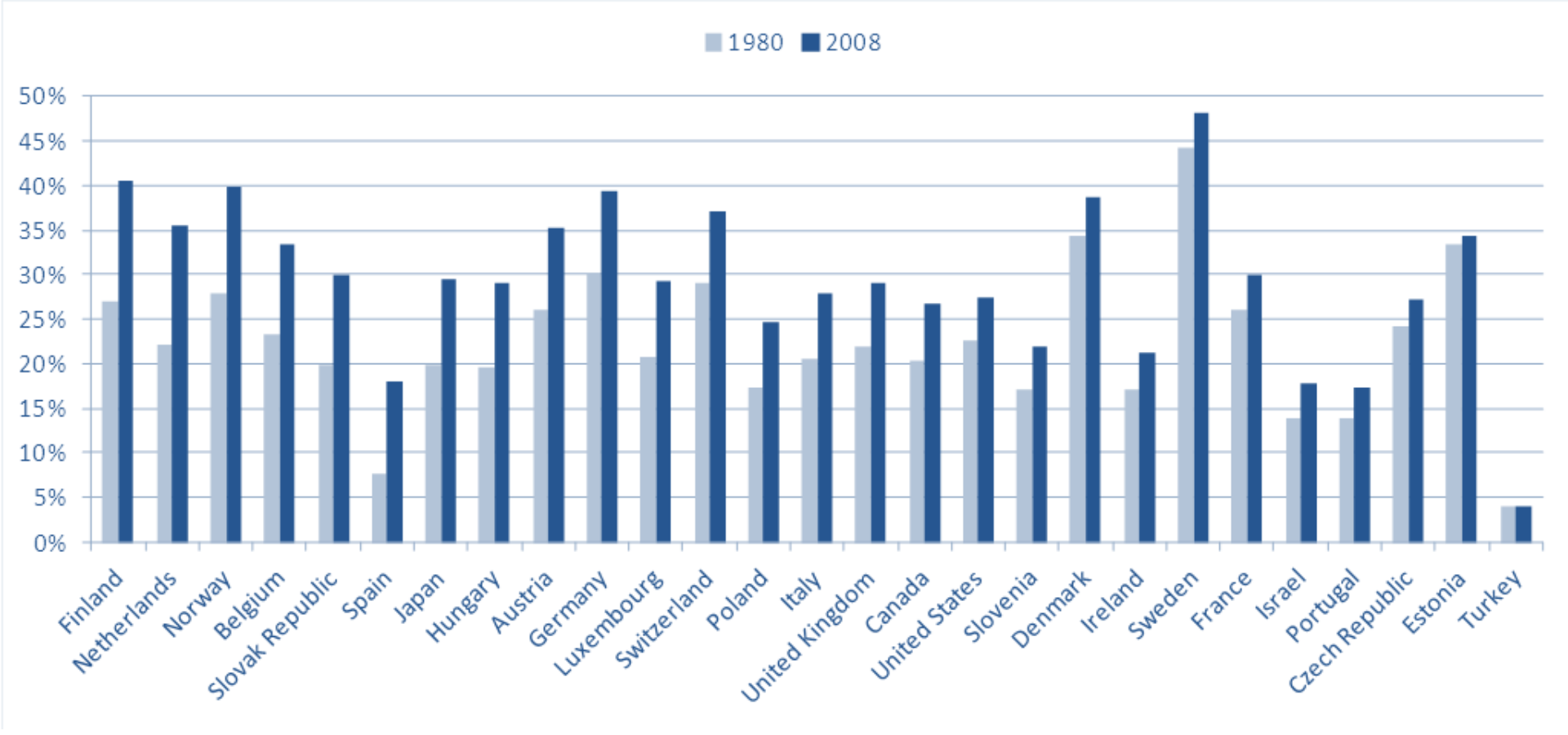


More demands for smaller houses…

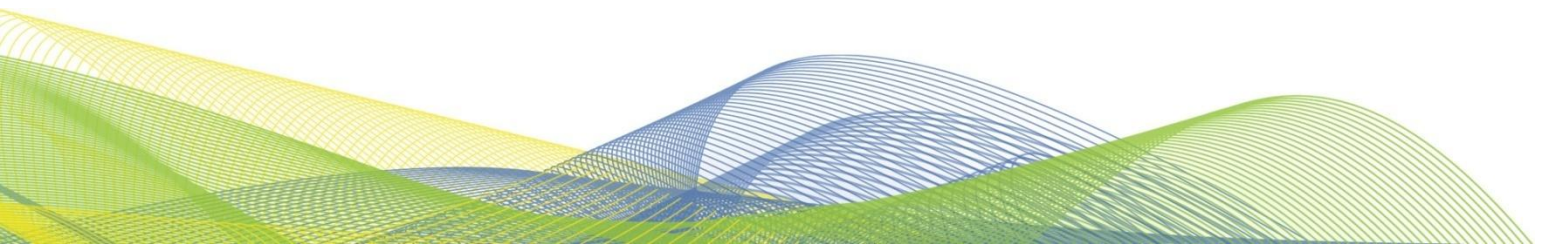


…and urban living

Percentage of one-person households



2. How can compact city policies contribute to urban sustainability and green growth?

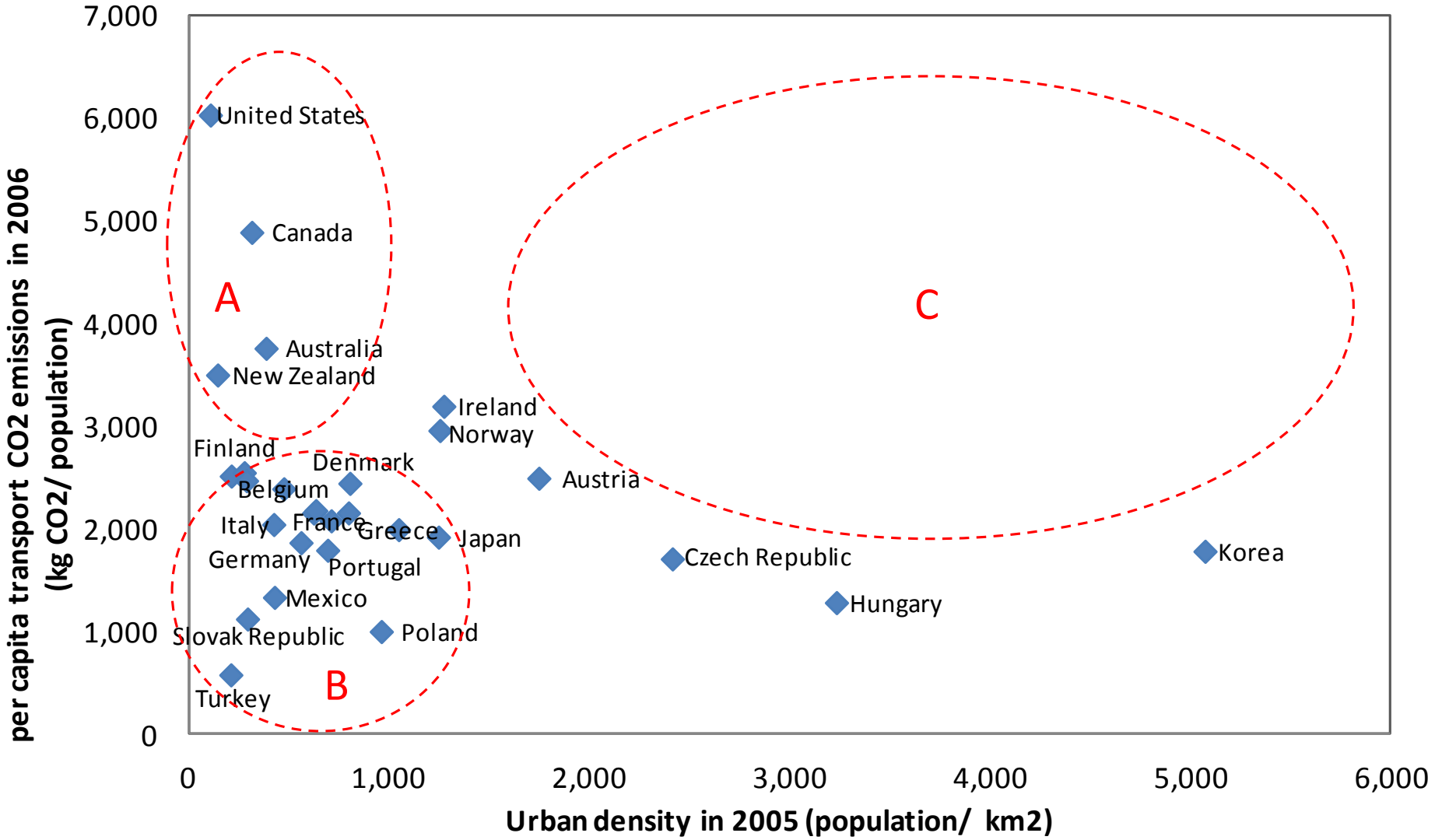


6 sub-characteristics

1. shorter intra-urban travel distances
2. less automobile dependency
