

Tampella

TAMPERE.
FINLAND

Circular Economy Yliopistonkatu street procurement

City of Tampere, Climate and Environmental Policy unit



KIEPPI
KESTÄVIEN
KAUPUNGINOSIEN
KUMPPANUUSMALLI
-HANKE



TAMPEREEN KAUPUNKI

WHAT IS CIRCULAR ECONOMY

- Materials used only once in Europe in average
- Globally only 9,1% materials are reused
- 67% of CO2 emissions are related to material production
- Offices are empty 62% of the time, cars unused 92-98% of the time

The disconnection of the economy from material and energy flows requires up to 10 times more efficient measures to ensure that actions turn sustainable and loops can be closed.



Improving existing operating models (e.g. recycling or improving existing resource efficiency actions) is not enough



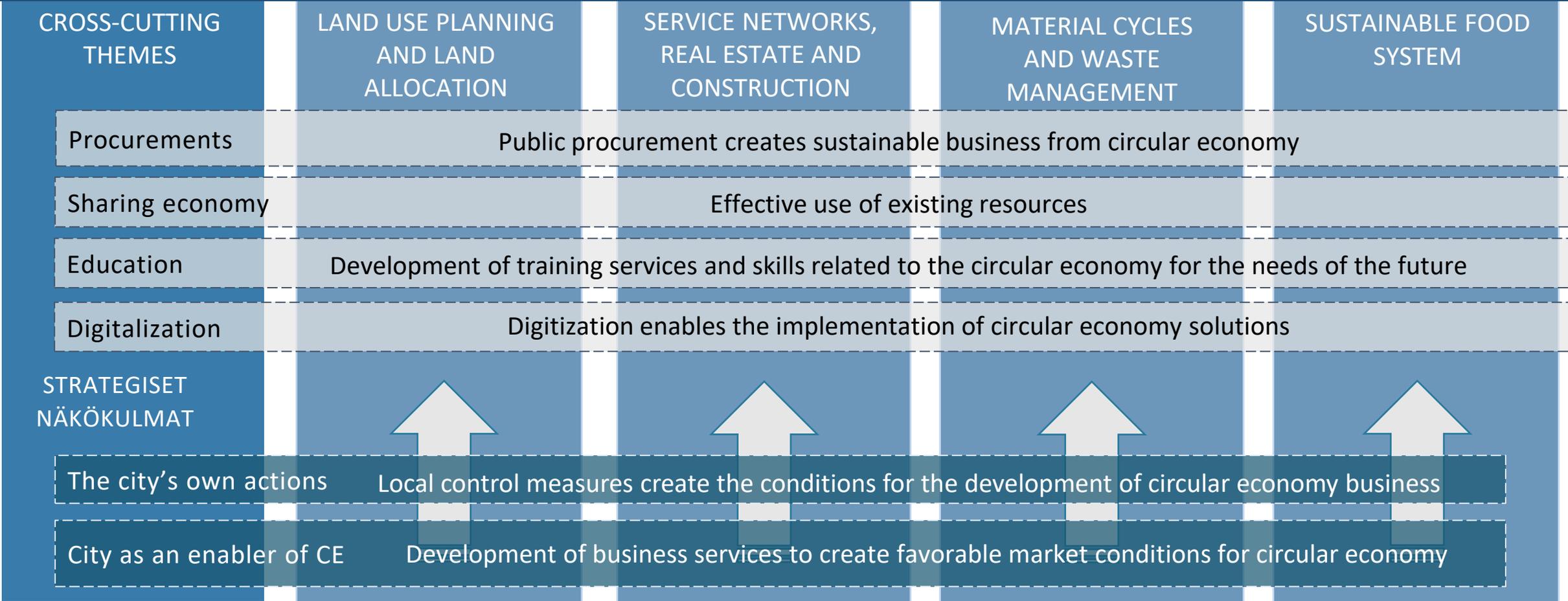
Systemic changes required to create sustainable actions in line with the circular economy (business models that support profitability and functioning social operating systems).

