Ch1. Cities and Digitalization

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What do we study in this chapter?

- Which will be the role of **cities to decarbonize the economic system**?
- Which is the right way to plan **urban infrastructure** to achieve sustainable cities?
- How **digitalization** could foster **sustainability in cities**?
- We put special emphasis on the role of **digitalization to decarbonize transport**.

Processes of sustainable urban transformation

There are **three key areas** to discuss when it comes to sustainable urban transformation:

1. **Governance and planning:** Efforts should be interconnected across sectors and adapted for specific urban and national policy conditions to ensure empowerment, engagement and collaboration of relevant stakeholders.

2. **Innovation and business:** Innovation and clean technology are key parts of a green economy, but also for fostering urban competitiveness in a globalising economy.

3. **Lifestyles and consumption:** Negative implications of over-consumption are particularly evident in cities.

Climate governance and urban experiments

Which is the **role of urban experiments on climate governance**? Why those experiments are **important**?

1. **Municipal governments** have limited powers to act on climate change alone and need to develop projects or specific interventions that attract other organisations to work with them.

2. **Private sector and community actors** also find urban environments an important site for action, but lack the power or capacity to intervene at the level of the city as a whole.

> We watch a video of the smart city in Heidelberg: Heidelberg smart city
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> Based on that video, we discuss the next questions:
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> 1. Which of the principles implemented in Heidelberg could be useful for Bergen?
> 2. Which is the role of technology in the Heidelberg smart city project?

Urban infrastructure and planning

Urban infrastructure and planning to foster sustainability can include **infrastructure** for water, waste, shelter, energy, telecommunications, and mobility, including streets, buildings, sewers, parks and energy systems.

Some good examples of urban planning can be found in **urban mobility**:

- Oslo: Chargers for EV; municipality fleet of EV; public transportation.

- Copenhagen: The top two reasons for biking in the city are convenience and health. The environment is number three. This is made possible by making biking as convenient as possible and giving it priority in planning across Copenhagen.

- To foster sustainability many cities integrate **information and communication technology** with public transport

  Which urban infrastructure changes could be introduced in Bergen to foster sustainability?

Sustainable neighbourhoods

Four **key principles** characterising sustainable neighbourhoods:

1. **Energy systems:** Most sustainable neighbourhoods have shared ownership of renewable energy technologies and low energy demands.

2. **Socio-economic balance:** Sustainable neighborhoods often have local – and organic – food cooperatives which are run by residents. These neighborhoods often have a strong "social ecology" element that includes direct democracy, transparency and tolerance.

3. **Transport and mobility:** Many sustainable neighborhoods have efficient public transport connections and might not even allow cars in the area.

4. **Urban design:** Most sustainable neighborhoods have multi-purpose community spaces that promote a variety of social activities.

How digitalization could foster the adoption of sustainable neighborhoods?