3. more district-wide energy utilisation and local energy generation
4. optimal use of land resources and more opportunity for urban-rural linkages
5. more efficient public services delivery
6. better access to a diversity of local services and jobs

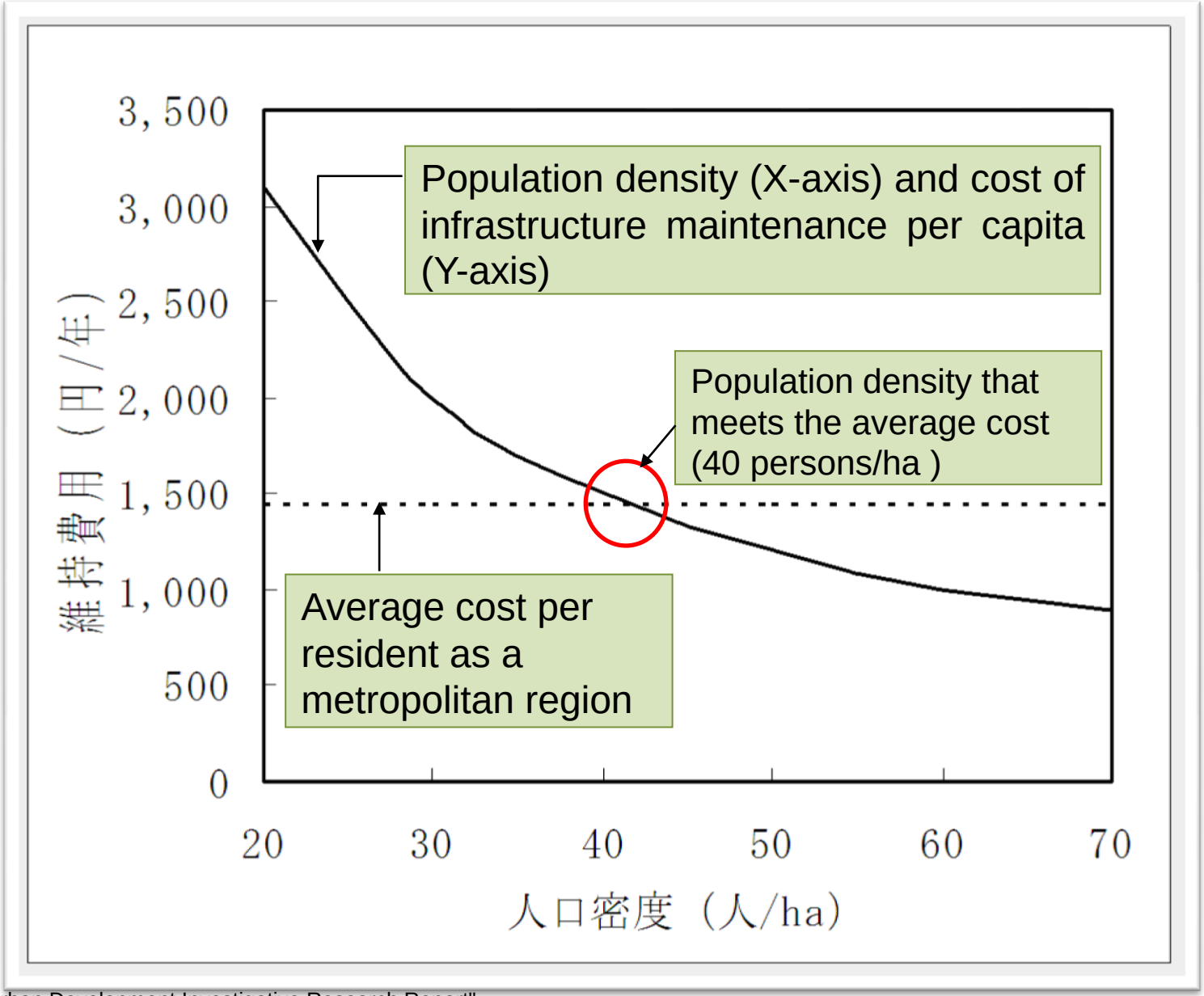
Environmental benefits

CO_2 emissions per capita in transport and density in predominantly urban areas, 2005-06



