



Smart City cooperation models in Estonia

Tartu Virtual Baltic Smart City Dialogue

Marek Muiste, Energy expert, Tartu Regional Energy Agency

Challenges of creating Smart Cities in Estonia

Possible conflict of interest in **investment heavy** development:

- how to provide a transparency and best price of development for the new services in public-private-partnership?

Equal access for new public services:

- how to provide equal access to new public services for all the social groups?

Usability of the new public services (ICT biases):

- how to focus on the needs of users instead of the 'common practices' of IT developers?

Innovation paradox:

- How to develop the capacity of the existing establishment to comply with the new ideas/principles/rules/services?

Burden of the **forerunners**:

- How to create new public services inside of insufficient national framework?

Top-down approach of Smart-City initiatives.

What about the environmental impact?

Roles of the partners

SERVICE PROVIDERS have the ownership of to energy/mobility/data services and are the owners of consumption data. They are in unique position for improving services and informing the *public*, providing the consumption statistics to the municipality and knowledge partners.

KNOWLEDGE PARTNERS will provide the know-how for improving the energy/mobility services, developing a smart city service platform and helping partners to improve their skills and capacity for innovation.

CITIZENS are the consumers and clients of the city services and are responsible of their energy and environmental footprint. They need to be engaged into smart city service development.



Municipality

Citizens

Contractors



Supported by European Union
Tartu Regional Energy Agency CC-SA-4.0 2020

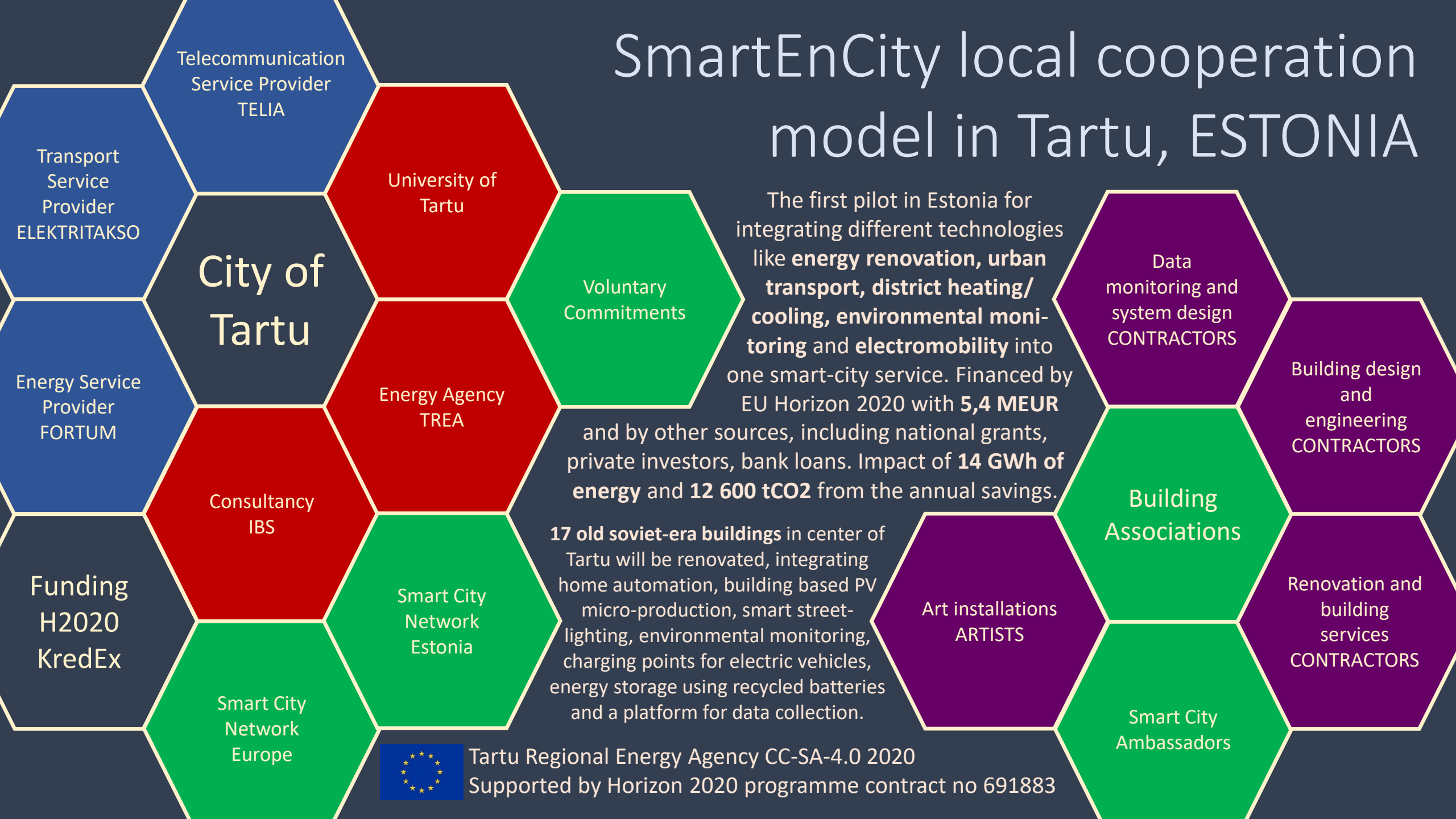
National and international grants can help to improve the quality of the new/improved services. Partners with **experiences with grants** can help to add new funding for interventions.

