Sustainable City Tartu

UBC Climate Resilience Webinar

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What are the challenges of sustainability in 2019?

- Consumerism
- Insufficient infrastructure/services
- Outdated legislation and global failures
- Inequity and social tension
- Political instability and lack of responsibility

‘Pockets’ of sustainable innovation

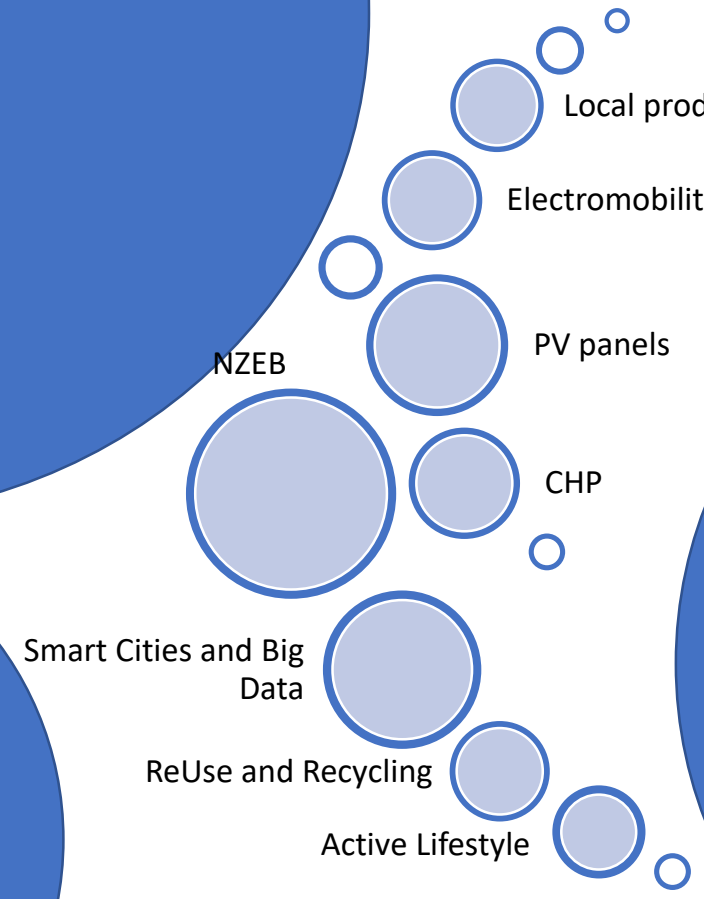
Big Money

Identity politics & War

Entertainment industry

Atention Economy

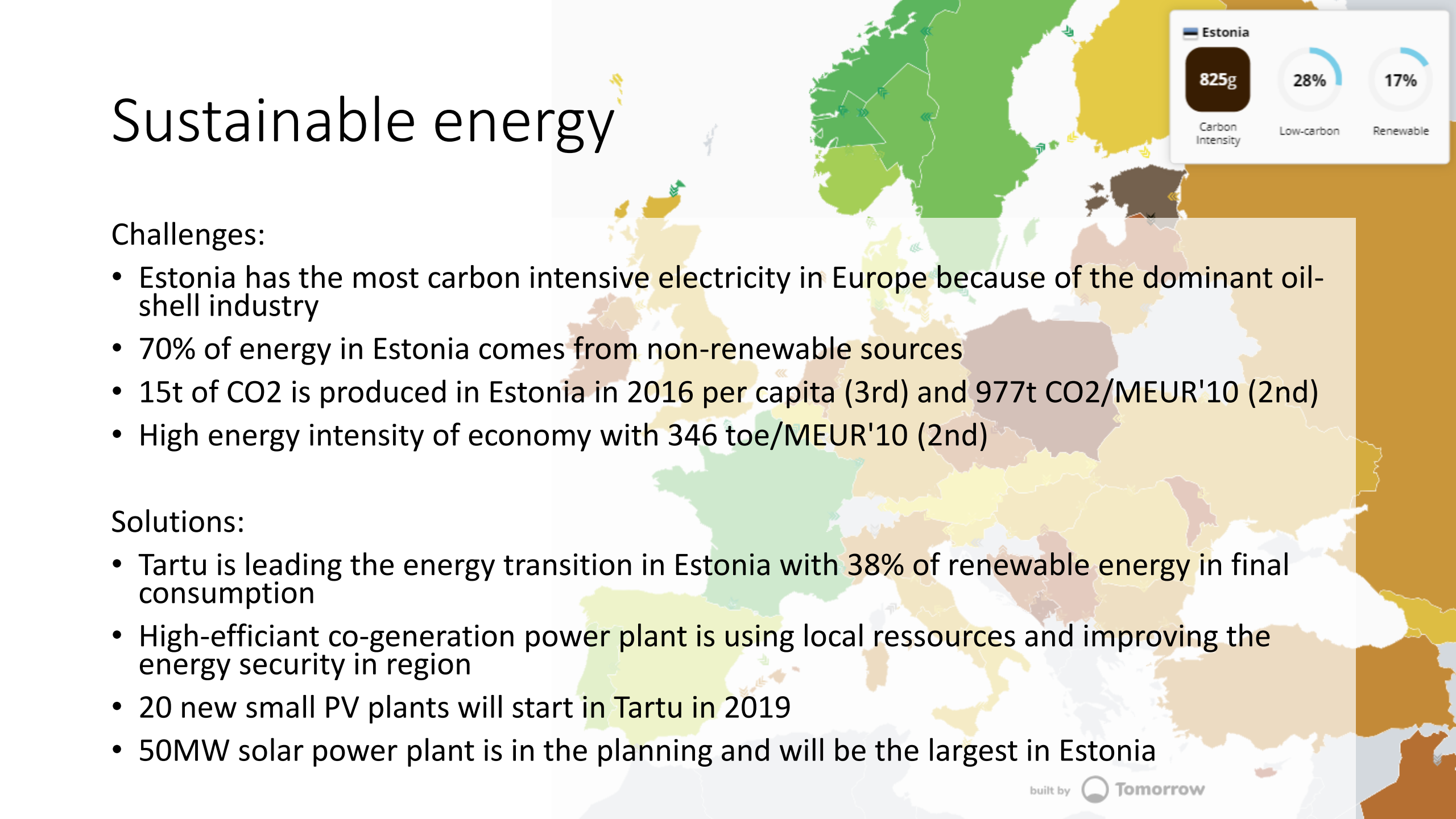
Poverty



Challenges in Tartu

- ideas of sustainability are competing with the ‘spells’ of consumerism
- peer pressure to consume more
- 'right to consume' attitude
- Me vs Us dilemma
- forced consumption caused by outdated infrastructure
- insufficient national framework
- energy poverty and social challenges

Sustainable energy



Challenges:

- Estonia has the most carbon intensive electricity in Europe because of the dominant oil-shell industry
- 70% of energy in Estonia comes from non-renewable sources
- 15t of CO2 is produced in Estonia in 2016 per capita (3rd) and 977t CO2/MEUR'10 (2nd)
- High energy intensity of economy with 346 toe/MEUR'10 (2nd)

Solutions:

- Tartu is leading the energy transition in Estonia with 38% of renewable energy in final consumption
- High-efficiant co-generation power plant is using local ressources and improving the energy security in region
- 20 new small PV plants will start in Tartu in 2019
- 50MW solar power plant is in the planning and will be the largest in Estonia

