

HELSINKI • ESPOO • VANTAA • KAUNIAINEN

Open City Data

for

researchers journalists associations data nerds humanists civil servants business developers tourists traders neighbourhood activists historians futurists statisticians geniuses artificial intelligence citizens software developers event organizers hands-on makers traffic planners entrepreneurs coders curious people

for all of us

hri.fi

HELSINKI METROPOLITAN AREA – FORERUNNER OF OPEN DATA

Helsinki Region Infoshare is the most diverse open data service in Finland and one of the international leaders in the field.

Launched in 2011

Open data service of the cities of Helsinki, Espoo, Vantaa and Kauniainen. The service provides data regarding the cities of the Helsinki Metropolitan Area and Helsinki region as open data for anyone to use freely.

HRI helps data owners and supports data users.



OPEN DATA IN A NUTSHELL

Open data is:

Public data Openly licensed Machine-readable Free of charge

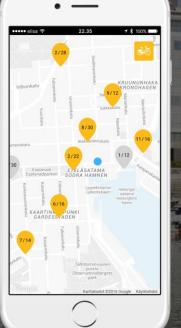


APPLICATIONS BASED ON OPEN DATA HELP IN EVERYDAY LIFE

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 (\rightarrow) Kaikki tapahtuma

The open event APIs of the cities can be used freely in e.g. event calendars, web services and mobile applications.



The city bike system in the Helsinki metropolitan area has been a huge success. Opening the bike station data for everyone quickly led to the creation of a host of city bike applications.

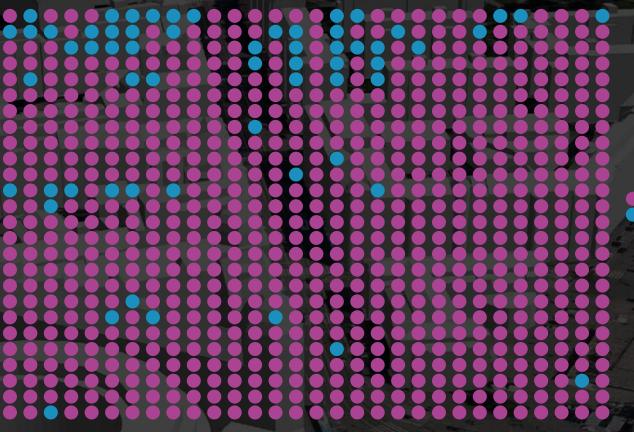


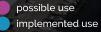
UNLIMITED PURPOSES OF USE

For example, <u>Helsinki's</u> and <u>Espoo's</u> 3D city models are available as open data for everyone to use. We are only taking the first steps in making use of the world's finest city models.

application

Carbon Neutral City Smart City **Innovations & Products** Services & Workflows Web Services Business **Education & Research** [City] Marketing **Tourism & Navigation City Events Communication & Interaction City Planning** [Smart] Traffic & Transportation **Building & Infra Design Project Planning** Microclimate **Building Permissions Decision Making** [Project] Management Construction Asset Management Maintenance [Tele] Networks & Lightning **Exceptional Situations** Rescue & Safety Exhibitions





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Source: City of Helsinki 3D experts

practical uses

DATA FROM ALL AREAS OF LIFE





命 CONSTRUCTED ENVIRONMENT

building prohibitions real estate housing production base map detailed plan 3D buildings flat types building stock floor space housing units 3D city models city plan heat loss surface model public area register stair halls address catalogue construction projects building land reserve building production rented housing production

Data

3D city models of Helsinki and **Espoo**

Buildings of Helsinki, Espoo and Vantaa

Plot reserve in the Helsinki Metropolitan Area per block

Register of public areas in the City of Helsinki

Started and completed housing in the Helsinki region

...and a lot more, check hri.fi

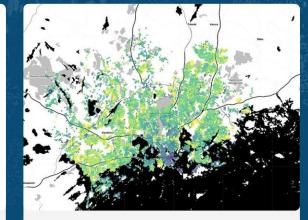


Helsinki Energy and Climate Atlas is a tool based on the 3D city data model. The Atlas offers information about the energy consumption and solar energy potential of buildings.

The SiirtoSoitto mobile application tells the user about upcoming street cleanings and reminds the user of parking restrictions coming into effect. Author: TwentyHexagons.