National and trans-national cooperation introduces the knowledge and experiences from other regions and helps to improve the resilience of the services.

Private **CONTRACTORS** are making the improvements in infrastructure, are responsible for the design and implementation of the smart city interventions.

MUNICIPALITY has the central role in initiating and coordinating the partnership, setting the premises for new/improved services, monitoring and evaluating the impact of the interventions. Balancing the *private* and *public* interest in establishing the smart city platform, municipality ensures the equal and fair access to the services.

SmartEnCity local cooperation model in Tartu, ESTONIA



Tartu Regional Energy Agency CC-SA-4.0 2020
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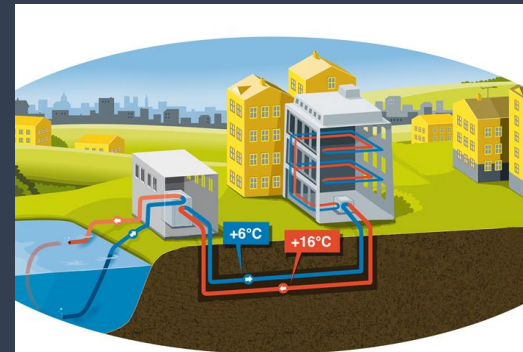
SmartEnCity financial model in Tartu, ESTONIA

Zero Carbon Public Transport is utilized by private service provider using public procurement funded green tender process for 64 City busses using zero carbon fuel. **Total cost was around 18 MEUR and its directly funded from municipal budget.**



