TerrainSense

Smarter terrain navigation for everyone!

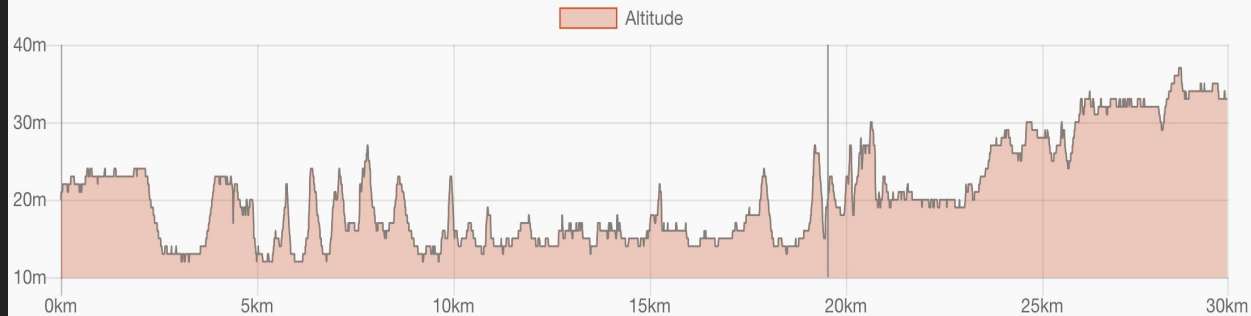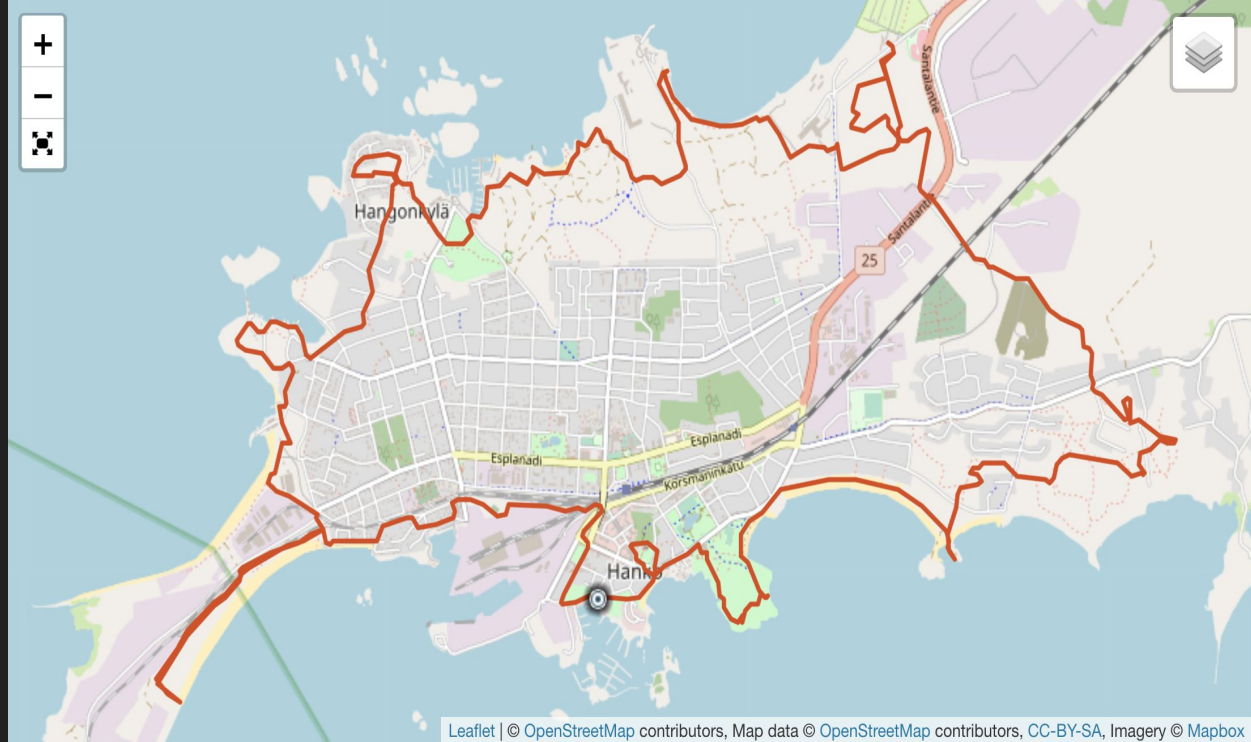FAMILY WITH CHILDREN ≠ MOUNTAIN BIKER

Each user group has different expectations and demands when it comes to nature and nature routes.

Existing route solutions only use altitude data as a difficulty measurement.