Data: Helsinki street cleaning plans

SiirtoSoitto



Age of buildings in the Helsinki Metropolitan Area is Topi Tjukanov's visualisation. The map shows the average age of buildings in the Helsinki Metropolitan Area by 250 m x 250 m hexagons.

Data: Buildings of Helsinki, Espoo and Vantaa



Data: 3D models of Helsinki



© CULTURE AND RECREATION

libraries nature routes art museums exhibitions event API number of cyclists city museum art and culture grants most borrowed books building history orchestras concerts non-fiction books collections reservations swimming halls music magazines

Data

Applications



Helmet libraries' catalogue

Helsinki Zoo visitor count

...and a lot more, check hri.fi

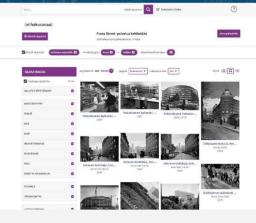


The Eventmore mobile application, created by iQ Payments Ltd, can be used to search events in the cities based on, for example, locations, time, category or theme.

The Outdoor Exercise Map contains information about the condition of outdoor exercise facilities in Helsinki. Espoo and Vantaa. The service includes the skiing tracks, ice-skating fields and beaches in the cities.

(2) Kaikenkuntoi

Data: Helsinki metropolitan area Service Map **APIs, HSL Journey Planner API**



Finna Street searches images from Finna based on the location provided by the user's browser. Finna contains more than a million photographs from Finnish museums, libraries and archives.

Data: Collections of Helsinki City Museum



Data: Linked Events Helsinki API



ECONOMY AND TAXATION

difference in income city's acquisitions gini coefficient balance household incomes budgets investments income expenditure economic indicator operating expenses acquisitions of fixed assets profit and loss accounts municipally owned companies personnel costs tax revenue company tax income level

Data

Budget data Construction projects of Helsinki Dwelling-unit incomes Investments by the city of Vantaa Procurements of Helsinki, Espoo, Vantaa and Kauniainen

...and a lot more, check hri.fi

Valinta

Applications

The Procurements of municipalities web service is Hahmota Oy's dashboard of the procurements of Helsinki, Espoo and Kauniainen.

Data: Procurements of Kauniainen, Espoo and



The visualisation of income levels in Helsinki shows the income level factors of housing areas in Helsinki both on the map and as time series.

Data: Helsinki region statistics API, Household income in Helsinki by district 1993-

Tiliryhmien osuudet	Suurimmat ostajat 2017	Määrä (milj. €)	Hankinnat lajeittain 2
ostoissa 2017	Helsinki	2 421	
	Espoo	1 061	
	Tampere	934	
~	Vantaa	857	
	Turku	806	
	Oulu	732	EU 50%
Palvelut 78% Avustukset 9%	Lahti	524	Kansallinen 20%
Aineet 8% Muut 5%	Kuopio	484	Entyls 12% Puolustus 2%

Handata is Sofokus Oy's search engine for the municipalities' acquisitions and tendered procurements.

Data: Procurements of Helsinki, Espoo, Vantaa and Kauniainen

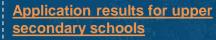


EDUCATION

schools pre-school education number of pupils joint application system youth vocational education institutions educational fields upper secondary schools students adult education centres entrance thresholds day-care educational level universities

Data

Applications



Comparison of early childhood education and care between the six largest cities

Number of students in Helsinki by school

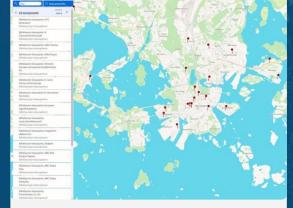
School admission areas

Statistical Yearbooks of Helsinki

...and a lot more, check hri.fi

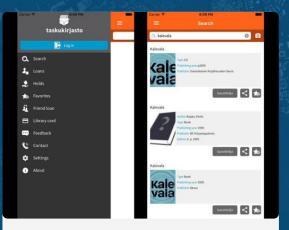


The Helsinki school history register includes information about the schools of Helsinki since the foundation of the city in 1550.



On the <u>Helsinki Metropolitan Area</u> <u>Service Map</u> you can find all the public municipal services, such as schools, day-care centres and health stations in the Helsinki metropolitan area.

