

HSL open data

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HSL in a nutshell



- Helsinki Region public transportation authority
- Cities: Helsinki, Espoo, Vantaa, Kauniainen, Kirkkonummi, Siuntio, Kerava, Sipoo, Tuusula
- Responsible for transportation planning, ordering, passenger information, ticket sales



Our open data



- Route and timetable data
- Real-time traffic data
- Routing API
- Maps and location data
- Park and ride facilities information system
- Payments
- <https://www.hsl.fi/en/opendata>
- <https://digitransit.fi/en/developers/>

Traffic data



→ Routes, timetables and zones

- GTFS format <http://dev.hsl.fi/gtfs/hsl.zip>

→ Real-time data on location, forecasts, cancellations and releases

GTFS-RT via GraphQL API <https://digitransit.fi/en/developers/apis/4-realtime-api/>

- Location data 1/s <https://digitransit.fi/en/developers/apis/4-realtime-api/vehicle-positions/>

→ Traffic releases in JSON

→ Routing API / GraphQL API

- City bike station data

→ Park and ride facilities data

- ~REST API -> JSON/GeoJSON: equipment level, utilization rate etc.



Maps and location data



→ GIS data portal

- <https://public-transport-hslhrt.opendata.arcgis.com/>

→ HSL utilizes OSM and introduces corrections there

- Tile Map Service – HSL background map available

→ HSL POIs available as vector tiles

- Ticket vending machines, city bike stations, park and ride facilities...

→ Geocoding API

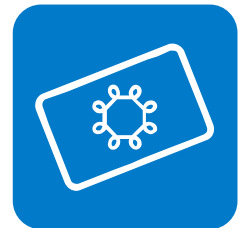
- Pelias REST API, GeoJSON
- Address search, autocompletion



Payments



- OpenMaaS API for single, day and season mobile tickets
 - <https://sales-api.hsl.fi/>
- Mobile ticket done with HTML, API provides a link with order
- A contract with HSL needed before production usage
 - Sandbox available for testing



Latest



→ Bluetooth beacons in all vehicles and (at start Helsinki) stops and metro stations

- Documentation https://hsldevcom.github.io/beacon_api/
- Endpoint <https://dev.hsl.fi/beacons>
- More info <https://www.hs.fi/kaupunki/helsinki/art-2000006227201.html>

→ City bike trips

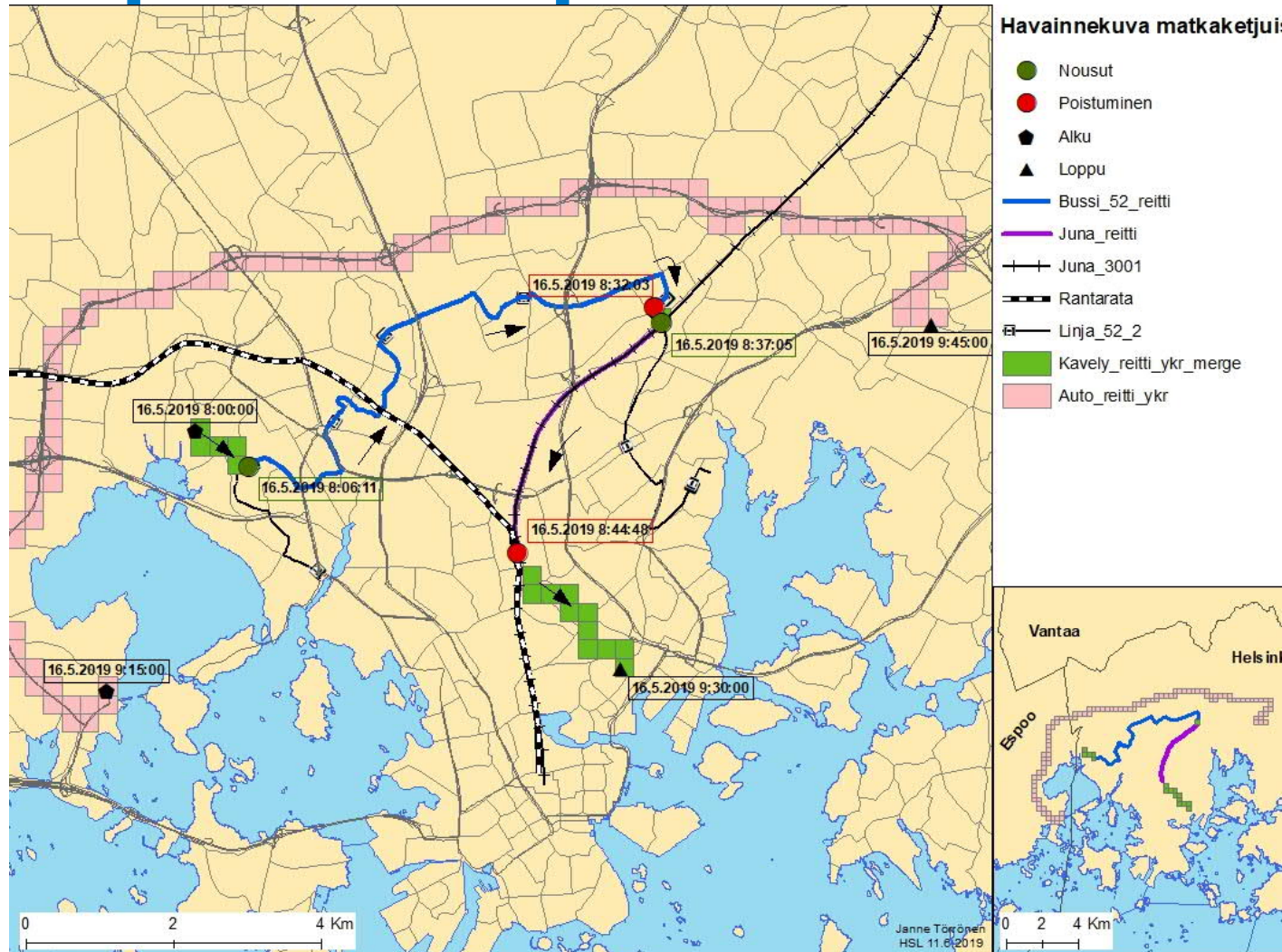
- All trips made with city bikes in Helsinki and Espoo. Data includes information about trip's origin and destination station, start and end times, distance as well as duration
- For example: dev.hsl.fi/citybikes/od-trips-2019/2019-04.csv

Trip data collection in HSL app



- HSL is piloting collecting of trip chain data to HSL app
- If user allows, app collects this data to HSL data warehouse
- Data is used for planning and modeling of public transport and transport system
 - Examples of features that are under development
 - Success of transfers
 - Time used for different parts of trips
 - Trip chains going through given nodes
 - Partial automatisisation of transport survey

Examples of trip chains



Open source HSL Projects



- Digitransit – Journey planner
 - HSL deployment <https://reittiopas.hsl.fi/>
 - <https://github.com/HSLdevcom/digitransit>
- Transitdata – publishes GTFS Realtime interfaces
 - Serves real time data to Digitransit via Apache Pulsar
 - <https://github.com/HSLdevcom/transitdata>
- Transitlog – visual exploration of observed public transport
 - Uses HFP-data
 - HSL deployment <https://reittiloki.hsl.fi/>
 - <https://github.com/HSLdevcom/transitlog/>

Contact



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