

Reducing food transport emissions through route optimisation and more efficient vehicles

Helsinki Service Centre (Finland)

Background

The [City of Helsinki](#) is the capital of Finland and has 635,000 inhabitants. The city has the mission to become [climate neutral by 2035](#), which is described in the City of Helsinki's Strategy and the Helsinki City Operational Program Carbon Neutral Helsinki 2035.

To achieve this goal, all its procurement departments work toward minimising the carbon impact of the goods they procure.

The Helsinki Service Center forms part of the city administration and is in charge of developing, preparing, and delivering food products for everyday and festive occasions. The customers of the service center include schools, day care centers, and nursing homes throughout Helsinki. Services also include catering for events such as summer camps and sporting events. The service centre delivers up to 100,000 meals per day. The largest food production unit is the production plant in Pakkala, Vantaa, which delivers approximately 15,000 kg of food daily to about 60,000 customers. Food is also prepared in the food service centres operated by the Helsinki Service Centre and in other manufacturing locations. The meals are distributed from the Services Centre to several locations in the city. The distribution is a major logistical undertaking and requires detailed and accurate planning.

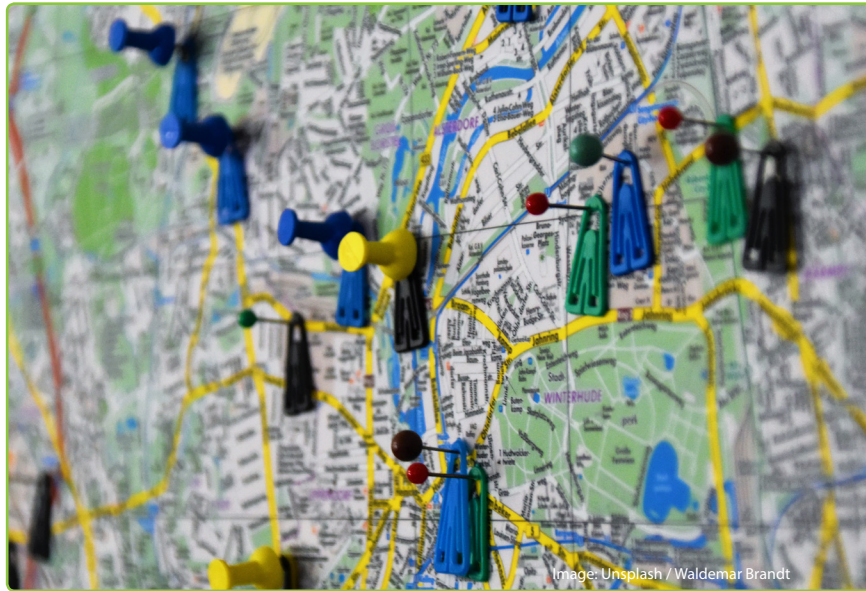
There are possibilities to reduce the carbon emissions related to the meal delivery and food transportation both through route optimisation and the vehicles used for distribution.

Procurement objectives

Helsinki Service Centre aimed at improving their operations of food transportation to become more customer friendly and reliable, save costs, significantly reduce the environmental impact of their operations and to prevent grey markets in the transport sector: Grey markets refer to transportation companies that do not comply with tax payments, social insurance and pension contributions.

The Helsinki Service Centre conducted in-depth research into their own operations as well as the market to be able to improve its logistics through new tenders. Helsinki Service Centre's logistics and transportation cover about 2,000 delivery points. For each delivery point, detailed information was collected about route planning and general activity management. As a result, some routes could be combined and other routes were terminated. The Service Centre also conducted a market survey to help them create a more simple and transparent pricing model.

Based on this information, three separate calls for tender were published that jointly cover all food transportation and logistics for Helsinki Service Centre. The first concerned the transportation of home meals, the second the transportation from and to the Pakkala food production plant and the third covered transportation between other food preparation locations.



The goal was to introduce a new pricing structure, new route planning, tighter requirements for audits as well as higher environmental standards to simultaneously improve the cost effectiveness of the logistics and decrease CO₂ emissions and air pollution related to it.

Criteria used

Subject matter of the contract:

Three calls for tender were published:

1. Transportations of meals for home consumption: Delivery to about 1400 delivery points
2. Transportations of food and meals from the Pakkala plant: Delivery to 460 delivery points
3. Transportations between the other manufacturing places: This tender combined the transportation in-between food production centres as well as on-site transportation of different food production centres. It includes about 150 delivery points

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Selection criteria:

A set of selection criteria was applied in all three tenders, and only bidders who could prove financial and economic viability, compliance with tax payments, and social insurance and pension contributions, as well as certain level of professional experience in the field of food logistics, were accepted. The selection criteria also included the requirement to provide proof of an environmental management system such as [ISO 14001](#) or equivalent.