Lower expenditure on public service

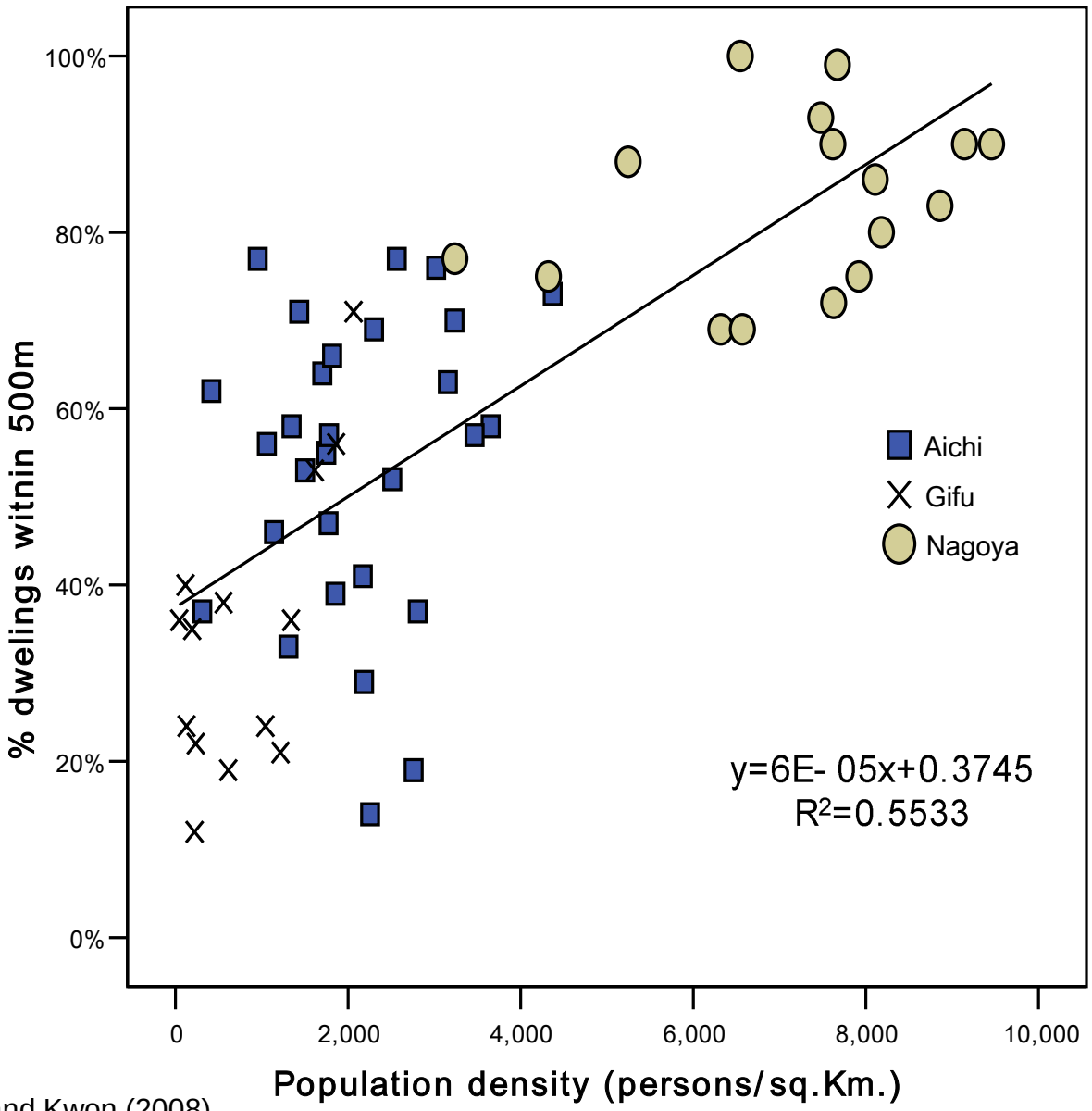
Administrative cost in low-density urban areas



Source: "Toyama City Compact Urban Development Investigative Research Report"

Walkability to local service

Distance to the nearest medical facilities



Source: Kaido and Kwon (2008)

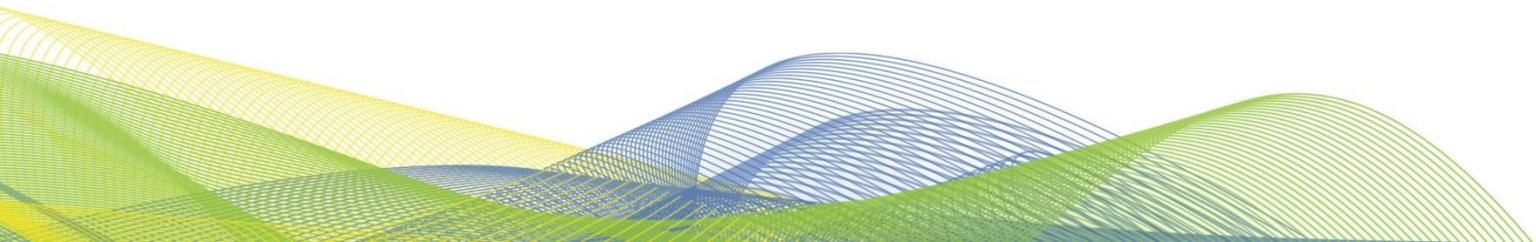
Mobility

- **Affordability : compact city can achieve lower transport costs**
- **Higher mobility for people without access to a car**

Concerns

- **Potential adverse negative effects**
  1. Traffic congestion
  2. Housing affordability
  3. Quality of life (loss of open and recreational spaces, etc.)
  4. Energy (urban heat islands, etc.)
- **Lack of local balances**
- **Long-term policy effects**

3. Measuring the performance of a compact city



The proposed 18 indicators

- Population and urban land growth
- Population density on urban land
- Retrofitting existing urban land
- Intensive use of buildings
- Housing form
- Trip distance
- Urban land cover

