

Helsinki

# Helsinki News

2/2017

Helsinki seeks a pioneering role  
in climate action

mySMARTLife project develops cuts  
in urban energy use

Automated bus to go into service

Journey Planner improves through  
open-source software development



# Helsinki seeks a pioneering role in global climate action

Mayor Jan Vapaavuori outlines Helsinki's climate goals and strengths



Pertti Niisonen / City of Helsinki

“One of Helsinki’s strategic focuses is to join and to be an active member of international networks including the C40 Cities Climate Leadership Group,” says Helsinki Mayor Jan Vapaavuori.

Cities have great power. Therefore they are responsible to act as forerunners in climate action, and they play crucial roles in fulfilling the requirements of international climate agreements including the Paris climate accord. Cities either solve, or fail to solve, those problems that lie in the core of fighting climate change.

Welcoming the full weight of its global responsibility, Helsinki has set ambitious climate goals for itself in the new proposal for the City strategy. Helsinki seeks to cut greenhouse gas emissions by 60 percent from 1990 to 2030 and



## Helsinki's climate roadmap

### Current climate goals

By 2020

**30 %**

cut in greenhouse gas emission from 1990

**20 %**

of energy sources are renewable

**20 %**

improvement in per-capita energy efficiency from 2005

### Proposed new climate goals

By 2030

**60 %**

cut in emissions from 1990

By 2035

**CO<sub>2</sub> neutral**

City is carbon neutral

to be carbon neutral by 2035.

I strongly believe in the power of positivity in fighting climate change, as in other areas of life. Prohibitions and restrictions are not part of today's climate policy, although some enforcement is always necessary. For example, the main mechanism to reach our goals in mobility in Helsinki is to plan and build communities in such ways that reduce needs to move around and encourage people to walk, cycle and use public transport; often artificial restrictions on private car use only shift problems elsewhere.

Mobility is indeed one of Helsinki's strengths in cutting emissions. Here good public transport services and an increasing focus on rail transport play strategic roles. One significant indicator of the City policies is a reduction in parking charges for electric vehicles to promote low-emission mobility.

Moreover, Helsinki possesses considerable strengths in smart and clean solutions. Our expertise in this area is underscored by our recent

Smart & Clean initiative, which aims to improve living standards in Helsinki and to benefit other cities and regions through our innovations, as well as raising Helsinki's international profile.

One of our greatest strengths in fighting climate change is our city-wide network dedicated to the work. The City of Helsinki is just one player in this network, supporting and supported by globally first-rate Finnish and Helsinki-based enterprises focusing on smart and clean solutions. Key roles are played by the citizens of Helsinki, who are committed to a healthy and clean environment.

Helsinki wants to be a pioneer and internationally recognised for sustainable development and high ecological standards. We want to partner with other major cities in key global issues and seek a high profile in fighting climate change. Without doubt, climate action should be one of the main themes of global collaboration.

**Jan Vapaavuori**

*Mayor*



The Kalasatama area under construction is a platform to develop new, smarter lifestyles.

# Helsinki develops smart energy solutions in mySMARTLife project

Helsinki is one of the EU's three mySMARTLife Lighthouse cities that produce commercial-scale smart solutions for energy use in properties, city infrastructure and mobility.

Helsinki climate expert **Jari Viinanen** presents solutions that make his carbon-neutral workplace even smarter: the Viikki Environment House, the headquarters of the Helsinki environment services, already features the lowest energy use of any Finnish office building, but with new remote-controlled solutions to optimise workspace heating the build-

ing's energy use will be pushed even lower. Solar energy produced by the building's solar panels is stored by a newly-built system to be used, for example, to recharge electric vehicles, as well as helping to power the building.

The Environment House is also the headquarters of the mySMARTLife Helsinki Lighthouse proj-

ect, in which Helsinki joins Hamburg and Nantes as mySMARTLife Lighthouse cities. Together they seek to find workable solutions that can cut energy use in cities by 10–20 per cent. Four follower cities will learn from their experiences to develop their own sustainable urban solutions.

“The ultimate goal of mySMARTLife is to mitigate climate change,” says **Mikko Martikka**, mySMARTLife Helsinki Lighthouse Lead, reminding us that cities produce 70 per cent of all greenhouse gas emissions.

Martikka explains that every city involved in the initiative develops its own mySMARTLife programme. Helsinki utilises its special features and strengths, such as new areas under construction serving as testing grounds, good opportunities to develop smart mobility solutions, and advanced capabilities in IoT/ICT.

The Environment House is a spearhead site to optimise energy solutions for office buildings. The building regulates heat and electricity consumption by demand response, while boosting energy efficiency and the use of renewables.

Residential solutions are developed, first, by retrofitting some of the 1970s Merihaka apartment buildings. Apartments are equipped with smart heating control systems that adjust heating according to resident needs.

Some of the latest home technologies are installed and tested in the new residential area of Kalasatama, which is designated by Helsinki as a smart city development platform: Smart Kalasatama tests a wide range of services, from remote control of homes to mobility, that promise to give residents one extra hour a day. The Helsinki energy company Helen’s adjacent operations develop combinations of solar power production, power storage and electric car charging. The nearby Korkeasaari island, home to Helsinki Zoo, is being developed into a carbon-free district.

Helsinki brings to mySMARTLife a strong IoT perspective. Data produced by sensors related to

the new, smart technologies is made available as open data with open APIs for further application development. The data can be visualised on Helsinki’s advanced citywide 3D models, which can show, for example, building energy efficiency.

The five-year project 2016–2021 is funded under the European Union’s Horizon 2020 research and innovation programme. Total funding is €18 million, €5.6 million for Helsinki.

