

Circular Economy in Service Sector: Using Nordic and Baltic Cities as a Testbed

Urban trends in the Nordic and Baltic Countries

- Climate change (70-80% of greenhouse gas emissions from urban areas)
- Demographic change (ageing, migration)
- Divides in society (digital divide, social divides between districts within urban area and between urban and rural, between large and smaller cities)
- Digitalization (as a solution to control and steer urban infrastructure, unused for communication with inhabitants)
- City as a service (from manufacture dominated industry to service industry)





Urban solutions of rural origin

- Circular economy
- Citizen engagement
- Co-creation and co-design
- Urban-rural interaction



City as a Service

- Service sector not commonly referred to in Circular economy
 - Mainly environmental technology: waste management, water management
urban infrastructure
- **Shift from linear to circular models in service sector**





City as a Service

Circular economy requires change of attitudes in many industrial communities

- Citizen engagement (Overcome divide)
- Co-design and co-creation
- User perspective (citizen and community) -> knowledge sharing, data sharing
- Knowledge sharing (Smart)
- Time-sharing (Smart housing)
- Vehicle sharing (Smart transport)
- Data sharing (Smart)
- City as an open source platform



City as a Service

Service sector's share of local economy is growing

- How to affect citizens perceptions and attitudes?
- How to create value in use?
- How to utilize the best practises?
- How to avoid worst case scenarios?





Nordic and Baltic Cities as Testbeds

The Nordic and Baltic cities provide an excellent test bed for circular economy

- Potential for profitable service design
- Digital services developing fast
- Local authorities are relatively independent
- Rapid structural change in society driving new models to act and work
- Advanced circular economy thinking, especially in developing industrial processes
 - Circular economy thinking supports developing new service processes



Nordic and Baltic Cities as Testbeds

Bottlenecks

- Small cities do not have enough resources
- There is not enough big data to attract big companies
- Shrinking cities, how to utilize technology? How to test under the social and demographic change?
- Smart-City-as-a-Social-Machine –approach, is it comprehensive (inclusive) enough



Next steps

Understand citizens needs

Find value in use

Create service



Thanks.



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