Circular Economy in the City of Tampere

- Up until 2021, no strategy / cohesion in CE - Some separate experiments and projects in different city units
- Beginning on 2022 city approved a new Circular Economy plan with aims in house and street construction, sustainable food and waste management
- The city has a significant role in generating a circular economy and related business, not all of which have yet been identified.
- Examples of pilots (e.g.):
 - KIEPPI-project: Infrastructure circular economy experiments and procurement criteria
 - KIEPPI-project: Landscaping circular economy (ecological closed cycles)
 - Nutrient cycles
 - Consumer side (incl. public waste management)

Circular Economy (CE) plan for the city of Tampere

VISION 2030: "In Tampere, we are pioneers in circular economy know-how at both the Finnish and European level. With bold implementation and purposeful actions, we have adopted the circular economy as a strong part of all the city's activities. With the help of circular economy, together with companies, municipalities and other actors, we can ensure a sustainable future in terms of business life, jobs and well-being."



Cooperation with the private sector

Tools for facilitating cooperation from partnership model and regional circular economy platform

Achieving the goals of the circular economy requires more **in-depth cooperation** between public and private actors than at present - but how can this cooperation be organized?

Actions:

- KIEPPI project Circular Economy Partnership Model 08/2021
- Pirkanmaa circular economy development platform 10/2021 →



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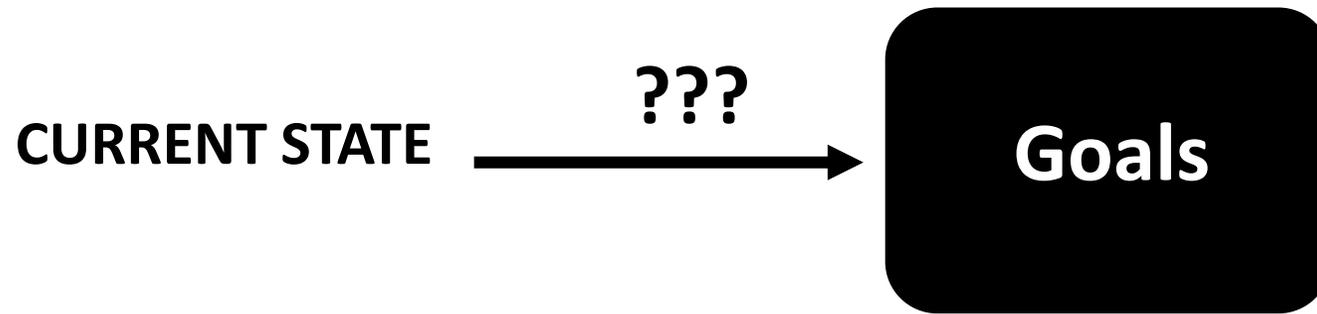
Development in Tampere

Yliopistonkatu procurement



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GENERAL from the perspective of cities: Attention from goals to means



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KAPA/ Kaupunkiympäristön rakennuttaminen ja ylläpito
Kuntatekniikan suunnittelu

UUMA recovered materials plan

14.2.2018

In accordance with the strategy of the city of Tampere, in the planning, development and construction of infrastructure projects, investments are made in innovative solutions and procurements, as well as in the promotion of the circular economy.

The implementation of the strategy requires responsible, open, but also bold new ways of operating.