Data: Helsinki metropolitan area Service Map APIs



HelMet Pocket library is a mobile application for library customers in the Helsinki Metropolitan Region. In the Pocket library, the user can renew loans, search materials and receive reading recommendations.

Data: Helmet-libraries' catalog



Data: School history database of Helsinki

ENVIRONMENT AND NATURE

valuable environments waste management nature trails environmental protection greenhouse gases solar radiant energy waste amount parks noise report nitric oxide nature data system air quality inland waters wind power questionnaire energy water management heat loss lighting air pollution environment report environment permit

Data

Amount of solar radiant energy on the roofs in the Helsinki Metropolitan Area

Annual statistics for the waste management in the Helsinki Metropolitan Area

Answers to Helsinki's and Vantaa's environment attitude survey

Energy consumption in the Capital Region

Helsinki's nature information system

...and a lot more, check hri.fi

Applications



The greenery areas of Helsinki application estimates the greenery areas in terms of accessibility and location in relation to the population density. Authors: Petteri Pesonen, Pilvi Nummi, Aino Keitaanniemi.

Data: Register of public areas in the City of Helsinki

Road traffic noise levels is Cloud'N'Sci Ltd's visualisation, which shows the noise zones as comprehensible heat maps.

Data: Traffic noise zones in Helsinki metropolitan area



kattohukka

Vuotaako lämpöä harakoille? Säteileekö kattosi? Tervetuloa tutkimaan Helsingin kattojen lämpövuotoja. Kattohukka on palvelu joka kertoo katoilta säteilevästä lämmöstä ja eristyksen laadusta.

Kirjoita kadunnimi ja talon numero

Aloita

Kattohukka (~roof loss) is a service produced by Helsinki Region Environmental Services Authority (HSY) by which it is possible to scrutinise the heat loss through the roofs of buildings in Helsinki.

Data: <u>Thermographic map of Helsinki</u>, <u>Orthophotograph of Helsinki region 2017</u>, <u>Buildings in</u> Helsinki



HEALTH AND SOCIAL SERVICES

well-being health services health status housing conditions causes of death total fertility rate child welfare social assistance social services elderly care number of customers performances prevalence index

Data

Births and deaths in Helsinki 1811-1998

City of Vantaa's service accessibility survey 2018

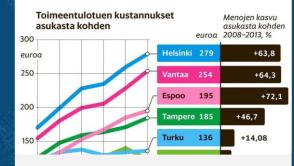
Comparisons of <u>elderly care</u>, <u>social</u> <u>assistance</u> and <u>social welfare for the</u> <u>disabled</u> between the six largest cities in Finland

Helsinki: Health care

...and a lot more, check hri.fi

Applications

Toimeentulotuen menot kasvavat voimakkaasti



Social assistance expenditure is increasing heavily is an article by newspaper Helsingin Sanomat and the visualisation of the social assistance expenditure in the six largest cities in Finland.

Data: Comparison of social assistance between the six largest cities

Kuuden suurimman kaupungin vanhusten sosiaali- ja terveyspalvelujen ja kustannusten vertailu vuonna 2017

<u>Comparison of elderly care between</u> <u>the six largest cities</u> report makes a comparison between the population, performance, personnel and costs of the cities.

Data: <u>Comparison of elderly care between the six</u> largest cities



Ilkka Pirttimaa's <u>Blindsquare</u> is an augmented reality application, which helps the visually impaired navigate in the city environment.

Data: <u>Helsinki metropolitan area Service Map APIs</u>, <u>HSL Journey Planner API</u>





HOUSING

buildings housing prices number of rooms average size of dwellings purpose of use housing production type of dwelling completed dwellings rental dwellings number of persons dwelling density

Data

Dwelling households in Espoo

Dwelling inspection requests in Helsinki

Housing production in the Helsinki Metropolitan Area

Statistical yearbook of Helsinki: Housing

Statistical Yearbook of Vantaa

Vantaa's Future Survey

...and a lot more, check hri.fi

Applications



The <u>Helsinkians' best places of</u> <u>residence</u> visualisation by Lauri Vanhala shows which parts of the city have the best public transport for the commute in the morning and the restaurant visits in the night.

Data: <u>HSL Journey Planner API</u>, <u>Address list of</u> Helsinki



Salla Multimäki has made the <u>Water</u> <u>supply of dwellings 1900 visualisation</u>. In 1900, an own tap was luxury even in the inner city.