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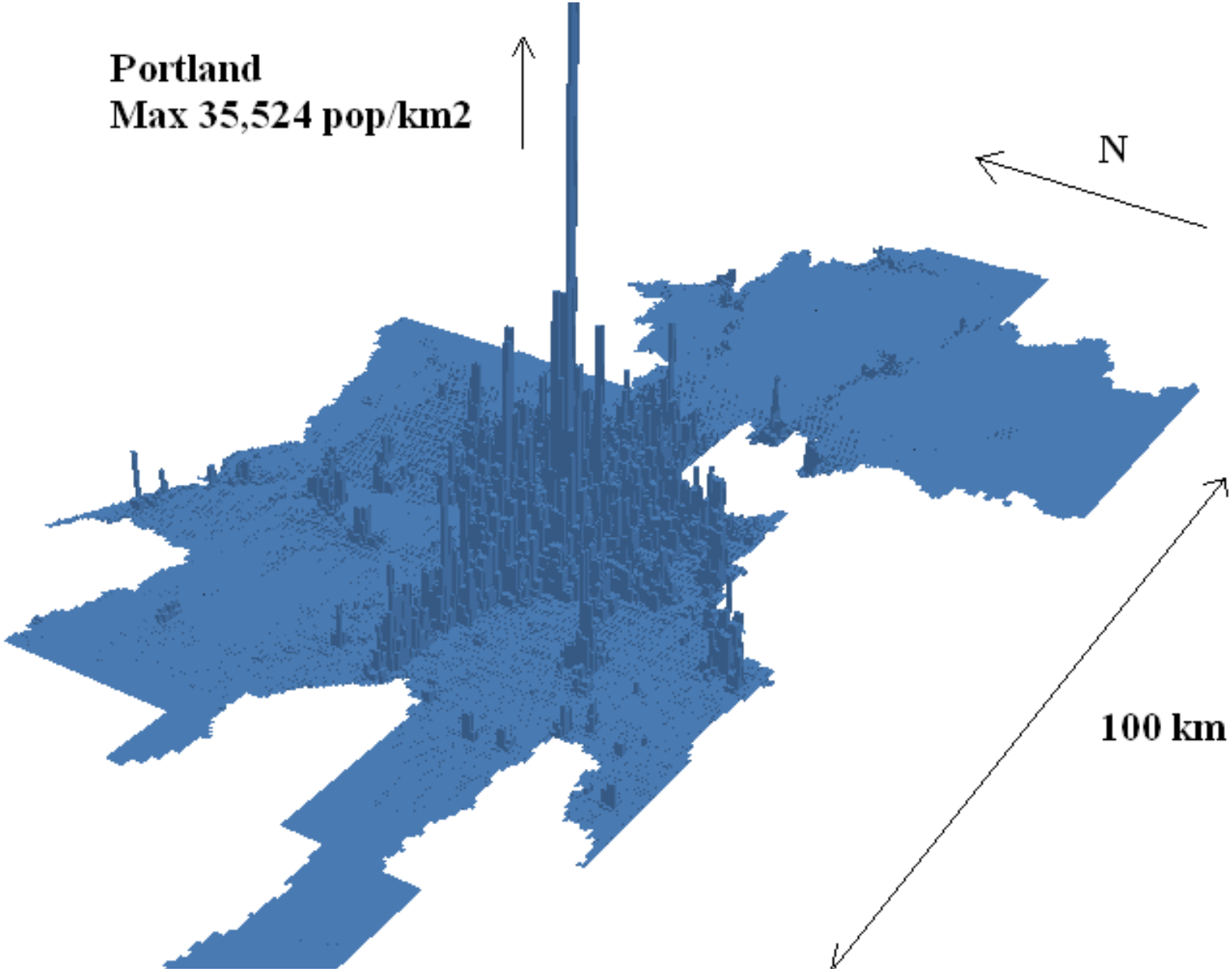
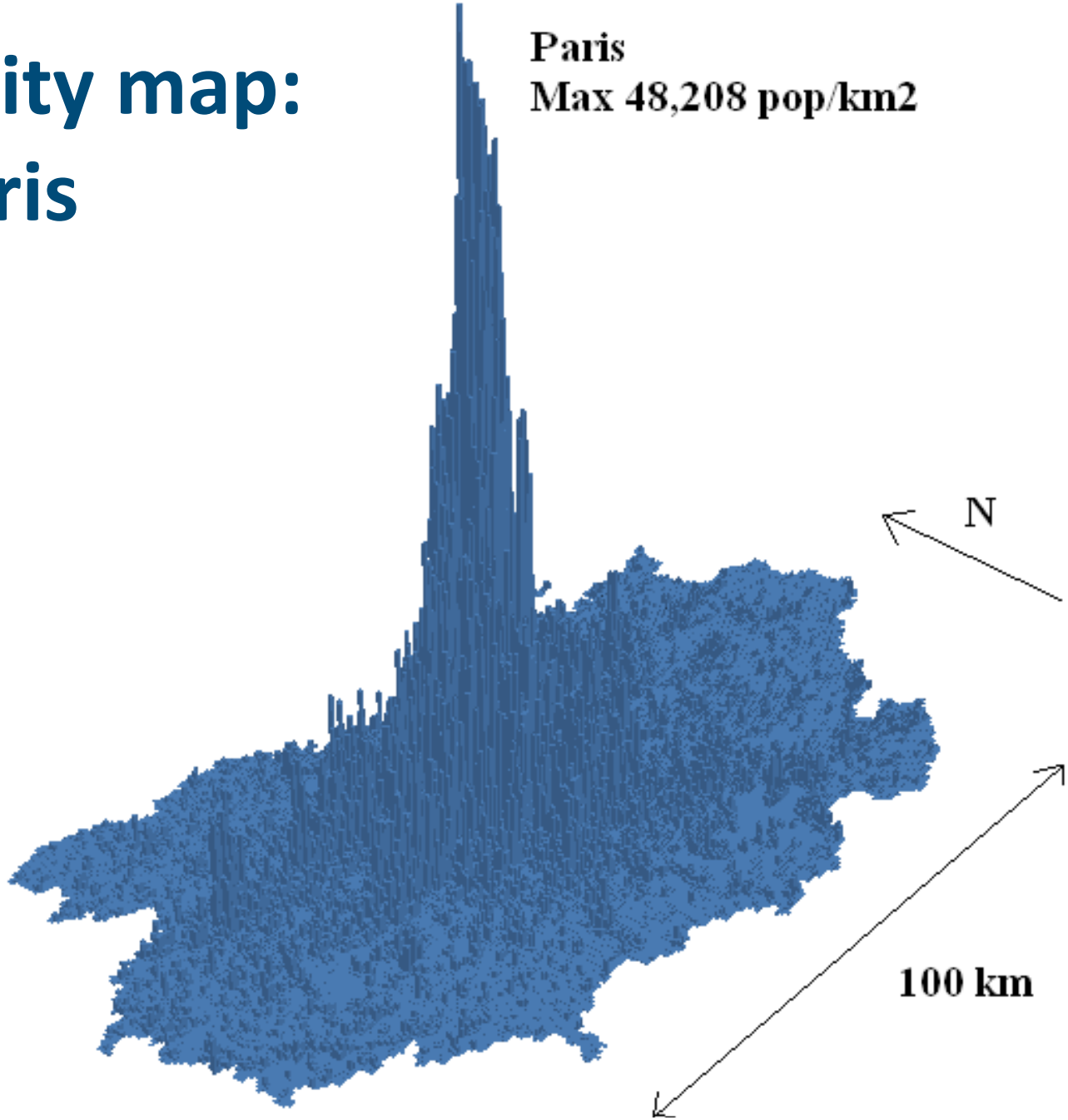
3-D density map: Portland