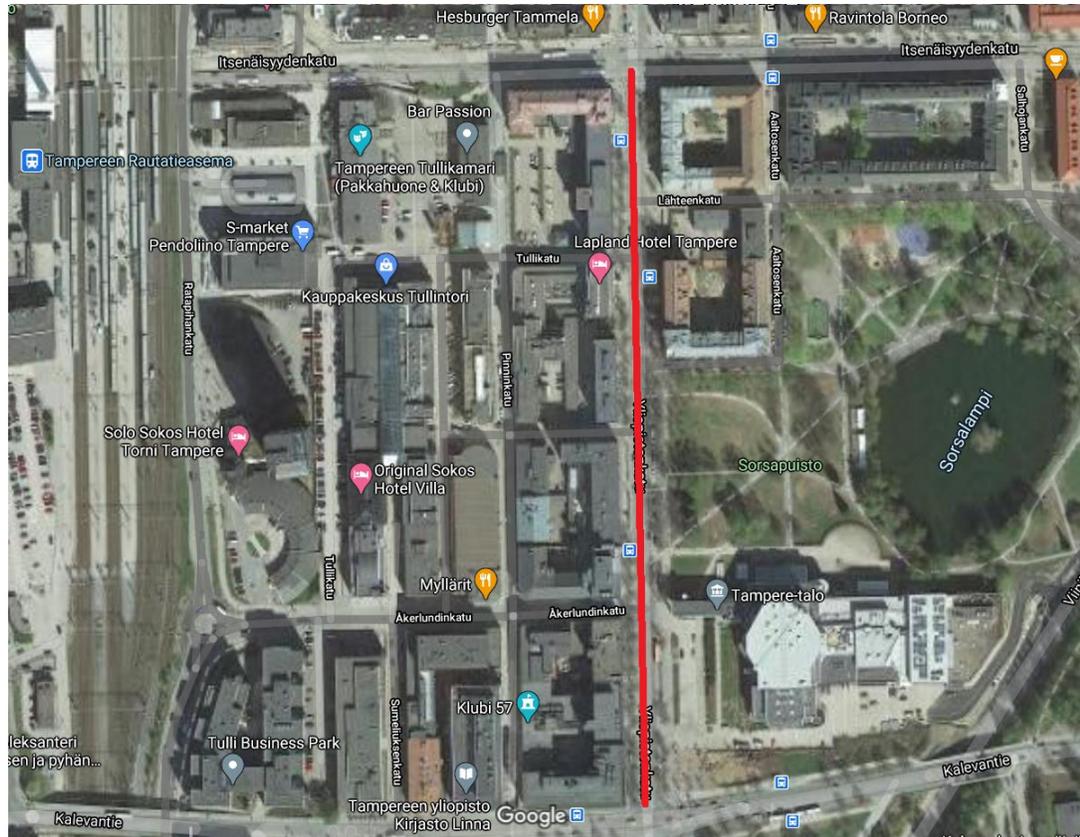
The city should change its attitude towards the use of recycled materials in suitable locations. In the sites according to the annual infrastructure construction plan described above, the possibilities of replacing virgin earth and stone materials with recycled materials must be examined where applicable.

THEME 3

SUSTAINABLE CONSTRUCTION

Measure package 3.6.	Infrastructure construction	Timetable in council terms	Responsibility
	135. Emission reduction requirements will be set for materials in site design for all major projects. Emission reduction requirements will be set for appropriate items (equipment, logistics) in tendering procedures for major regional construction projects.	2020-21	Construction and Maintenance of Urban Environment
137	The efficiency of the use of land masses for infrastructure construction will be increased and its transport reduced by introducing land mass balance policies to increase the recycling of land masses (land mass bank, land mass coordinator and land mass analysis of town plans). The land mass coordinator will start working and regional cooperation will be resolved in 2020.	2020-21 2021-25	Construction and Maintenance of Urban Environment, Detailed Planning, Comprehensive Planning, Sustainable City
142	The possibility of using recovered materials will always be assessed in the project and building design of public streets and park areas. The use of recovered materials will be assessed both in terms of emission reductions and costs. In street plans, there will be a move to a model of two alternative solutions, where the structural layers will use primarily recycled material, if available, and secondarily rock crush. Construction sites using recovered materials (including recycled concrete, ash) will be mapped and listed annually. The use of recovered materials will be piloted, for example in Hiedanranta. It will be determined whether recovered materials can be used in the extension part of Sammon valtatie cycling route.	2020-29	Construction and Maintenance of Urban Environment, Sustainable City, Hiedanranta Development Programme, Hiedanrannan Kehitys Oy