Data: Living conditions of workers in Helsinki in 1900

Nain pk-seutu asuu Austalia ääriviivalia merkittyis alueita kiikkaamala saat Iisätietoja. Asumisviityys, m²asukas alle 25 25-30 30-35 35-40 40-45 45-50 yil 50 ei tietoa

Newspaper Helsingin Sanomat's counter tells if you are living in a tighter space than your neighbour.

Data: Population grid of Helsinki metropolitan area



JOBS AND INDUSTRIES

open jobs labour business activities work stoppages employment exchange city's personnel division classification unemployed unemployment rate

Data

Employed work force in the Helsinki region by age and gender

Food establishments in Helsinki under food control supervision by the Food Safety Department

Job API for City of Vantaa vacancies.

Resource reservation system for City of Espoo and Helsinki

Telephone survey data of Helsinkibased companies from 2016 and 2018

...and a lot more, check hri.fi

Applications

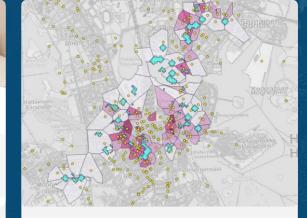


Tila käyttöösi vaikka vain tunniksi!



Flextila is a service constructed by Joustotoimisto Oy. The service makes it possible to utilise underutilised spaces. It can be used by both the owners of the spaces and those in need of a space.

Data: Resource reservation system for $\underline{\mathsf{Espoo}}$ and $\underline{\mathsf{Helsinki}}$



Where should I start a café? is Faris Alsuhail's visualisation of how geographic data can be utilised in deciding the location for a company.

Data: Walking and bicycling travel time matrix for Helsinki Metropolitan Area metro and train stations, Food establishments in Helsinki under food control supervision by the Food Safety Department, Nice city centre for visitors -survey results & City of Helsinki road map

	Perustiedot	
Tolenániesi	Holdingin mojerillike ov	
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KJyntkouite		
Pastiassite	Vanha talville 8 8 00580 HOLSINKI	
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En nakkaperint år ekisteri	Relatering	2013-07-15

<u>Firmoja.fi</u> is a new kind of company search, which combines the company's basic data from several open data sources.

Data: Procurements of the City of <u>Kauniainen</u>, <u>Espoo</u>, <u>Vantaa</u> and <u>Helsinki</u>



LOCAL GOVERNMENT

elections city's acquisitions environmental report city council budget revenue expenditure decisions voting area divisions financial ratios investments data system registers resource reservation API

Data

Applications

Electoral districts	in the	Helsink
metropolitan area		

Information about Finland in many languages

Information systems registers of <u>Helsinki</u> and <u>Vantaa</u>

Metadata of HRI datasets

Open decision API of Helsinki

...and a lot more, check hri.fi

MITKÄ PÄÄTÖKSET? Sältä läydät foa koo kaupungin päätökset ja sinin lämpukt asunkijat	KARTALLA	outerent päästäiseet.	PÄÄTTÄJÄT Maar päänäiset uikolliin? Selaa päättösser säärnerjonä.
/asta käsiteltyä		Uusimmat	kokoukset
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Kairasaaren ja Szano Kieraanan esirakertaminen, kokonaisusaika, mustostuikilaus		Hanishtajohtaja 35/2019 (33.85.2019) Hanishtajohtaja 35/2019 (33.85.2019)	
Eurocand Corporate Gold - kontiles hankkisminen kultuurin ja vapaa-ajan		Varmaiskasvatuksen alvepäällikko 6 20/2019 (10.05.2019)	
toirialaile		Tiknigääll Miki asumtotonti: 115/2019 (10.05.2029)	
Assanto Dy Hobilegin Pareslaittari A2 asamton kaatoushaittaegilihyyi Vittyvän tufikimussuuneltelman tilaaminen		Trimipádi kiső asumszonit: 136/2013 (38.65.2019)	

In the <u>Decisions web service</u>, you can browse Helsinki's decisions according to topics, areas and descriptors. Using the <u>Helsinki application</u>, you can send feedback and development ideas to the City.

HELSINKIKANA MUMUALANA HELSINKIKANA MUMUALANA Kaupunginvaltuusto Kaupunginvaltuus

<u>Helsinki Channel mobile</u> is an open source code application through which you can, for example, watch all City Council meetings since 2011.

