INTEGRATED PLANNING APPROACHES IN HIGHER EDUCATION: COLLABORATIVE EDUCATIONAL PROTOTYPE TOWARDS INTEGRATED APPROACHES IN THE PLANNING OF INCLUSIVE, PEOPLE-CENTRIC AND CLIMATE-RESILIENT CITIES







Project: 2022-1-EL01-KA220-HED-000089374 Erasmus+ Co-funded by the European Union. Views and opinions expressed are however those of

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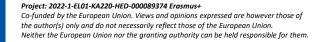




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Introduction I Planning for inclusive, people-centric and climate-resilient cities Date (to be modified by partners)





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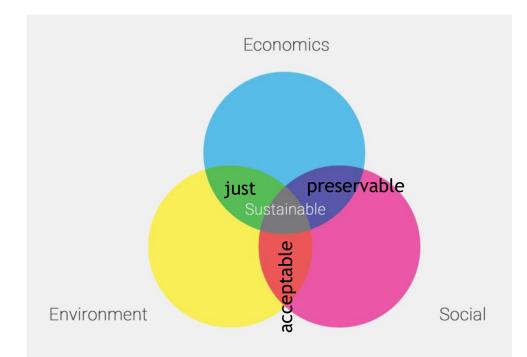
What is sustainability?



Multidimensional conceptholistic approach

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- Environment: Ecological integrity
- Economic: Access to resources, independence and financial security
- Social: Public health, security, human interaction, personal, labor and cultural rights



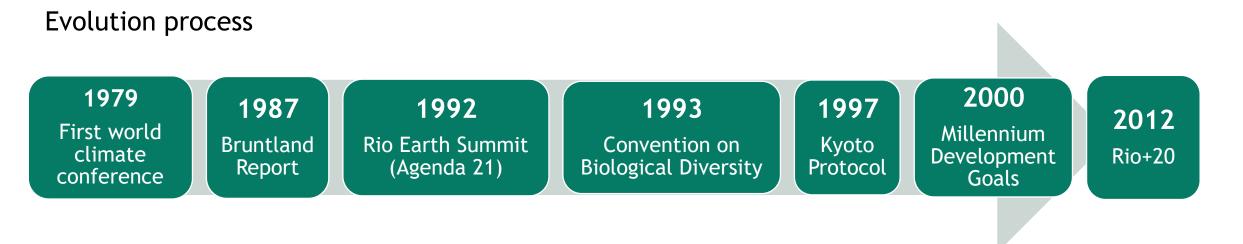
Source: https://www.pozzoni.co.uk/practice/sustainability



The origins of "sustainability"



- "Our common future" or Bruntland Report, 1987
- Definition:
 - "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs"







The need for sustainability



- Climate change
- Nature resources are limited
- Rapid urbanization
- Social inequalities
- Public health issues
- Over-use of renewable resources
- Pollution

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• Unattractive/inaccessible urban space



Source: http://www.standrewshfx.ca



Source: https://city2city.network/



Source: https://www.history.com/



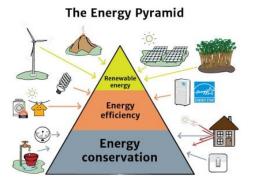
Source: https://www.cabq.gov



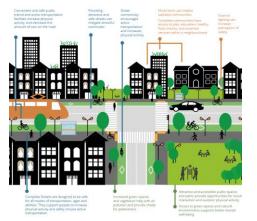


What sustainability can achieve

- Ensures a future for all
- Reduced energy usage
- A healthy habitat for all
- Societal impact
- Accessible cities
- Protection of natural environment
- Ecosystems preservation



Source: https://www.solarschools.net/



Source: https://participatoryplanning.ca/



Source: https://www.thezebra.com/



Source: https://www.un.org/es/



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Planning sustainable cities

According to Rio+20, it is important to:

- Promote an integrated planning approach to urban development for building sustainable cities (housing, social services, health and safe environment, sustainable transport system, green spaces and parks, job provision, water supply, sustainable energy)
- Facilitate sustainable management of urban waste (3Rs)
- Give emphasis to cities that implement sustainable development policy measures and adopt sustainable urban planning principles
- Highlight the important role of local administrative bodies in developing future visions for cities
- Foster the cooperation between cities

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Source: https://www.treehugger.com/



