

Actions to Promote Low Carbon Procurement in City Level

The background of the slide is a photograph of a city street in Helsinki, Finland. It shows modern multi-story buildings with large windows and balconies. A construction crane is visible in the background on the right side. The image is partially obscured by large, abstract, pink and blue shapes that frame the text.

Low Carbon Construction – From Urban Planning to Building Design webinar
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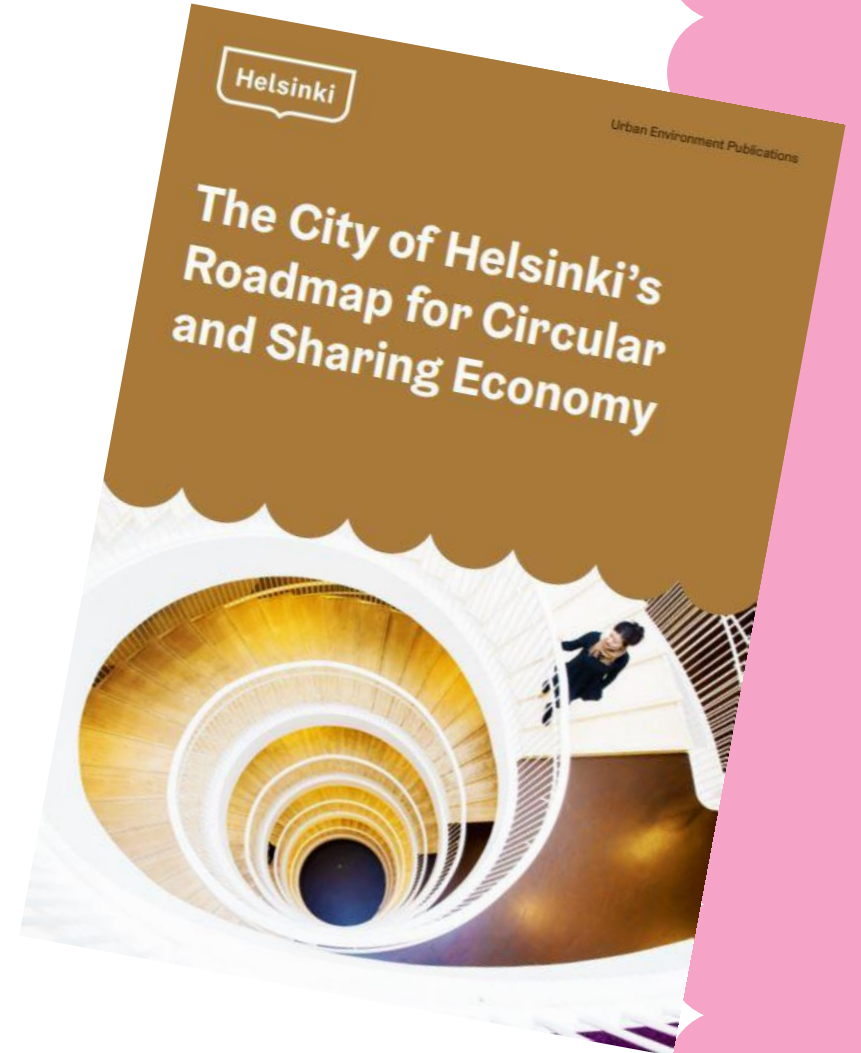
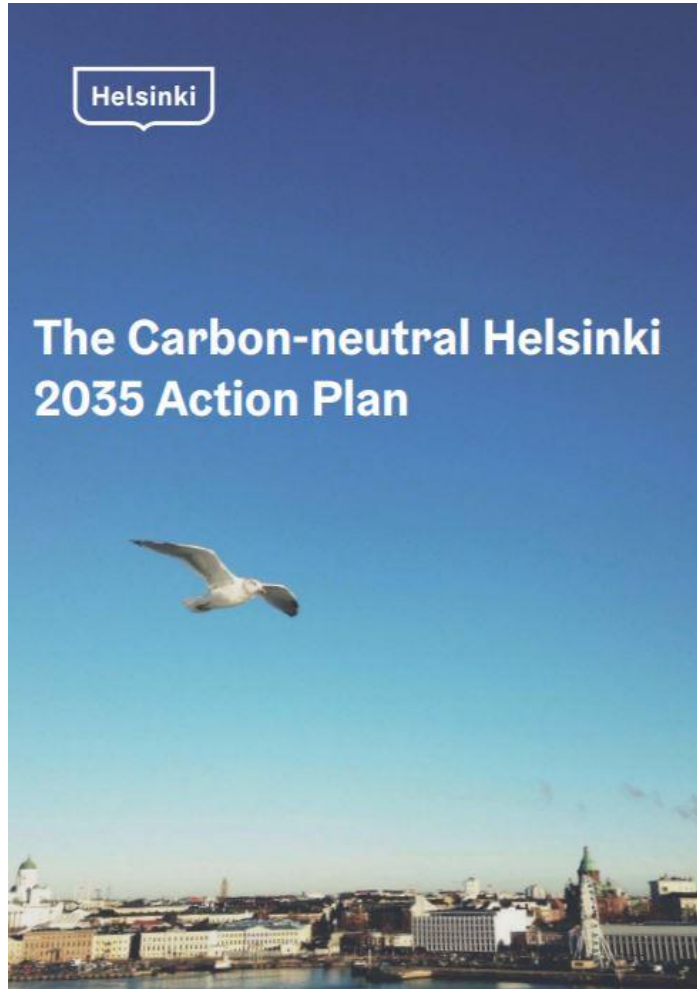
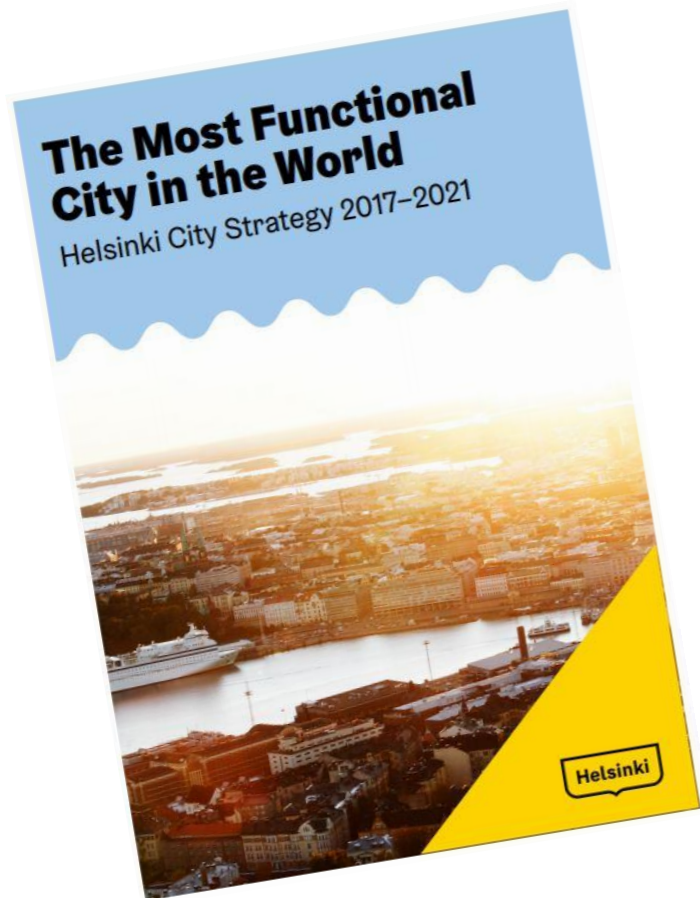
Helsinki