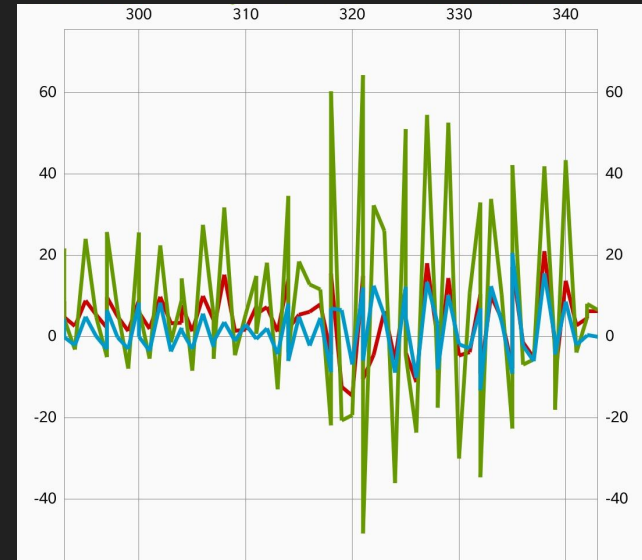This is not enough for ensuring user safety and meeting user expectations!

EXAMPLE

Routes with similar gradient values might be usable by families ...

… or they might be hard even for professional athletes!

TERRAINSENSE measures vibration from the back wheel
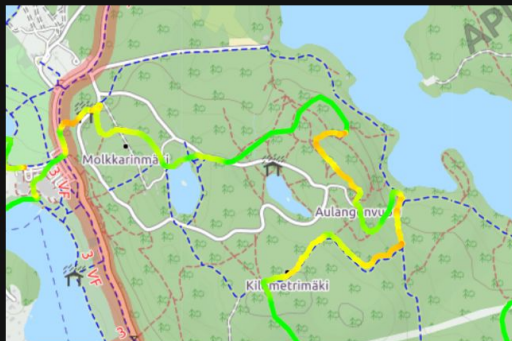of the bike (or car) and converts it into the difficulty gradient.

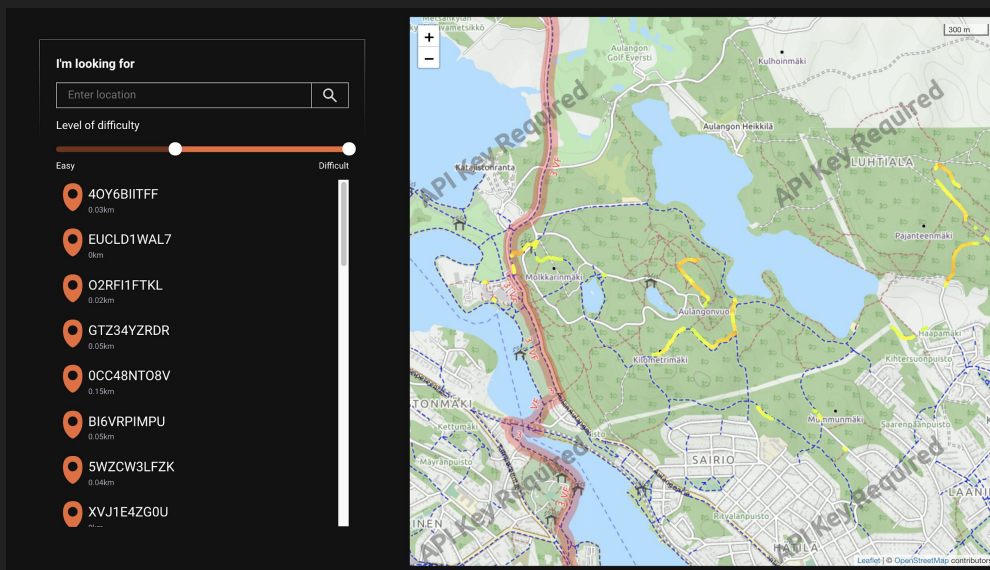Terrain data is gathered via an app (left picture).

Difficulty gradient and GPS-data are then transferred to the map (right picture).

User can then select only suitable difficulty levels and create own route based on these levels.

Next phase is to create a "smart" navigation solution, which will automatically navigate user based on her terrain difficulty preferences.

The application will also warn the user about difficult terrain approaching ahead.

This will insure that all the user groups will find suitable routes for their needs and maximise safety of the visitors.

12:34
MIN:SEC

2.4 km

Difficult section in 1.5 km

STOP NAVIGATION

TERRAINSENSE can also be used for the measurement of the pavement damage in the cities.

Measurement can be made on the bike lanes (using city bikes) or on the roads (using busses).

Based on the measurement data and a created interactive map, city authorities will be able to monitor road conditions in the city in real time.

This will dramatically decrease the repair reaction times and help in designing more user friendly roads and bike lanes.