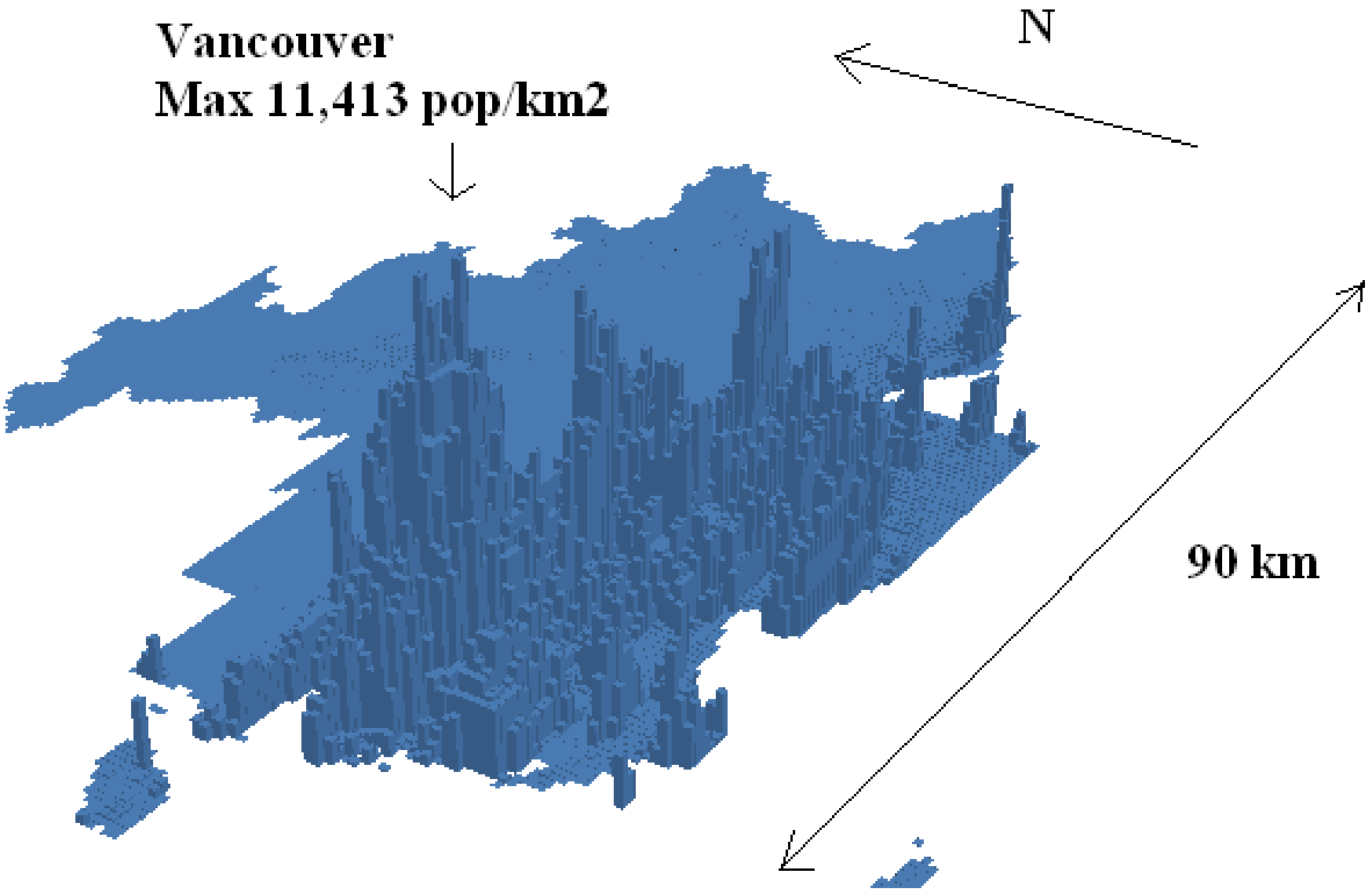
Source: OECD (2012), *Compact City Policies: A Comparative Assessment*, OECD, Paris.

3-D density map: Paris



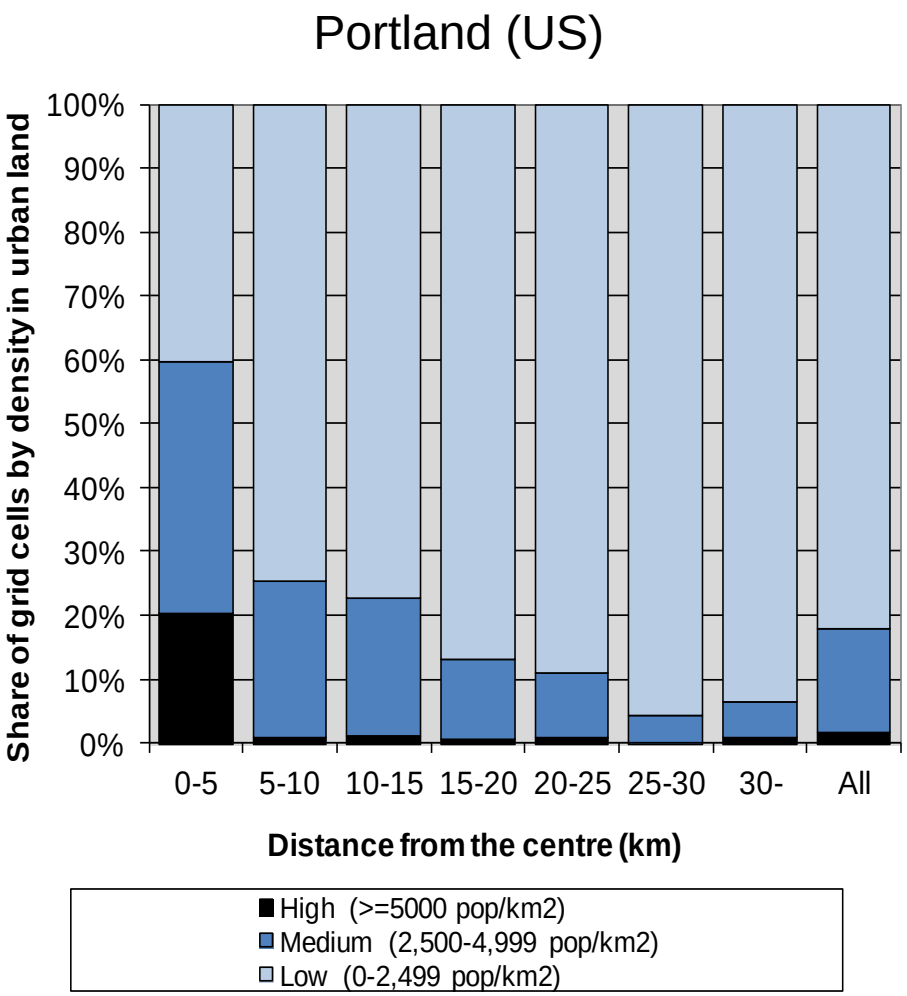
Source: OECD (2012), *Compact City Policies: A Comparative Assessment*, OECD, Paris.

