Chapter 1

Overall Description

1.1 Product perspective

WORK IN PROGRESS

1.2 Product functions

1.2.1 Data4Help

User Registration

Data4Help will allow users to register. These will register by entering all the required information (see [R$_X$] add reference to Requirements where we specify User info for registration). When registering to Data4Help, a user will first declare to have read the privacy statement and second they will have to accept the terms and conditions, which specifically include their consent to the acquisition and processing of their data, including sensitive ones, by TrackMe.
The user registration process will be carried out on the user dedicated application (see add reference to where we are going to specify the user interface - probably section User Interface (mobile app), maybe add also reference to user registration scenario / use case.
Unregistered users will not be able to use Data4Help. (maybe this is a requirement and it is not necessary to put it here)

Third Party Registration

A third party will be automatically registered to Data4Help once the (add name of contract between third parties and TrackMe, both here and in the definitions) contract has been agreed upon and signed by both TrackMe and the third party itself.
Third party registration is required for using the service: an unregistered third

party must not be able to access users data.(maybe this is a requirement and it is not necessary to put it here)

User Data Acquisition

Data4Help will acquire users data through smart wearables.
Users must give consent to the acquisition of their data when registering to Data4Help.
Data acquisition frequency can be changed according to users or third parties needs. For instance, if a user wants to save their smart wearable battery, frequency can be reduced. On the other hand, if a third party would like to track more accurately a user's position, a higher location acquisition frequency can be requested.

Third Parties Data Access

Once a third party is registered to Data4Help, it can request access to users data acquired through Data4Help and stored by TrackMe. Third parties may request data that refers either to a specific individual or to a group of users.
Consent to individual data access is left to the specific user, who can either allow or deny a third party request.
Data on groups of individuals will be shared with third parties as long as TrackMe will be able to anonymize it properly (see R_X include reference to requirement about anonymized data (1000 users satisfy request).

Data Management and Privacy

All data acquired through Data4Help will be stored on a database accessible only by TrackMe. Each piece of users data will have a list of parties to whom access was granted. At any time, a user will be able to revoke the previously given consent to any third party or to TrackMe. Moreover, a user may exercise their right to data portability, which means that TrackMe will have to provide them with all the collected data regarding them. Finally, users may ask the deletion of all their data stored by TrackMe. might want to list the requirements that relate to this
By guaranteeing these functions, Data4Help will respect existing general regulations on privacy (e.g. EU GDPR).

1.3   User characteristics

1.3.1   Data4Help

Data-senders: People having at least one device with a sensor connected to internet, willing to share the collected data with TrackMe to take advantage of the company rewards and eventually use the services built on top of Data4Help service.

Third parties: Companies or private persons willing, for any reasons, to collect bulk data. Usually the data is used for building services on top of it; in this case it is very important that data is transferred real time. Sometimes it is used just for statistics analysis. In both cases, third parties need that the data is correct and precise.

1.3.2 AutomatedSOS

Data-senders: People (mainly elderly) having some disease or high risk of disorder willing to monitor own health parameters and conditions in order to prevent and possibly avoid crisis.

1.3.3 Track4Run

Participants: People participating in running competition. Need to have small device and with no interaction during the run to avoid distractions.

Organizers: Companies or private persons organizing running competitions willing to better engage the spectators giving the possibility to track in real-time the position of all participants. Need to provide the service easily to ensure spectators are not prevented in using it.

Spectators: People participating as spectators to running competitions, willing to better engage the event by tracking the runners during all the run. Want it to be easy without needed particular devices or applications. Usually it is a "one-time usage".

1.4 Assumptions, Dependencies and Constraints

1.4.1 Domain Assumptions

D_1 Personal data inserted by the user during the registration correspond to his real data

D_2 Data collected and sent by the GPS and the sensors at a certain instant correspond to the status of the user at that time

D_3 User is logged in one device at a time

D_4 The maps used faithfully represent the streets that can be traveled

WORK IN PROGRESS