Planning sustainable cities



The formal framework of planning systems entail

• Policy measures, institutions, processes and plans

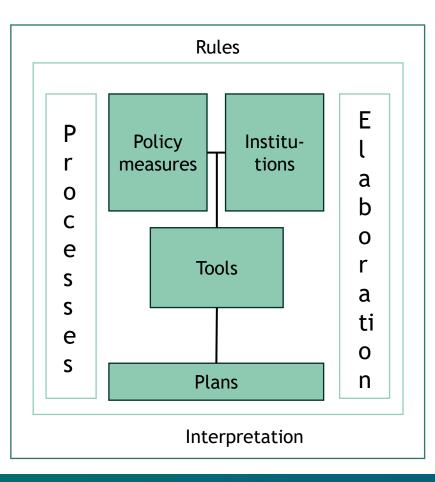
Factors affecting the formulation of the formal planning framework

- Political and economic conditions
- National institutional and constitutional systems
- Socio-cultural structure

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Basic characteristic of formal planning framework

- Who's in charge? National or local administration?
 - National vs local relations, State vs citizen, formal system operation: efficient vs inefficient







Towards an integrated approach

- Conventional planning approaches do not consider both transport and urban dimensions
- However, spatial planning is an interdisciplinary concept
- Urban and transport dimensions play a pivotal role in shifting from conventional to sustainable approaches
- How could these be linked?

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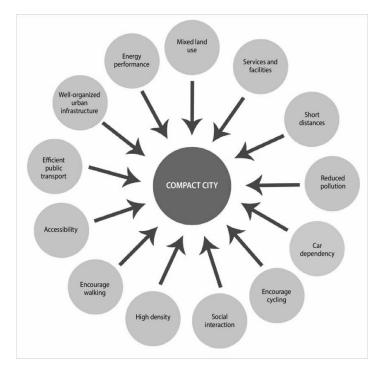
• Through combined urban and transport policies and intervention under the main concept of **compact city**



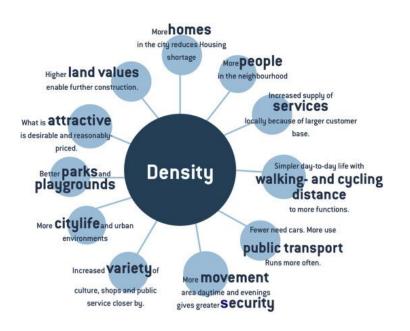
Source: https://www.treehugger.com/







Source: Rogatka and Ribeiro, 2015



Source: Bibri et al., 2020

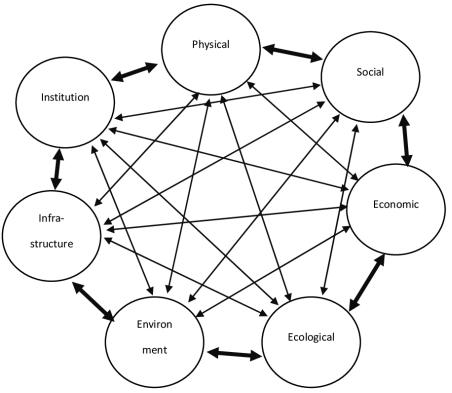








Source: Roychansyah and Felasari, 2016



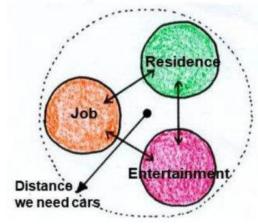
Source: Bhagwat and Devadas, 2020



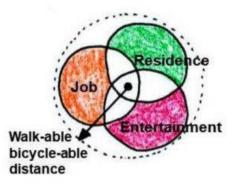


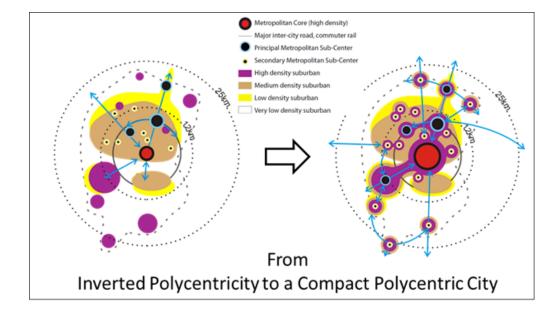


Zoning of functions makes people depend their transportation on private cars.



Compact nodes can reduce car uses and people can walk or use bicycles in the community.