A map of Europe with a light beige background. The landmasses are outlined in a dark grey color. The city of Helsinki is marked with a small red dot in the northern part of Europe, specifically in Finland. The word "Helsinki" is written in a large, bold, black serif font, positioned to the right of the red dot. A small red dot is also visible above the letter 'i' in "Helsinki".

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Helsinki

Helsinki

We are not running out of plans



Actions to promote low-carbon and circular procurement within construction sector

38. The City will constantly develop its criteria and methods for procurements in construction and maintenance so that they will take City's ambitious goals into account in terms of things such as energy efficiency, lifecycle CO₂ emissions and environmental impacts.

46. Emission-free construction sites will be piloted in the City's own construction projects, and a model and criteria for all sites will be adopted based on the experiences from the pilot. The model and the criteria will be included in the environmental document for infrastructure and housing construction projects, as well as in the and eco-efficiency of the construction environmental plan of the site. The actors having construction projects within the City will be steered to use the model and the criteria.

61. In plot conveyance competitions by environmental document for infrastructure and housing construction projects, as well as in the and eco-efficiency of the construction environmental plan of the site. The actors having construction projects within the City will be steered to use the model and the criteria.

62. The City will implement plot conveyance competitions that aim particularly at carbon-neutrality, the experiences from which will be analysed. The experiences gathered will be used when developing the terms and conditions for plot conveyance.

107. Existing procurement criteria will be developed and new criteria introduced to the procurements of the City of Helsinki, with regard to life cycle, circular economy and the climate.