Technical specifications:

Aside from the pricing structure and varying delivery and drop-off points, all three tenders were evaluated against the same technical specifications.

Vehicles

Vehicles must be approved for food transport and food accommodation. A valid food control approval document had to be presented prior to commencement of operations and must be valid and continuously present in the vehicle concerned. The condition, age, fitness for use and emission rating of the used cars must be regularly checked. The vehicles must meet the EURO 6 emission requirements.

Award criteria:

Given that technical specifications were very demanding and setting very high sustainability standards, tenders were awarded based on the lowest price offer. Tenderers had to offer a general pricing structure for deliveries and present a plan for their routing. The Helsinki Service Centre defined drop-off points prior to the call for tenders.

Contract Performance Clauses:

Regular reporting was required. This included written reports on routes and delivery success. The regular reporting requirements also include a statement that the supplier does not have a tax debt recorded in the tax debt register, or a statement by the tax authority of the amount of the tax debt (proof of tax debt) and a payment plan approved by the taxpayer for the tax debt, proof of staff insurance and payment of contributions or proof that a plan for the payment of contributions due has been approved by the payee. In addition, upon request, contractors can be asked in for a meeting to discuss customer satisfaction and service delivery.

Helsinki Service Centre also reserved the right to check the suitability of the cars as required and, if necessary, to prohibit the use of a vehicle unsuitable for food transport.

Results

Prior to the call for tender, Helsinki Service Centre conducted in-depth market engagement and had conversation with several transportation providers, and conducted in-depth research into its own operations, deliveries, and delivery points.

During the tender procedure, the most significant challenge for bidders were the high volumes and tight delivery schedules. Two bidders participated in the tender procedures, and both were able to meet the requirements. The contract for transportations between the other manufacturing places was awarded to Posti Oy, and has an estimated contract value of €3.5 million, for a contract duration of two years, and the option of two one-year extensions. The contract for transportations of home meals and transportations from the Pakkala plant was awarded to Kilon Osuus-Auto Oy, with an estimated contract value of €2.2 million and €3.5 million respectively.

The tender procedure resulted in a change of contractors. To ease the transition period, the Helsinki Service centre created an extensive induction programme, to train the new contractors. It also implemented an induction programme for its own staff working in the production plants.

With this contract Helsinki Service Sector also implemented a stricter auditing scheme. The new contractors have to regularly update Helsinki Service Centre about their operations. Helsinki Service Centre also conducts random audits to ensure that the contractor complies with the requirements for safe food transportation and handling as laid out in the contracts and manages to deliver on time.

At the same time, cost savings of up to 25% were achieved compared to the previous contracts. As a result of the strict pricing and delivery schedule criteria, the food deliveries are accurate and timely in 99.9% of the cases since the awarding the new contract.

Environmental impacts

Road transport is responsible for 73% of transport-related greenhouse gas (GHG) emissions in the EU, and around 20% of the EU's total GHG emissions ([source](#)), making it one of the most important areas of action in the transition to a low-carbon society.

The newly awarded transportation contracts have led to a significant reduction in emissions from transport. The fleet operated by the new contractors complied with the EURO 6 emission norm, instead of EURO 4, which was the previous standard. Based on 51 daily-driven vehicles, a reduction of 22% carbon monoxide emissions, 67% nitrogen oxide emissions and up to 92% particulate emissions compared to previous contracts and previous vehicles was achieved. These emission reduction calculations are based on the higher efficiency of EURO 6 compared to EURO 4 – meaning the real emission reduction is greater, due to the considerable optimization of routes that also occurred because of this tender. The end result was effective both in terms of environmental impact and cost benefits.

The requirement for 100% EURO 6 standards was challenging, as the market availability of EURO 6 Light Commercial Vehicles (N1) is still limited, and most of the available vehicles only meet EURO 4 or EURO 5 standards. This challenge was overcome, however, through close dialogue with suppliers prior to the launch of the tendering procedure.

Lessons learned

Conducting accurate market research, investing in definition work that took the Helsinki Service Centre over two years, and open-minded new practices and solutions have a significant impact on the desired outcome, which may also exceed the set goals.

The tenders made a significant contribution to emission reductions, which are also linked to the City of Helsinki's Strategy and the Helsinki City Operational Program Carbon Neutral Helsinki 2035. In addition, competitive bidding improved the operational reliability, continuity and the fight against the grey markets under the most demanding terms.

Helsinki Service Centre concluded that the competitions were successful both in terms of cost savings and tightening of environmental criteria, which can serve as a model for other contracting authorities. The procurement also reached the finals of the Finnish Municipal Association's [Public Procurement Advisory Unit](#) Awards for the year's most skilful acquisition in 2018. The Public Procurement Advisory Unit is located in the Ministry of Employment and the Economy. They operate within the organization of the Federation of Municipalities.

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For related information, please see European GPP criteria for [Road Transport](#) and the [Technical Background Report](#).