# Smartivo - Vehicle tracking system

## Sprint 1

* ~~Attend the initial presentation of an existing Vehicle tracking solution~~
* Decide on the system architecture
  + How many servers and where will they be hosted?
  + Azure-Jakovljevic
  + Divide the system into components/services (rest api => python?)
* Decide on the project scope
  + Which features will be implemented?
  + Which features are optional and what is the priority of implementing optional features? Additional alarms via email
* Decide on the database type (SQL, NoSQL, specialised timeseries, etc.)
  + Refresh your knowledge on the chosen database
  + Timeseries https://www.influxdata.com/
  + NoSQL? Decide based on available Azure databases?
* Decide on the backend technology
  + Refresh your knowledge on the chosen backend technology
  + Python, Rust
* Decide on the REST API framework technology
  + Refresh your knowledge on the API framework technology
  + Python, Node.JS?
* Decide on the web frontend framework technology
  + Refresh your knowledge on the frontend framework technology
  + React?
* ~~Setup git repository that will be used for your project.~~
  + ~~Create an empty solution and push it to git.~~
* Define the structure of the documentation
  + Functional requirements – **should be done in this sprint- *WHAT***
  + Design specification- Architecture- ***HOW***
  + API specification
* Define the initial structure of the database
  + Which data is collected and how is it stored?
* Using OpenStreetMap for map data (<https://www.openstreetmap.org/>)
  + Tiles - <https://wiki.openstreetmap.org/wiki/Tiles>
  + Reverse geocoding - <https://nominatim.org/release-docs/develop/api/Reverse/>
* For displaying tiles maps use an existing framework
  + OpenLayers – <https://openlayers.org/>
  + Leaflet - <https://leafletjs.com/>
* For sending email use existing services
  + Sendgrid - <https://sendgrid.com/>
* Using FMB110 devices in vehicles and test suitcase
  + Familiarise with the data protocol - <https://wiki.teltonika-gps.com/view/Teltonika_Data_Sending_Protocols#Codec_8>
  + https://wiki.teltonika-gps.com/view/FMB110\_First\_Start