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Building Carbon Neutral Cities in collaboration – the role of academia

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Research at Lund University

Lund University hosts research and education programs that support essential and continuous improvements in sustainable urban transformation.

Urban Arena at Lund University brings together 200 researchers from across Lund University; the researchers are active in research topics, such as

- Urban energy, water, waste and climate change
- Urban buildings, green space, transport and mobility
- Urban social interaction culture and consumption
- Urban governance, planning and innovation



Why transformative urban research in the South Sweden Region?

- **The vision** - The South Sweden Region aims to be a regional "powerhouse" in Europe for sustainability, innovation and cleantech.
- **The testbed** – The region provides a "laboratory" by which to experiment, implement, examine and evaluate the progress of (local) transition governance and infrastructural investments.
- **The collaboration** - Several projects in collaboration: academic institutions, local governments, regional authorities and cleantech businesses



Building Carbon Neutral Cities in collaboration – some selected activities

Climate neutral Lund 2030, Climate neutral Malmö 2030 (Viable Cities)

- Develop an innovation team; map research and innovation needs; develop a roadmap; test new concepts that build on the needs of the citizens and with digitalization as an enabler.
- Participants: City of Malmö, City of Lund, Lund University, Research Institutes, E.ON, VA SYD, Ericsson, etc.

Lund Municipality's Climate Council

- An interdisciplinary team of 8 researchers from LU and SLU assesses the municipality's climate work

Exchange programmes

- Employees at Cities work at the Universities/Researchers work in cities

Development programmes

- The development of local governance structures



Building Carbon Neutral Cities in collaboration – a selected research project

Urban Transition Öresund (EU)

- Cooperation between partners - developing methods and tools for sustainable urban development within the three themes: sustainable planning processes, guidelines for sustainable construction and sustainable finance.
- Partners: Lund University, Malmö University, SLU, City of Malmö, City of Lund, Malmö stad and Danish partners
- Learning outcome
 - **Cost:** Low extra cost in building energy efficient
 - but high transaction costs (that can be reduced)
 - **Learning:** Local governance programmes provide progressive incremental change



Building Carbon Neutral Cities – building capacity

**The IIIEE MOOC (Massive open online course)
Greening the economy: lessons from
Scandinavia**

- 3 MOOCS on Cities

- Creating online learning communities for 47,000s of students from around the world
- Over 200,000 visitors from more than 200 countries since starting in 2015



moocs@iiiee.lu.se



IMPACT - The role of Universities

- Can perform deep analysis and advance new knowledge
- Can develop interdisciplinary research responding to complex societal challenges
- Can provide action-oriented research and provide progressive problem solving
- Can involve students in research - building capacity for the future
- ...MOOCS...

Our expectations of the Mission on Cities



Advance knowledge - Support vibrant arenas for collaborative and transdisciplinary research

Build capacity - Support initiatives such as MOOCs, student-engaging initiatives, exchange programs between academia and cities, etc.

Enable transitions - Support progressive learning over time (based on systemic evaluations)



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