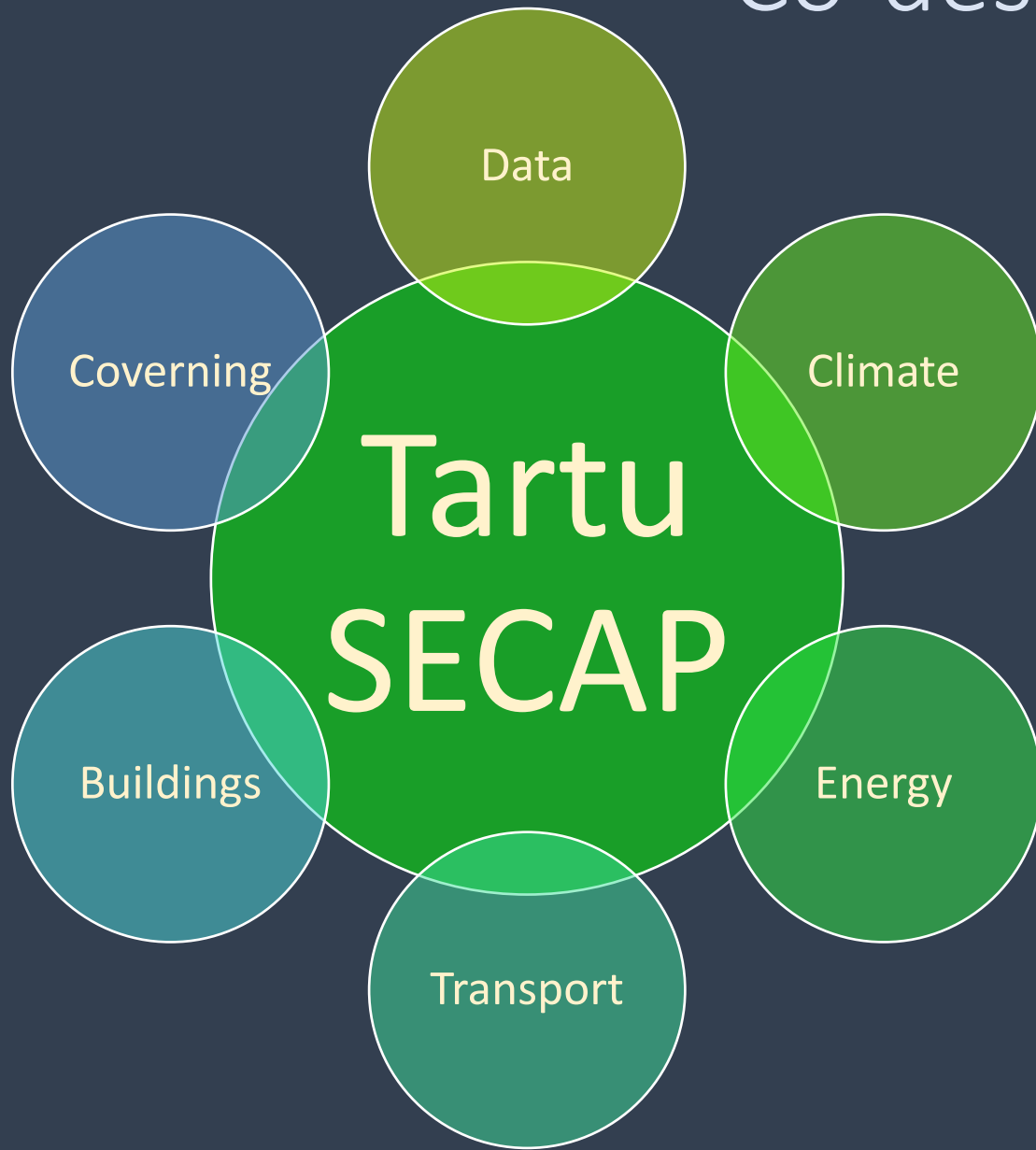
City bike sharing is utilized by newly established municipal service provider. 750 bicycles and 69 parking stations were procured together with supporting ICT platform and mobile application. **Total cost was around 2,5 MEUR and different grants including EU support was used.**

Zero Carbon distant cooling service was utilized by energy service provider using a mix of private and public investments total 6,5 MEUR, including also a share of EU funding.



Deep renovation of soviet-era apartment buildings was utilized by the housing associations of 17 buildings renovated. Mix of private funding, bank loans, **EU grants and national renovation grants was used in total for 15 MEUR.** A+ energy class was aimed from 270 kWh/y to 90 kWh/y.

Co-design as a guiding principle for sustainable policies



Engagement model is based on the principles of co-design and co-creation using:

- Public workshops
- Stakeholder teams and expert teams
- Building association meetings
- Engaging with the forerunners of energy transition
- Voluntary contracts



Forerunners of energy transition

- Tartu integrated energy plan is identifying 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 don't 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.



Inclusive policy making **engages and empowers different groups** in society and balances the business interest with the public and private interest in service development.



Improving **energy efficiency** and replacing the fossil fuels with **Renewable Energy Sources**.



Reducing the **environmental footprint** and CO2 emission of the organisation: energy sources, materials, technologies, waste management. Increasing the **knowledge and capacity** of the workers to make better decisions.

Voluntary



contracts



Improving the access with **sustainable transport modes**: walking, cycling, public transport. Supporting the active life style and active transport modes of the workers.



Reducing the waste flow, improving the waste management, **reusage** of products/materials and **recycling**.