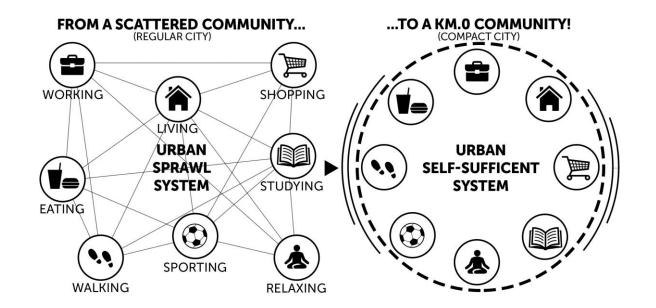
Source: Shrivastava and Singh, 2020

Source: https://www.joburg.org.za/

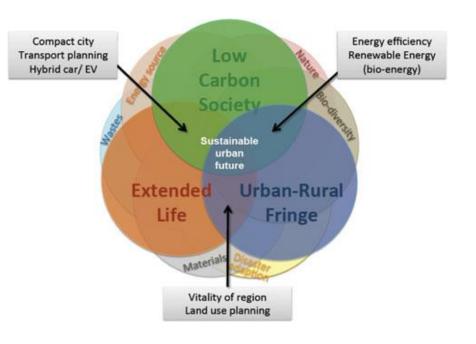








Source: http://www.tari-architects.com/portfolio-item/seoul-compact-city/

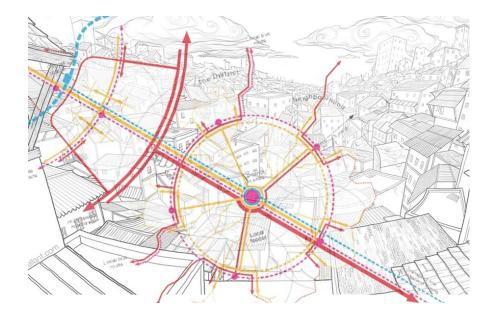




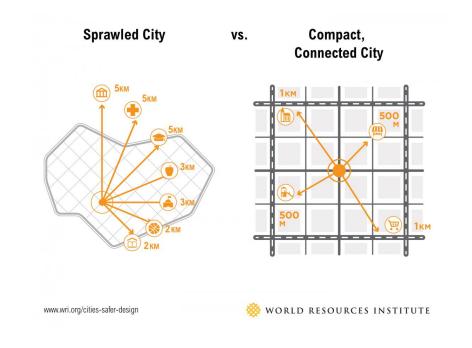








Source: https://www.re-thinkingthefuture.com/



Source: https://slocat.net/1527-2/





Source: https://www.burohappold.com/

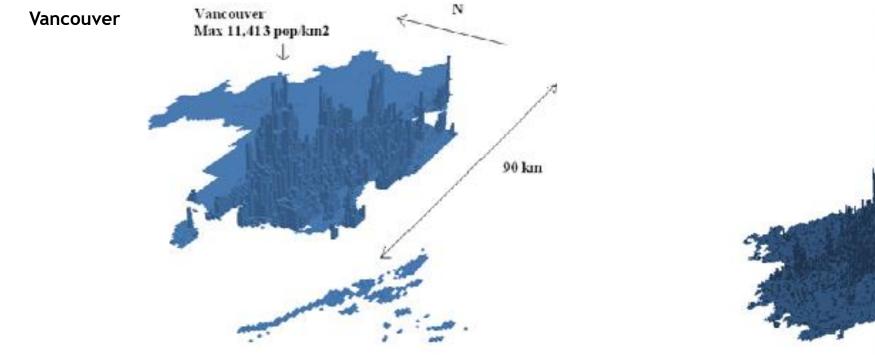


Copenhagen

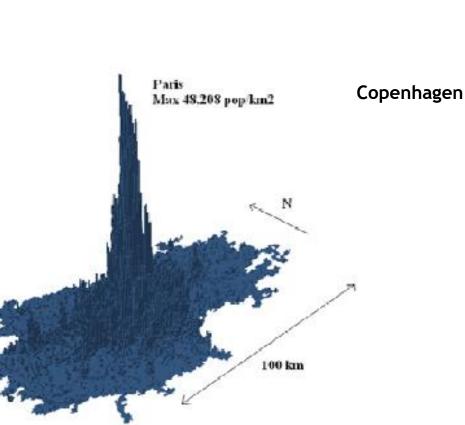
Source: Heysham et al., 2021







Source: https://www.oecd.org/

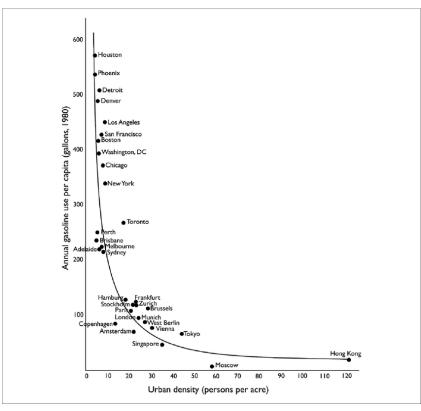


Source: https://www.oecd.org/



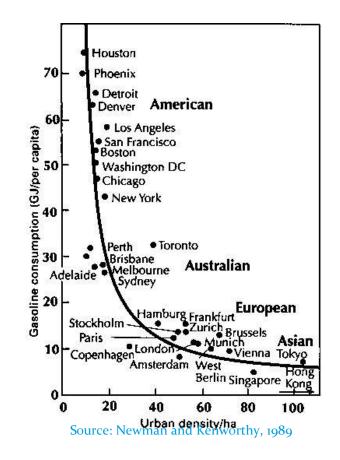


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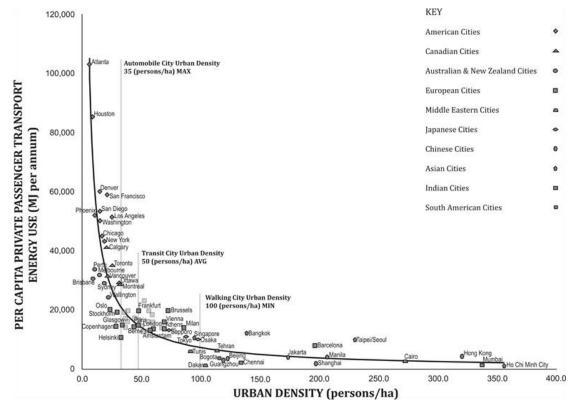
Source: Newman and Kenworthy, 1989



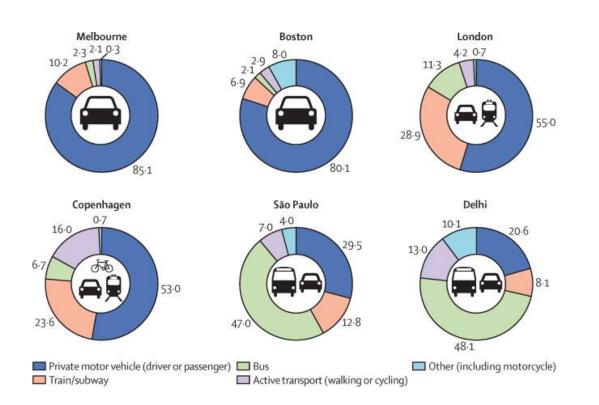












Source: Stevenson et al., 2016

Source: Newman and Kenworthy, 2015





How compact is a city? Defining the parameters

- Population density (pop/km²) \rightarrow building density (average built height in m)
- Public transport (area served by -at least- a means of transport / radius from a PT stop that functions as a central point)