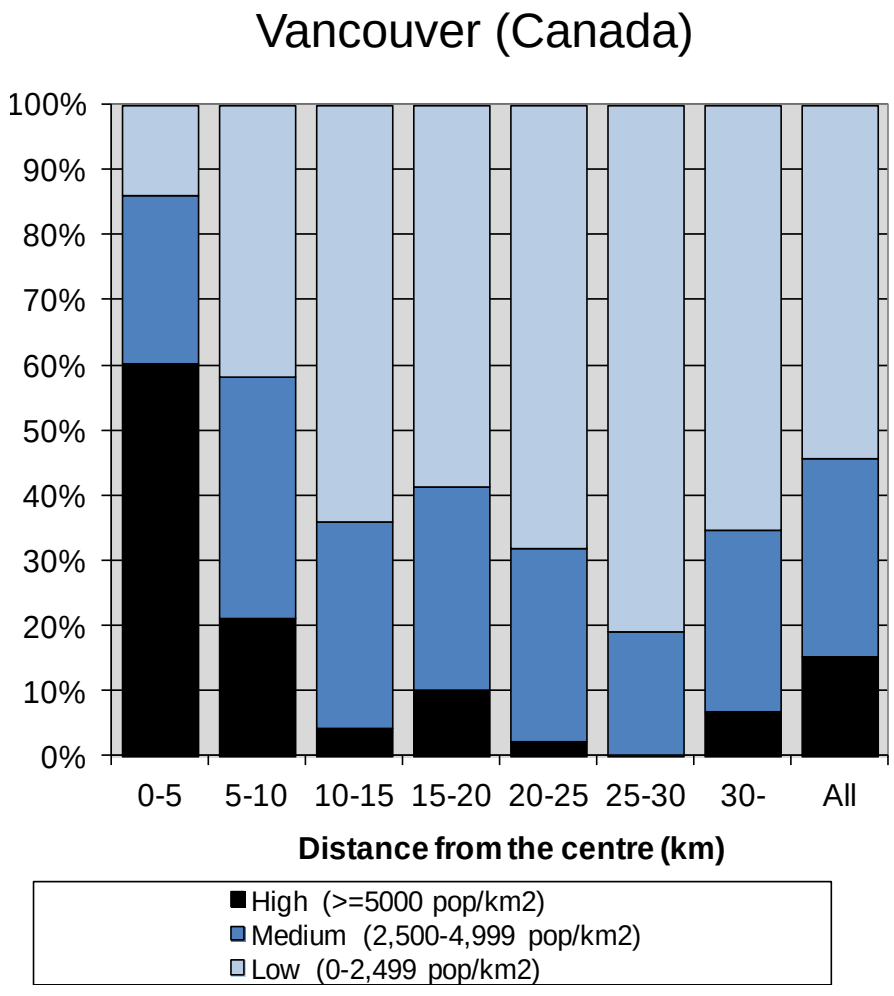
3-D density map: Vancouver



Source: OECD (2012), *Compact City Policies: A Comparative Assessment*, OECD, Paris.