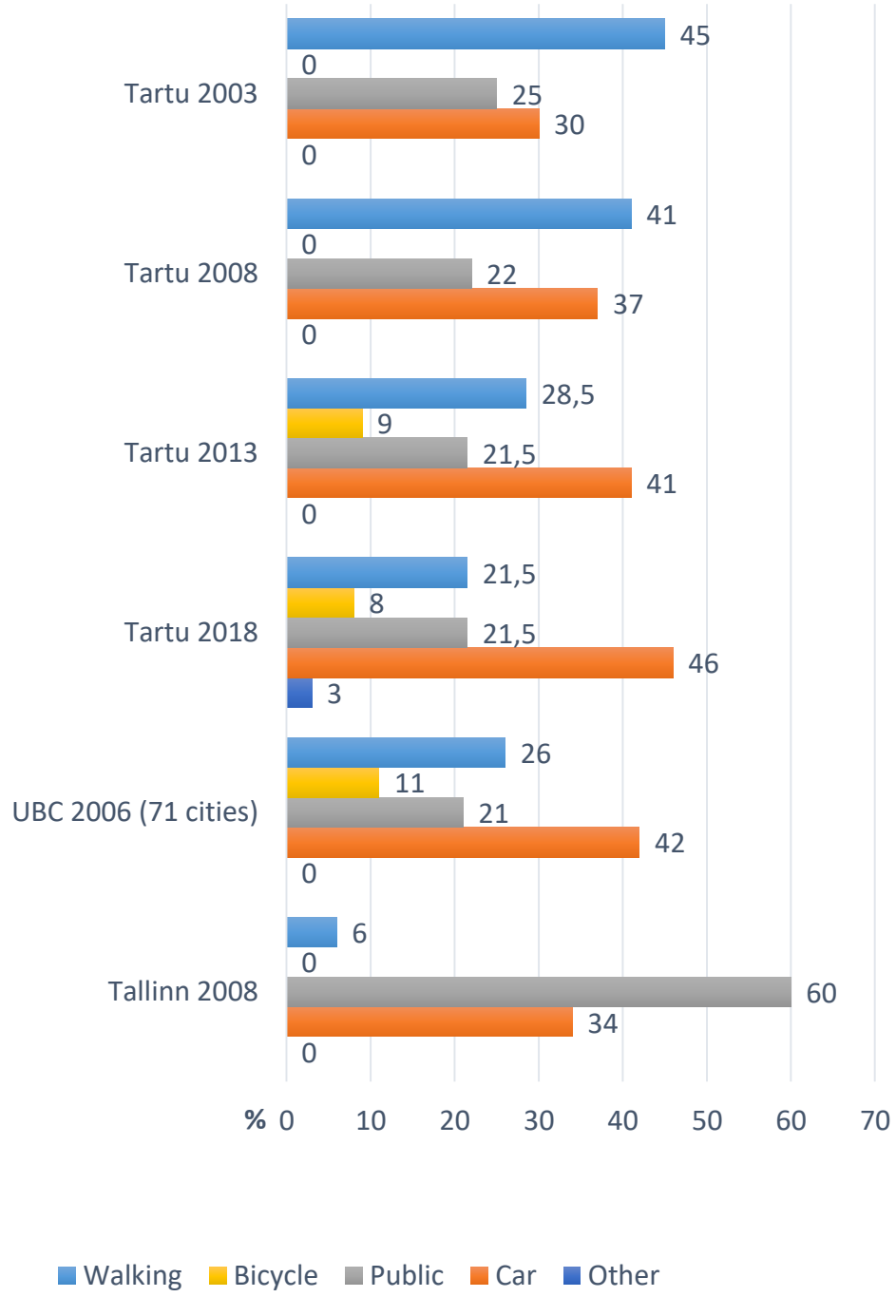
Sustainable mobility

Challenges:

- increasing car ownership and usage from 37% in 2008 to 46% in 2018
- urban sprawl and the develpment of large shopping malls near the border
- decreasing accessibility of rural areas of Estonia by public transport
- insufficient infrastructure for disabled/elderly/children
- winter maintenance for walking/cycling

Solutions:

- developing the infrastructure for cycling and walking
- increasing the quality of the public transport service with new busses, real-time information system, replacing oil with natural gas and electricity, electronic ticketing
- free-of-charge sub-regional public transportation
- public charging network for e-cars
- city bike service (including e-bicycles) starting in summer 2019
- further improvements for public transportation in future



Sustainable housing

Challenges:

- soviet era housing stock (72% of all the apartements in Estonia) with substandard energy performance
- lack of funding for refurbishing (up to 400 EUR/m2)
- low motivation so less than 4% of apartement buildings are refurbished using National grant
- increasing energy prizes
- new buildings do not always perform exceptionally well

Solutions:

- implementation of EU Energy Performance of Buildings directive
- promoting existing support models for renovation
- pilot renovations that go beyond nation targets

Circular economy

Challenges:

- rapid increase of the volume and diversity of materials used and wasted
- 300 000t waste in Tartu annually, 2,9 t waste per capita, 50 000t of municipal waste (1/3 is separated)
- ever increasing consumption cycle
- smaller quantities meaning more packaging
- planned obsolescence of consumer goods
- lack of control over the cost/impact of off-shore production
- waste management is getting more expensive and complicated

Solutions:

- reuse, repair, hack and recycle – computers, electronics, consumer goods, furniture, food etc.
- local sustainable solutions balancing the global production modes for food (community gardens), materials (wood), product development (rapid prototyping), adding value (RES based energy)
- digital solutions for material-heavy problems
- evaluating the impact and cost of consumption
- energy production from municipal waste

Planning for sustainability