- Accessibility (cycle paths %)
- Land-use mix

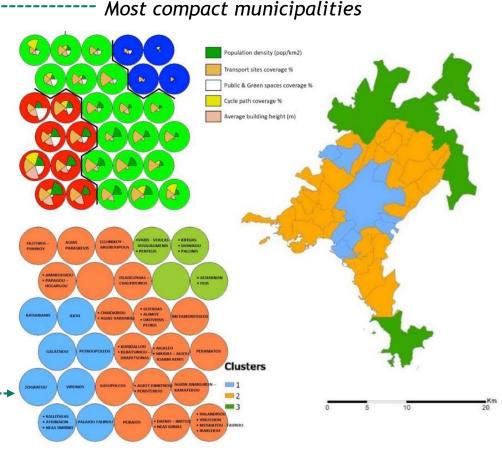
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• Public & green spaces (% coverage)

Index calculation: 1st step: data were inserted in a table / a normalization method ($X_i = X_i - X_{min}/X_{max}-X_{min}$) was applied in order for the data to range between 0-1

2nd step: final index= $V_1 + V_{2+} V_{3+} V_{4+} V_5$

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Source: Kyriakidis & Iliadis (2018)





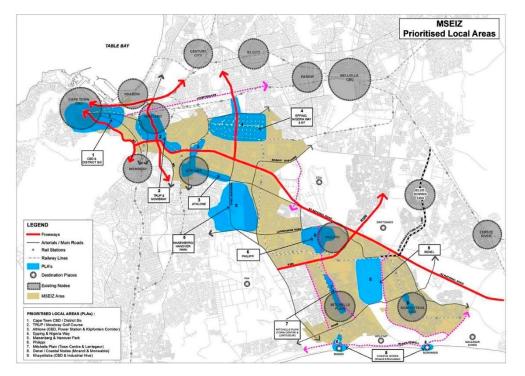
Integrated urban-transport planning

- Integrated regional/urban and transport planning constitutes a basic principle for building sustainable cities
- Land uses and urban identity should be related with transport modes and operations

Goals

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- Compact cities
- Urban sprawl mitigation
- Reduction of GHG emissions
- Human-friendly cities
- Sharing and circular economy
- Self-retained citizens, responsible with the natural and urban environment
- Equitable, accessible and cohesive cities



Source: Moyo et al., 2021





thank you!



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