Density gradient graph

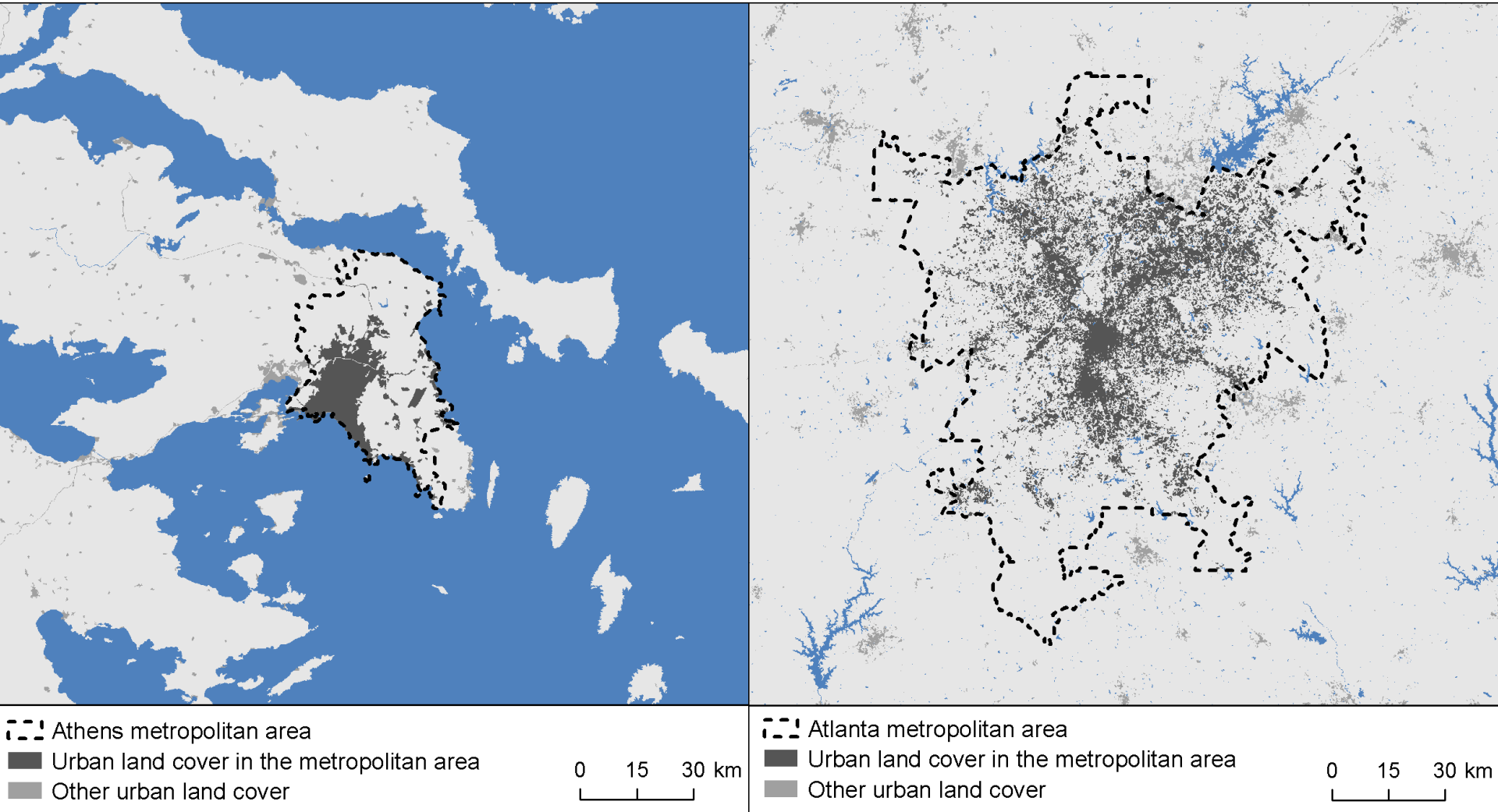




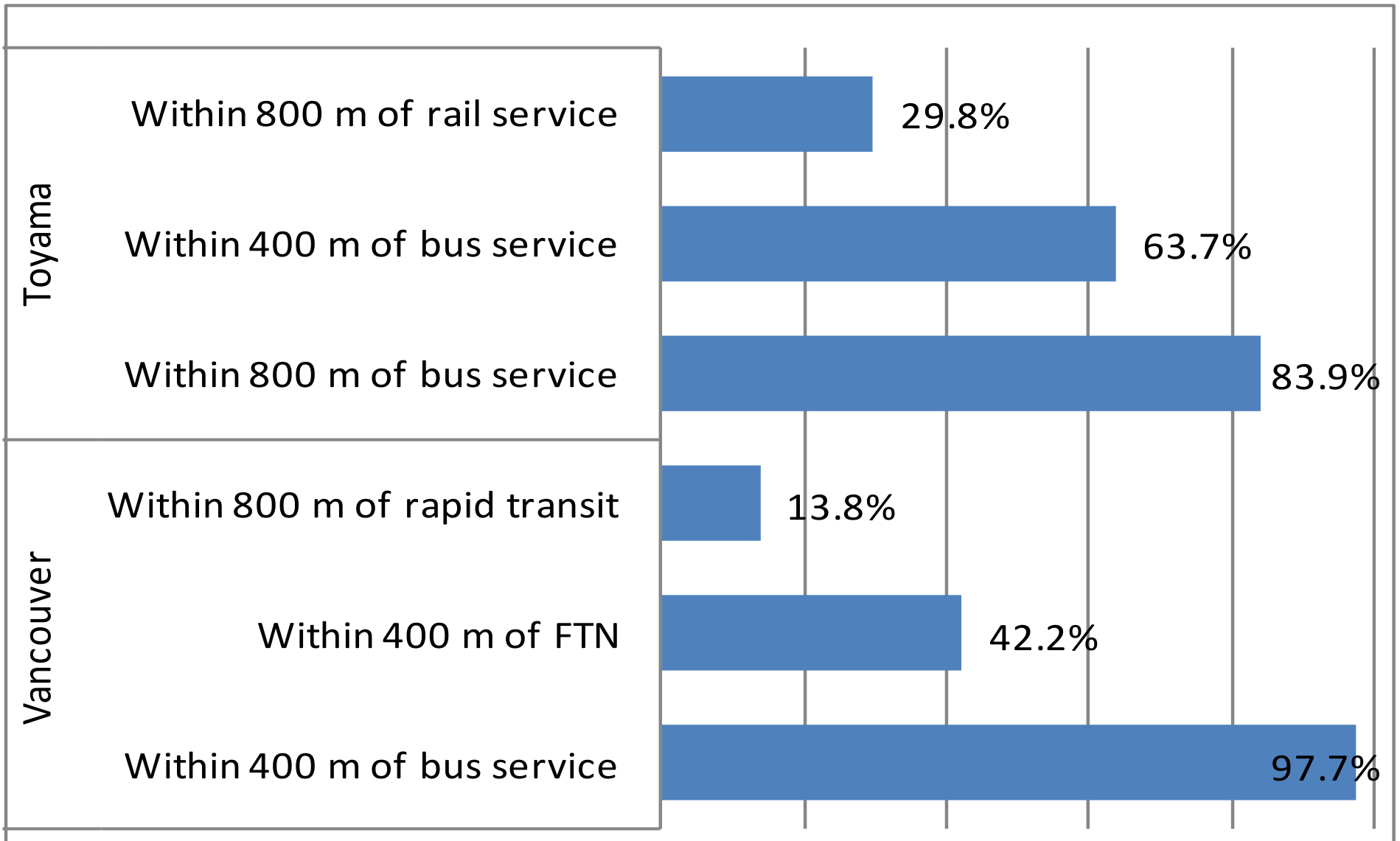
Urban land cover

Athens (3.4 million)

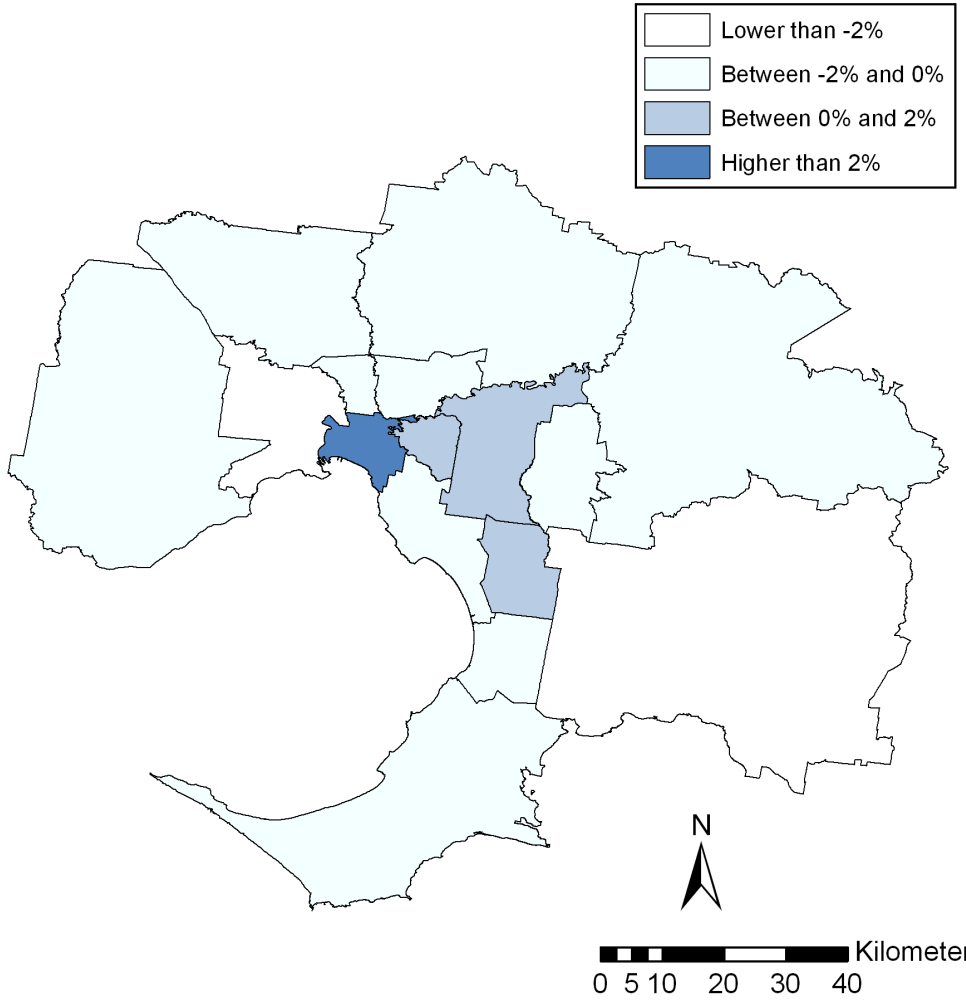
Atlanta (4.6 million)

