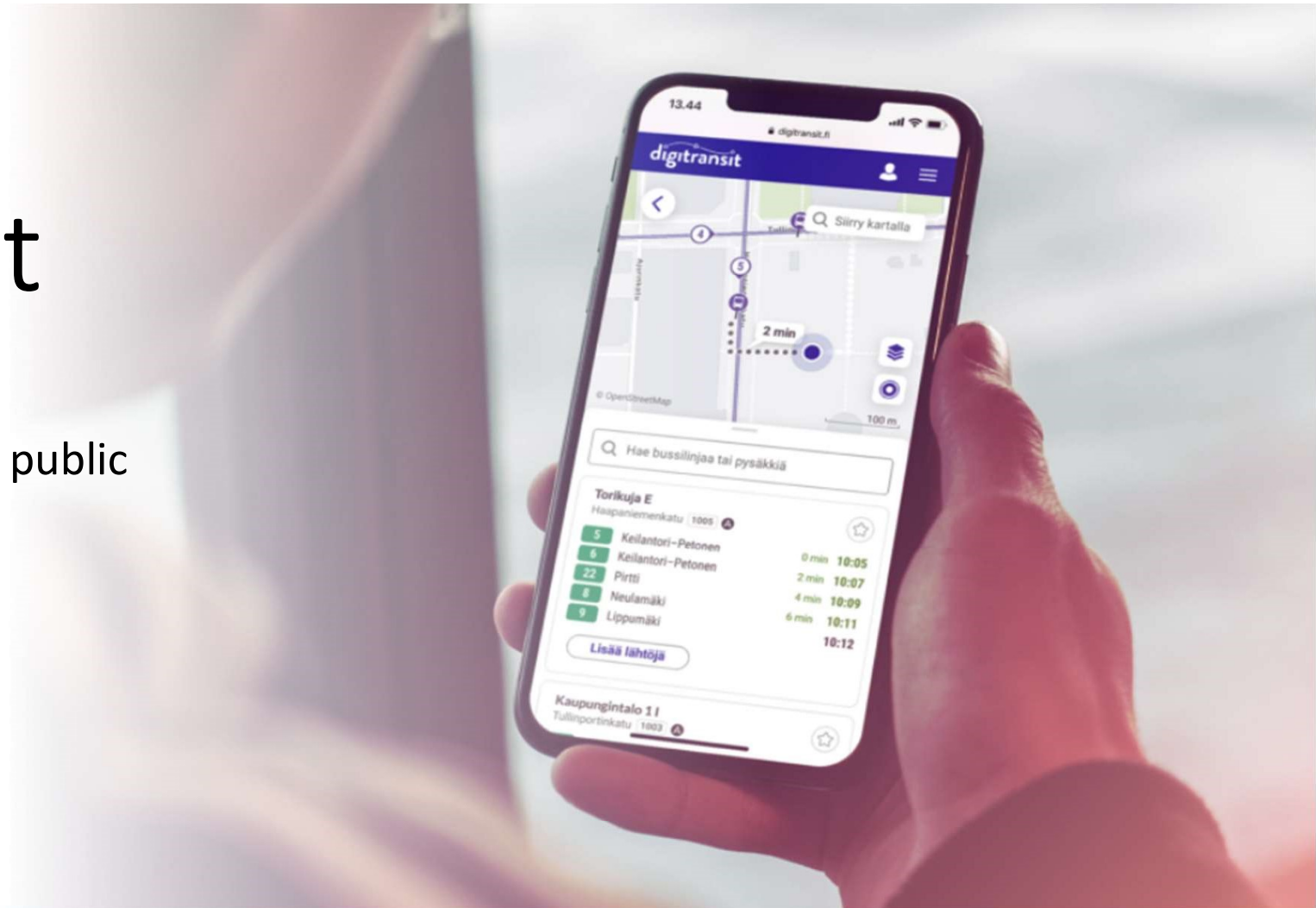# Digitransit

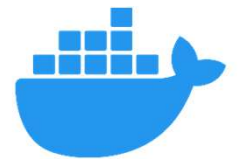Open source platform for public transit services

Architecture

- Consists of about 40 microservices running on Azure

- Kubernetes

- Docker containers

- Provides all components required for implementing a modern public transit routing service

https://www.digitransit.fi/en/developers/architecture/

Open source

- https://github.com/hsldevcom repositories
- International co-operation with upstream sources and downstream forks. Contributions from individual developers are accepted, too.
- Languages: mostly javascript, some java, python and go components
- CI based on github actions
- Examples:
  - https://github.com/HSLdevcom/digitransit-ui
  - https://github.com/HSLdevcom/OpenTripPlanner
  - https://github.com/HSLdevcom/pelias-api

Open APIs

- OpenTripPlanner routing API delivers public transit data and computes multi-modal itineraries (graphql interface)

- Geocoding API for finding coordinates of place names and addresses, and for finding the nearest location to a given coordinate (reverse geocoding). Traditional REST api.

- Map API for raster and vector maps (REST)

- Currently fully open and unlimited services. New API management layer for restricting the access will be deployed in the near future.

- Developer documentation: digitransit.fi

Other possibilities

- Some functionality (such as UI elements for search and query tools) is distributed as encapsulated libraries
  - Javascript, npm
  - React components

- A dedicated search view will be available for embedding into other web pages. This provides an easy way to integrate routing services.
  - Easy to use configuration view
  - Search view which can be placed into an iframe

- Stop monitor service