Bottle necks



Starting points for actions:

- Countless pilots and technical possibilities.
- Licensing enables several new solutions.
 - Why are circular economy solutions not common in the industry?
 - Public procurement as a bottleneck!
- General information about our measures:
 - All activities are carried out as part of the annual procurement of the construction program: Yliopistonkatu renovation 2021 (1,6M€)
 - All results can be duplicated in other destinations!

Current model of street building

Target from the construction program

↓
Planning

↓
Choosing method of implementation (materials, structures etc.)

↓
Construction

↓
Tendering for construction

↓
Implementation

↓
Ready

— The selection is made with the city's internal resources (approx. 10 people), knowledge and experience.

— In tendering, only the lowest price and quality decide → no requirements for circular economy.

To take into account

The planning, construction and technical definition of the target street is based on the city's internal resources, knowledge and experience.

→ If the city itself has not participated in the piloting of a new solution, it is likely that the solution will not be implemented

→ If the city's own designers do not have the know-how or resources to search for information and lessons about the properties of new materials or design of technical possibilities, then most likely the solution will not be implemented?

The resources, know-how and experience of the businesses do not have much influence → they only have a minimal margin to influence how the street is built.

D&B operating model in street building (Yliopistonkatu implementation model)

Target from the construction program

Construction

Necessary Prerequisites

CITY Tenders for D&B implementation

COMPANIES

Tendering (incl. design)

Comparison of tenders (choosing implementation method)

Implementation

Ready

The tendering uses circular economy procurement criteria produced in the KIEPPI project → the cheapest price is not the only scoring criterion.

critereon.
In thinking about how the street can be built in accordance with the circular economy:

The knowledge and experiences of all private operators in the circular economy (compared to the city's 10 people).

The competitive field of the private sector → competition

To take into account

- The definition of the street and the city's internal resources (circular economy) goals.
1. Conservation of natural resources
 2. Reducing waste
 3. Reducing CO2 emissions
 4. Life cycle sustainability
 5. Other environmental aspects
 6. Financial sustainability
- and abilities of private operators → tendering and implementation.
2. Makes it possible to do business in accordance with circular economy goals (feedback from a business meeting).
- + in addition to the circular economy:
3. The procurement model shortens the project time + minimizes additional/change work and makes budgeting easier.
 4. We learn efficient operating models and get information about new technical possibilities for design and construction.

Procurement criteria evaluation tool for Yliopistonkatu

- Evaluation criteria Excel, mass report Excel and environmental plan attached to the procurement documents
- In the evaluation criteria form, there are different criteria by theme (the utilization of soil and stone materials generated inside and outside the contract, the utilization of recycled materials and recycled asphalt, and the distance of transportation of soil materials)
- Points are given according to reduction of masses used and CO2 produced – 30% and quality points 70% price
- In the mass report form, all masses generated / used in the contract are evaluated both before and during the contract and it is monitored throughout the contract.
- In addition, there is a customer satisfaction survey, as well as criteria for the duration of the project and the traffic inconvenience

Next steps



With the criteria and procurement model, the most cost-effective AND most ambitious offer was obtained

Co-development required a lot of time and resources - a huge number of people were involved

The use of the D&B model and scoring criteria in the construction contract was new for the city, but the experiences have been good

Market dialogue is an important tool for dialogue in connection with acquisitions / new development

The site will be completed in 2022, the following sites are already in the pipeline → criteria developed so that the contractor has an even lower risk

Management of the city has a HUGE role is pushing for change

Prize winning solution: national circular economy development prize and honorary mention in the Procura+ AWARDS

THANK YOU!

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