- City of Tartu joined the Covenant of Mayors on 20 February 2014
- According to the Baseline Inventory the energy consumption in 2010 was 1,27 TWh and the emissioon was 541 000 tCO2
- First Sustainable Energy Action Plan SEAP was adopted in 2015 with the target of reducing energy consumption and emission by 20%(2010) by 2020:
  - 108 159 tCO2 less CO2
  - 200 000 MWh less energy in final consumption annually
- In 2019 preparation for a new integrated energy plan **Tartu Energy 2030+** for increasing the scope and adding the climate ressiliance as a startegical goal
- New plan is implementing Sustainable Energy and Climate Action Plan SECAP methodology
- Main topics are: data, climate, energy, transport, buildings, governance
- With the focus on public engagement the strategy is improving the work with the stakeholders, providing also a platform for the voluntary emissioon agreements for non-govermental and private sector

Forerunners of energy transition

- Tartu integrated energy plan is identifiyng the Forerunners of Energy Transition, including them into the planning process and promoting their work as an example of the sustainability.

Forerunners are the people and organisations that already are implementing sustainable practices/technologies and have the ambition to share their experiences with the wider community.

- Forerunners can be valuable source for insight as they already are living the ‘reality of Tomorrow’ - using new or rare technologies, innovative lifestyle and/or ideas. Their work can set an example that others can follow. As early adopters, they can make mistakes so others dont have to.
- Forerunners should be identified, contacted and invited to the development process. This connection should be valued and maintained. You also have to support THEIR work with:
  - Capacity building. Find out what they are lacking and offer them: Trainings, better Tools, better access to Resources.
  - Networking. Connect them with like-minded individuals from abroad.
  - Direct incentives. Buy their products and services, help them find grants and investments.
  - Not compromising. Don't give any money to the people not sharing your ideals. Every € counts!
- The biggest asset one community can have are their own active people.

Thank you!

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