3. Piloting the use of circular economy criteria in plot conveyance conditions. Adopting functional solutions.	Land Use and City Structure, Executive Office / Area Construction	2020–2025
14. Adding circular economy requirements to demolition contracts.	Buildings and Public Areas / Built Assets Management / Construction Contracting / Housing Production, Heka	2020–2021
15. Preparing and adopting an operating model for reusing furniture and building parts from demolition and renovation projects.	Buildings and Public Areas / Built Assets Management / Construction Contracting / Housing Production, Heka, Services and Permits / Building Control	2020–2023
11. Planning and implementing new construction and renovation projects that follow the principles of circular economy. <ul style="list-style-type: none"> The planning will focus on the following circular economy criteria: smart use of building materials, flexible modifiability, modularity, use of recycled and repurposed materials, maintainability and repairability, ease of demolition and reusability. Calculating the lifecycle costs and carbon footprint of each project. 	Buildings and Public Areas / Built Assets Management / Construction Contracting / Housing Production, Heka, HKL	2020–2025

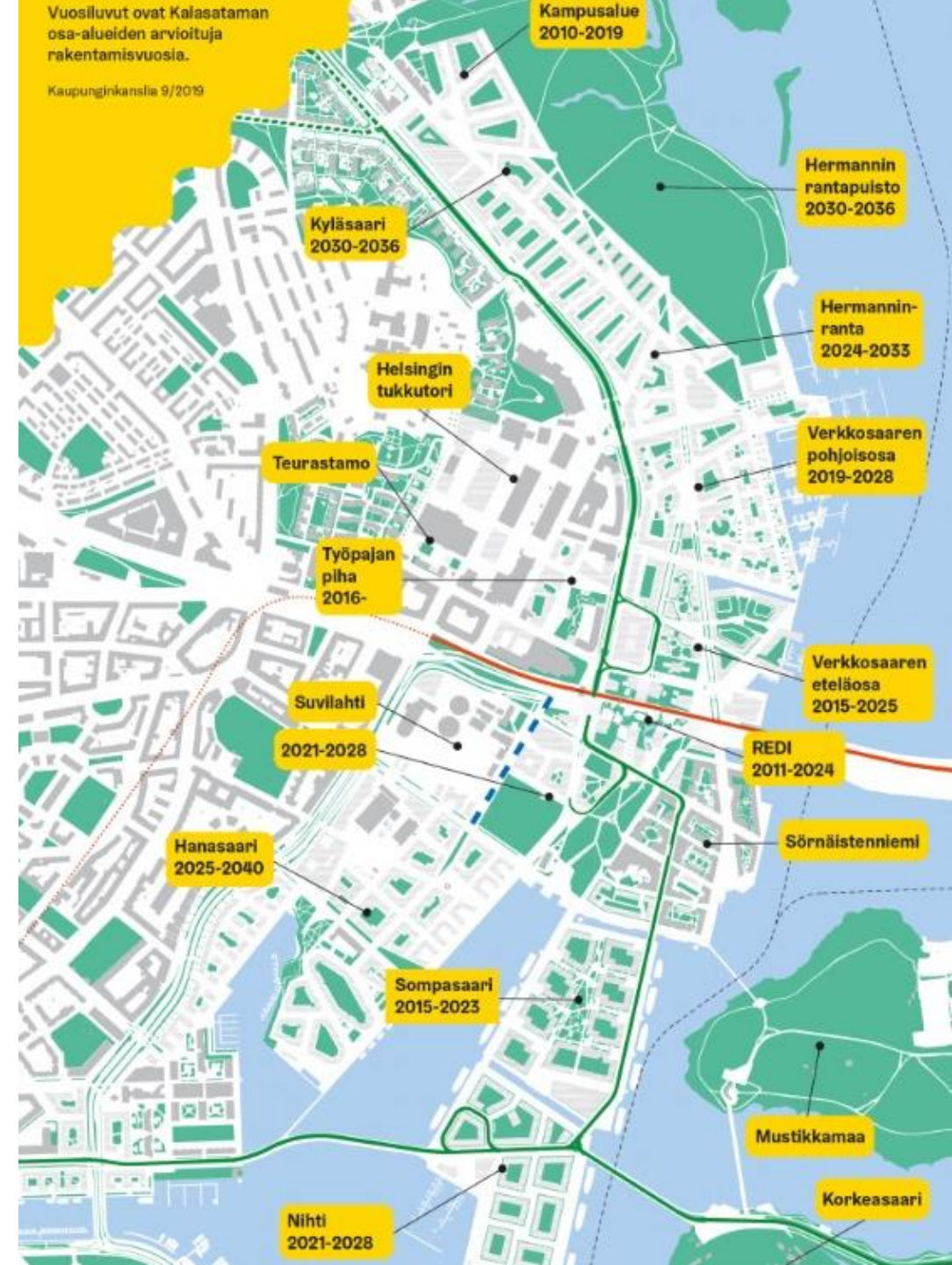
**This is how Helsinki
furthers low carbon
procurement within
different stages of
construction**

