



Urban planning & Smart cities

In this session:

- Planning for sustainable cities
 - Smart cities
- Progress of SDG 11

Planning for sustainable cities

- SDG Academy, Prof. Jeff Sachs
- https://www.youtube.com/watch?v=r_NbRJHRYS0



Urban infrastructure

- Urban infrastructure means the inside structure of a urban region, city, neighbourhood or some other locality
- How the different functions are situated in the urban infrastructure
 - population, living, working areas, production, services, recreational areas, green infrastructure, traffic network, technical infrastructure
- The development of urban infrastructure is governed by urban planning processes and building (and other) permits
 - Ministry of Environment 2018



City of Helsinki / new developments

- Many new developments in the Helsinki area include Malmi airport, Myllypuro, Pasila, Jätkäsaari and Koivusaari
- Development goal: to densify the urban structure



Malmi airport area

- Helsingin Sanomat:
- <https://www.hs.fi/kaupunki/art-2000006457258.html>
- <https://www.hs.fi/kaupunki/art-2000006397794.html>
- search also other material

Östersundom - new growth area in the east

- <https://www.uuttahelsinki.fi/fi/ostersundom>
- Helsinki, Vantaa and Sipoo
- urban structures built around the extended metro line



Smart cities

- A smart city is a municipality that uses **information and communication technologies** to increase operational **efficiency**, share **information** with the public and improve both the quality of government **services** and citizen **welfare**.
 - IoT Agenda



Three generations of smart cities 1

By Boyd Cohen, www.fastcompany.com

• Smart Cities 1.0: Technology Driven

- technology providers encourage the adoption of their solutions to cities
- cities are not necessarily able to understand the implications of the tech solutions
- the impacts to citizens and quality of life not well-known

Can you find examples of non-user-friendly technologies?

(e.g. Helsinki travel card reader 2016)

Three generations of smart cities 2

By Boyd Cohen, www.fastcompany.com

- **Smart Cities 2.0: Technology Enabled, City-Led**
- led by cities, as opposed to technology providers
- the municipality—led by forward-thinking mayors and city administrators—takes the lead
- city determines the future characteristics of their city and how smart technologies and other innovations are used

Examples?

e.g. charging network for electric vehicles with map application in Barcelona

Three generations of smart cities 3

By Boyd Cohen, www.fastcompany.com

• **Smart Cities 3.0: Citizen co-creation**

- leading smart cities are promoting citizen co-creation models
- emphasis on equity and social inclusion
- cities are providing the enabling conditions to e.g. local sharing activities
- slightly more chaotic and unpredictable

Examples?