## mySMARTLife Helsinki Lighthouse project 2016–2021

# 10–20%

### cuts in energy use

- Properties
- City infrastructure
- Mobility

**Smart heating control**

**Smart lighting and mobility services**

**Heat and electricity demand response**

**Electric vehicles and charging stations**

**Retrofit energy solutions**

**Open energy data**

**Energy storage**

**Energy data visualised on city 3D model**



Harri Santamala presents Robobus's predecessor, a Sohjoa automated minibus.

## Driverless bus to operate in traffic on Helsinki RobobusLine

The automated electric minibus is a component of the mySMARTLife project

Helsinki public transport services will take a major step towards smarter mobility with the launch of RobobusLine in late 2017. The line will be operated on streets in an inner-city area with one driverless electric minibus that represents the latest generation of automated buses, supplied by Navya of France. After an experimental phase in 2017, RobobusLine is projected to start scheduled service in 2018.

Helsinki RobobusLine is a three-year project carried out by Metropolia University of Applied Sciences. Paving the way for Robobus, two driverless electric minibuses have been tested in traffic in the Sohjoa project since summer 2016. RobobusLine represents a shift from short-term experiments to more established service with automated buses. Helsinki is the first city in the world to put a driverless, remote-controlled bus onto streets to operate in regular traffic.

RobobusLine project leader **Harri Santamala**, director of Metropolia's smart-mobility innovation hub, explains, "Robobus will be used to study the user experience and customer behaviour in situations where the novelty of a driverless bus wears off."

Driverless minibuses are a solution to the last-mile service in public transport – taking riders from a public transport hub to their homes. The last legs of journeys are often not competitive if served by traditional buses but could be economically operable with remote-controlled driverless buses.

The ultimate goal of the RobobusLine project and further automated bus development in Helsinki is to increase public transport use and so to reduce cars and needs to drive in the city. Helsinki RobobusLine is part of the mySMARTLife project's mobility development towards sustainable, low-emission transport. [Sohjoa.fi](http://Sohjoa.fi)

# Public transport users served by new Journey Planner

The service keeps improving through open-source software development

The Helsinki region's Journey Planner is one of the most popular digital services in Finland: the planner has 150,000 daily users in its service area of one million people. The provider of the service, Helsinki Region Transport HSL, has released a new version of the planner that promises to improve the service's popularity even further thanks to continuous upgrades.

The new HSL Journey Planner is exceptional among similar trip planners worldwide in that it is based on open-source code, and all data is made available as open data. Thus the development of the planner can be a collaborative activity among developers, the general public and other cities' transport authorities. Among others, New York's Metropolitan Transportation Authority MTA has tested the source code.

"The Journey Planner will never be fully complete; it will be continuously developed," says **Jari Honkonen**, who leads the work at HSL. He points out that the development is largely carried out with feedback from customers.

Keys to the features of the Journey Planner are the user's location and utilisation of real-time data. When the user enables location services, the Journey Planner makes the route search by destination only and shows the real-time situation in nearby public transport services: the user can see the nearby stops on a map, the services available at those stops, and when the next services will depart.

The Journey Planner gives the user a fast, disruption-free route, and it offers alternative routes



Roni Rekomaa / City of Helsinki

The Journey Planner development is part of the overall strive in Helsinki to improve public transport services and so to increase the use of public transport.

utilising the entire public transport fleet. The planner even integrates Helsinki's City Bikes bike-share system.

## Helsinki applies to host European Medicines Agency

Finland submitted an application to the EU in early August to host the European Medicines Agency (EMA) in Helsinki. This EU agency, today located in London, will need to find a new home after Brexit (the prospective withdrawal of the UK from the EU). Several EU countries are competing to host EMA.

“Locating EMA in Helsinki would ensure a smooth transition of the operations,” says Helsinki Mayor **Jan Vapaavuori**.

Helsinki is already home to the European Chemicals Agency (ECHA). Together, ECHA and

EMA would form a significant centre of excellence for the protection of human health.

“Even now, the Helsinki region is among the best places in Europe for research & development and business in health and health technology,” Mayor Vapaavuori asserts. “The development of Helsinki’s life science sector is strongly supported by Health Capital Helsinki, which is a joint project of the City of Helsinki, University of Helsinki, Aalto University and the Hospital District of Helsinki and Uusimaa HUS. EMA would benefit from this project.”

## Helsinki to be the world’s most functional city

Mayor Jan Vapaavuori has announced his proposal for the new Helsinki City Strategy 2017–2021. He declares, “We will work every day to be an increasingly international, service-oriented and attractive city.”

Some of the key points of the strategy are as follows: Helsinki strives to be the most functional city in the world, and Helsinki will be further developed as a dynamic and original city. The most essential task of the City administration is to secure sustainable growth. Helsinki keeps improving services to make the city a momentous place for learning, a physically active and healthy city, a city with dynamic, original and safe neighbour-

hoods, and a city that shows climate responsibility.

Some of the key objectives of Helsinki defined in the strategy are to resolutely fight segregation and social exclusion; to be among Europe’s most appealing locations for innovative startups and to be Finland’s best city for enterprises; to be carbon neutral by 2035; to make early childhood education free step by step; to double the provision of English-language education and early childhood education; and to be the world’s foremost city in utilising digitalisation.

The Helsinki City Strategy proposal will be presented to the City Council for approval in the autumn 2017.

**Helsinki**

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**City of Helsinki  
Communications Unit**  
Executive Office  
P.O.B. 1  
Pohjoisesplanadi 11–13  
00099 City of Helsinki  
Finland  
Phone +358 9 310 1641

**Contact**

*United States and Canada:*  
Johanna Lemola  
[jlemola@aol.com](mailto:jlemola@aol.com)

*United Kingdom:*  
Jarkko Järventaus  
[jarkko\\_jarventaus@yahoo.com](mailto:jarkko_jarventaus@yahoo.com)