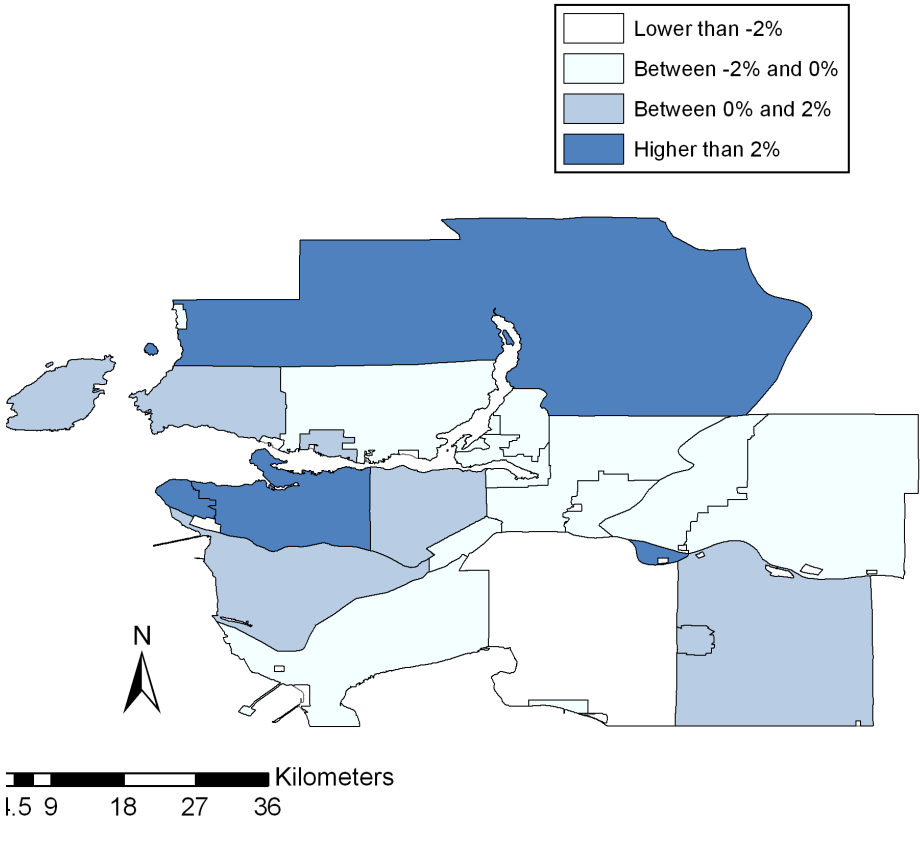


Population living close to transport stations/network



Matching local services and homes





Policy practices in use

Regulatory / informative	Fiscal	Public investment / partnership
• Master plan with explicit compact city goals / instruments • Urban design guidelines • Urban growth boundary / urban containment boundary • Greenbelt • Urban service boundary • Agricultural / natural land reserve • Minimum density requirement • Mixed-use requirement • Restriction on green-field development • Restricting location of facilities causing high trip frequency	• Taxation of under-density • Congestion tax / fee / charges • Subsidies for densification • Tax incentives for promoting development near transit stations • Location Efficient Mortgage • Split-rate property tax	• Purchasing land for natural reserve • Development agreement for dense/mixed-use development

Source: OECD compact city survey

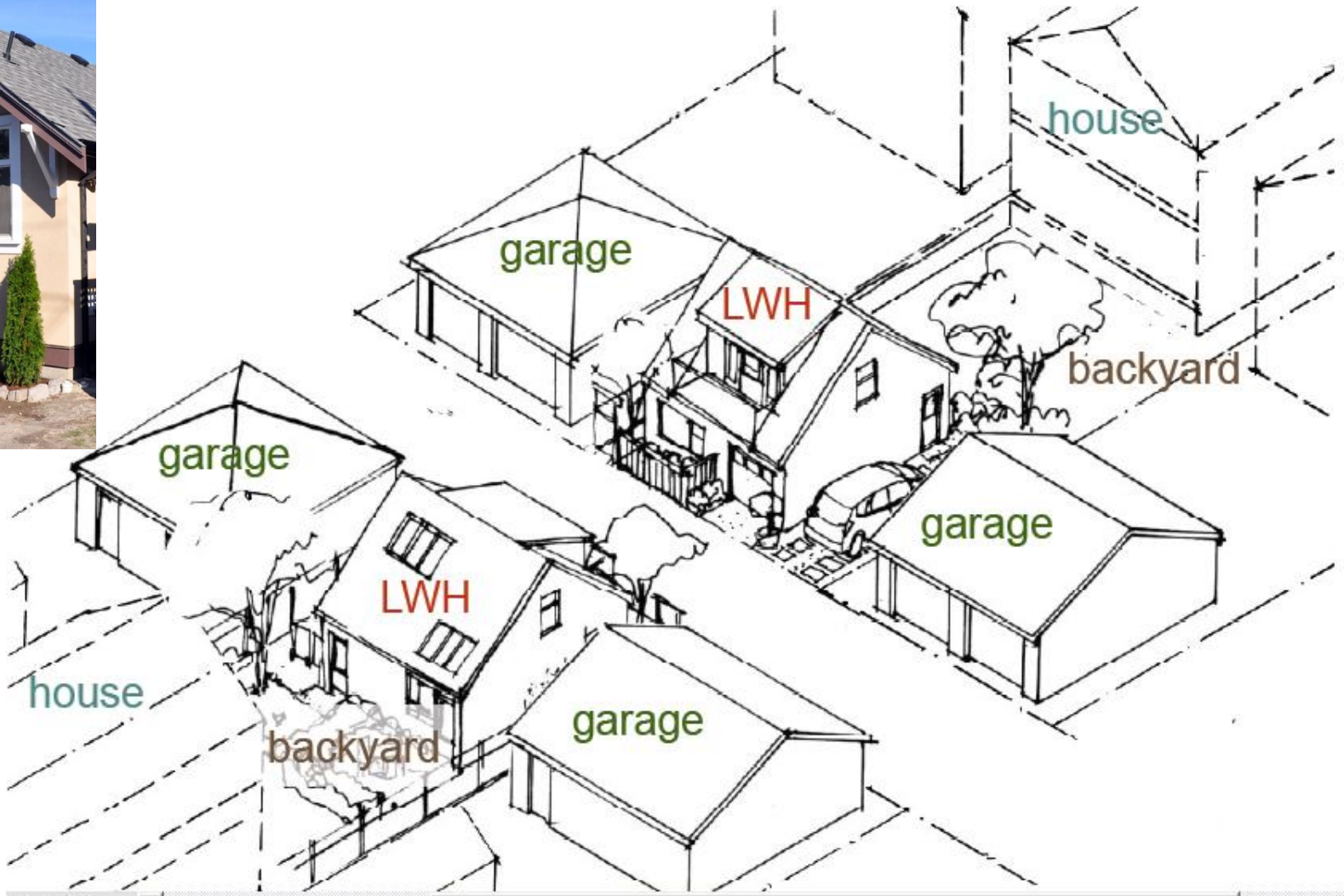
The five key strategies

1. Set explicit compact city goals	• Establish a national urban policy framework that includes compact city policies • Encourage metropolitan-wide strategic planning
2. Encourage dense and proximate development	• Increase effectiveness of regulatory tools • Target compact urban development in green-field areas • Set minimum density requirements for new development • Establish mechanisms to reconcile conflicts of interests • Strengthen urban-rural linkage
3. Retrofit existing built-up areas	• Promote brown-field development • Harmonise industrial policies with compact city policies • Regenerate existing residential areas • Promote transit-oriented development in built-up areas • Encourage “intensification” of existing urban assets
4. Enhance diversity and quality of life	• Promote mixed land use • Improve the match between residents and local services and jobs • Encourage focused investment in public space and foster a “sense of place” • Promote a walking and cycling environment
5. Minimise adverse negative effects	• Counteract traffic congestion • Encourage the provision of affordable housing • Promote high-quality urban design to lower “perceived” density • Encourage greening of built-up areas

Inner-city TOD (LRT, Toyama)

Transfer between the transport modes (LRT, Toyama)

Retrofitting built-up areas + housing affordability (Laneway Housing, Vancouver)



Urban design in contexts (Southeast False Creek, Vancouver)

Storm water + heat island + perceived density (green street, Portland)

Public and private green space (Paris)

Improving metropolitan governance

- A vision: region-wide, integrated, long-term
- Articulate the roles and responsibilities of all key actors and stakeholders in the vision
- Vertical and horizontal coordination
- Accountability, transparency and reporting

Next steps

- **More case studies**
  - Fast-growing metropolitan areas (Asia)
  - Shrinking metropolitan areas (US, Japan, Europe)
- **Theme specific studies**
  - Housing and compact city
  - Energy and compact city
- **Indicators**

Thank you

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