e.g. Medellin Ciudad Inteligente, IT skills and services for citizens

https://www.youtube.com/watch?v=-FvLpj61D_o

Three generations of smart cities

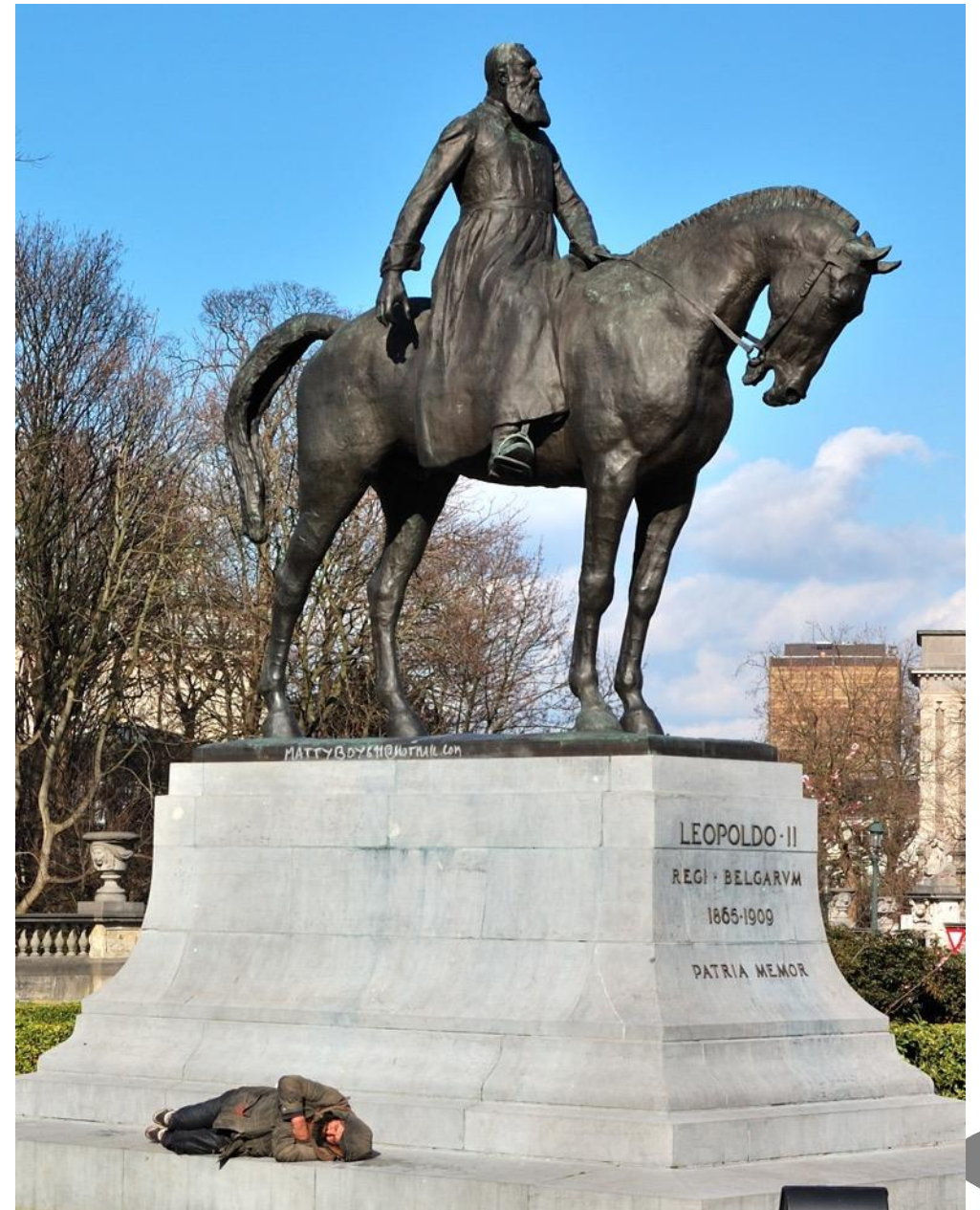
By Boyd Cohen, www.fastcompany.com

- most cities start from 1.0 and progress to 2.0
 - some get stuck to 1.0 or 2.0, many move on to 3.0
 - e.g. Singapore: no prospects for 3.0.
- some jump directly to 3.0



Smart cities

- <https://www.youtube.com/watch?v=bANfnYDTzxE>
- CNBC
- <https://www.youtube.com/watch?v=m45SshJqOP4>
- TED Singapore



IMD Smart City Index 2019

- <https://www.imd.org/research-knowledge/reports/imd-smart-city-index-2019/>
- 102 cities of the world evaluated and ranked by their smartness
- analyses smart structures and technology, as well as priority areas and citizens' attitudes

Media and sustainable cities

- What is the role of media in promoting sustainability?
 - traditional media?
 - social media?
- Which media channel is the most reliable for sustainability and climate news?

Assessing websites

- Access
 - how easily the sustainability information can be found; is it found in one place
- Coverage
 - which sustainability issues/themes are included
- Depth
 - the amount of specific, detailed, concrete and quantified information
- Management
 - how well the city management provides commitment, leadership, engagement, strategy and targets
- Versatility
 - how varied is the use of information, media formats and citizen engagement

More information of website assessment:

<https://aaltodoc.aalto.fi/handle/123456789/18498>

especially pages 76-77

Apply to your Assignment!

- what smart solutions are there in your city?
 - technologies, uses, users, partners?
- what benefits have these provided?
 - e.g. in relation to the SDGs?
 - who have benefitted?
- which smart city generation would you classify your city into and why?
- any smart plans for the future?

Progress of SDG 11

- <https://sustainabledevelopment.un.org/sdg11>



SDG 11 progress 2019

- number of people living in slums halved from 1990 to 2016
 - still 1 billion
- convenient access to public transport (<500 m)
 - average 53%, NZ&Aus 75%, Sub-Saharan Africa 18%
- urban areas are expanding faster than populations
- shortage of waste collection and disposal
 - waste: 2 billion tons in 2016 -> 4 billion tons in 2050
- 10% of urban population breathe clean air

Learning diary questions

- a) list the three most interesting or important topics of today's lecture
- b) how would you make your university or your campus more sustainable, resilient, green or smart?
- c) please give some feedback on this nugget Sustainable cities and communities:
 - a) which parts were good?
 - b) development and improvement proposals
 - c) comments about the work load