Data: Helsinki Channel open data

Data: The issue reporting API of Helsinki



Data: Open decision API of Helsinki



orthophotos aerial photos nature routes traffic lanes nomenclature base map city plan building prohibitions property maps false-colour images laser scanning data up-to-date detailed plans 3D-models guide maps statistical zoning postal code areas geological destinations street cleaning plans Minecraft city model surface models area divisions neighbourhoods

Data

3D city models of Helsinki and <u>Espoo</u>

Combined detailed plan map of Helsinki

Helsinki metropolitan areas in districts

Helsinki metropolitan postal code areas

Historical ortophotographs

...and a lot more, check hri.fi





Helsinki 1943 3D is a 3D picture of Helsinki in 1943, created by Antti Ahola. It combines a historic orthophoto and the modern-day 3D city model of Helsinki.

Data: Orthophotograph of Helsinki 1943, **3D models of Helsinki**

146 m

Newspaper Helsingin Sanomat's web article Pasila grows sky-high visualises future Helsinki using the Unreal game engine and Helsinki's 3D city model.

Data: 3D models of Helsinki



In the Espoo City Home Street Portal you can browse a map with information about buildings, land use planning and traffic in your own neighbourhood.

Data: Helsinki metropolitan area Service Map APIs



POPULATION

population estimates age gender nationality language foreigners population immigration fertility rate mortality marriages population data grid single person households household-dwelling units population changes mother tongue migration families with children birth rate labour force

Data

<u>Average size of households in the</u> Helsinki region

Families in Espoo by family type 1.1.1999

Population and foreign people in Helsinki by place of birth, age and district in 2004-

Population grid of Helsinki metropolitan area

Population projections

...and a lot more, check hri.fi

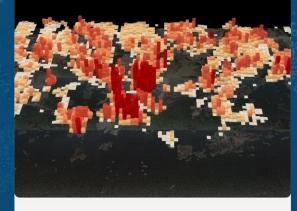
Applications



The Helsinki Region is aging rapidly is YLE News' article and visualisation of the age structure in the Metropolitan area.

Migration to Helsinki by province and region 1917-2016 is a visualisation of Finland's centenary. The visualisation describes the enormous migration of the last century.

Data: Migration in Helsinki by province 1911-1994



The 3D visualisation of the population data grid is Faris Alsuhail's three dimensional visualisation of the distribution of the population of Helsinki into different housing areas.

Data: Population grid of Helsinki metropolitan area



Data: Helsinki region statistics API

TRAFFIC AND TOURISM

schedules parking city bikes streets traffic noise city models stops Helsinki Region Transport's services residential parking events traffic volumes cyclists park-and-ride guide map emissions cycling barometer parking violations accommodation stats traffic lights sights accidents

Data

Centreline network of traffic routes in Vantaa

Helsinki and Tallinn nature trails

Number of cyclists in Helsinki, Espoo and Vantaa

Parking spot usage API of Helsinki

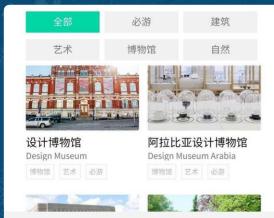
Parking violations in Helsinki

Snow plow locations in Helsinki and Vantaa

Tourist traffic stops and parking places in Helsinki

...and a lot more, check hri.fi

Applications



Tencent's <u>WeChat MyHelsinki Mini</u> <u>Program</u> makes Helsinki info available to almost one billion WeChat users. The application includes information about sights, services, events and mobility in the City.

Data: Linked Events Helsinki API MyHelsinki Open API



Helsinki Traffic Forecast makes forecasts about the traffic volumes in the Helsinki region. It is based on open data published by the City of Helsinki and the National Land Survey of Finland. Author: Kristian Polso / Vaiste

Data: Traffic volumes in Helsinki

Productions Oy.

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Maas Global Ltd's <u>Whim</u> is a Mobility as a Service (MaaS) application, which can be used to gain access to public transport, city bikes, taxis and rental cars.

Data: HSL Journey planner API





HELSINKI • ESPOO • VANTAA • KAUNIAINEN

Utilise freely!

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@HRInfoshare

f facebook.com/helsinkiregioninfoshare



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