In plot conveyance terms

Kalasadatama

- A combination of dense urban structure, diverse cultural offerings and proximity to nature
 - The largest areas to be built in Helsinki
 - Construction until the late 2030s
 - Seaside homes for 25,000 residents
- Smart Kalasadatama
 - Smart district and innovation platform
 - Development work among hundreds of companies, thousands of citizens, researchers, the city and other actors
- Intelligent energy systems in plot conveyance competitions
 - Among other things, open communication interfaces, building and apartment automation, renewable energy, electric car charging

Helsinki



Upcoming plot reservation competition in Kalasatama

The aim of the competition is to find and develop innovative solutions related to energy efficiency that contribute to the achievement of the Carbon Neutral Helsinki 2035 goal.

The competition aims to improve **storm water management, resident comfort, energy efficiency**, increase the use of **renewable energy** and **reduce the carbon footprint**.

The following factors have been considered for scoring:

- E-number
- Green factor
- Carbon footprint

Very significant emphasis on climate change mitigation and adaptation issues.



In design phase

Life cycle management model for municipal buildings

The aim is to take into account and guide the carbon footprint, cost and environmental impacts of the life cycle of service building projects with the help of the management model

- Nine life cycle goals
 - Minimum requirements for design
 - Piloted and implemented in all new projects
 - Monitoring through the construction project, monitoring report
- Targets will be refined and updated as information accumulates (e.g. limit values for the carbon footprint)
- Becoming part of the model: life cycle requirements for the construction site
- Read more at: <http://energiaviisaat.fi/elinkaari1/>

Nine lifecycle goals in a design phase

1	Usage age
2	Life cycle carbon footprint and life cycle cost
3	Urban runoff management and green factor
4	Resource wisdom (treatment of earth and stone materials, use of recycled lands, utilization of demolition materials e.g. concrete, preserved building components and building materials)
5	Estate waste management
6	Sustainable transportation
7	Energy efficiency
8	Renewable energy
9	Energy measurement

In Design&Build contracts

Kuninkaantammi D&B contract

What? Procurement of four wooden apartment buildings.

Goal? To choose a contractor that designs and builds architecturally, visually and by its technical solutions buildings that are both high quality and low-carbon.

To guide the designing of buildings towards low-carbon as well as achieve low-carbon solutions.

Why? As energy efficiency of the new buildings is constantly rising, we need to start targeting the carbon footprint of the construction as well. In this pilot we wanted to test a new method to reduce the carbon footprint of the buildings.

How did we do it?

Tenderers calculated the carbon footprint of their tenders using the low-carbon assessment method for buildings by the Ministry of the Environment, and the results were scored as part of the tender.

Outcome?

- We received two offers, difference between carbon footprints
- Unfortunately, the winner's plan was less ambitious in terms of carbon footprint and E-number.

Learnings!

- Try comparing the carbon footprint of the tenders in traditional project rather than wooden building project.
- Scoring the carbon footprint of the tenders is still problematic.



On construction sites

Green Deal

What? The Finnish Public Procurement green deal is a voluntary agreement between the government and the procuring authority.

Goal? To create a gradual path forward for zero-emission construction sites by 2030. The aim of the agreement is that construction sites will be fossil free by the end of 2025, meaning they will not use fossil fuels.

In addition, by 2030, at least 50 per cent of construction machinery and site transports will be powered by electricity, biogas or hydrogen.

Why? Emissions from working machines account for a significant share of urban and municipal climate emissions, as well as particulate and nitrogen oxide emissions that are hazardous to health.

Progress in Helsinki

- **3/2018:** Environmental criteria for heavy vehicles and machinery
- **12/18:** Carbon neutral Helsinki action plan
- **18-19:** International projects, benchmarking
- **6/19:** Green deal negotiations, actions and indicators
- **12/19:** Market dialogue event for infrastructure contractors
- **1/20:** One-on-one dialogues for infrastructure contractors
- **Kevät 2020:** Deal approval
- **4/20:** First low-emissions construction site tenders out
- **6/20:** The first pilots are launched → low-emission construction site criteria for all incoming infrastructure contracts
- **9/20:** Signing the green deal
- **Syksy 2020:** Implementation



Thank you!

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