TrackMe

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**1. Introduction**

**1.1 Purpose**

This document represents the Requirement Analysis and Specification Document (RASD).

Goals of this documents are to completely describe the system in terms of functional and non-functional requirements, analyse the real needs of the customer in order to model the system, show the constraints and the limit of the software and indicate the typical use cases that will occur after the release.

Furthermore, it provides a description of the two software-based services offered by TrackMe (Data4Help and AutomatedSOS).

This will be done by a detailed presentation of the proposed solution and its purpose, listing its goals, and the requirements and assumptions through which they will be achieved. In particular:

* **Data4Help** is designed as a software application used for allowing third parties to monitor the location and health status of some specific individuals or to access to anonymized data of large groups of individuals.  
  Moreover, individuals agree that TrackMe acquires their data (through smartwatches or similar devices) by registering to the service
* **AutomatedSOS** is a service based on Data4Help designed to monitor the health status of the subscribed customers and, when such parameters are below certain thresholds, to send to the location of the customer an ambulance, guaranteeing a reaction time of less than 5 seconds

This document is meant to be used by any person who might be interested in this project, both end users (private customers or third-parties) and developers who have to implement the requirements.

* + 1. **Goals**
* **[G1]**: Allow individuals to become registered users of Data4Help
* **[G2]**: Allow users to sign up for AutomatedSOS service
* **[G3]**: Provide the registration to third parties who want access to users’ data
* **[G4]**: Give third parties access to users’ data
  + **[G4.1.]**: Give third parties access to data of a specific user
  + **[G4.2]**: Give third parties access to anonymized data of group of users
* **[G5]**: Allow users to accept or refuse the requests from third-parties to access their own data and their location
* **[G6]**: Allow third parties to subscribe to new data and to receive them as soon they are produced
* **[G7]**: Allow customers to insert or update their own personal data and information about their body measurements (e.g. weight, height, etc.)
* **[G8]**: If some parameters of health status are below certain threshold, send an ambulance to the user location, with a reaction time less than 5 seconds
* **[G9]**: Allow users to keep track of their health status at any time
* **[G10]**: Allow users to withdraw the authorisation to third parties to access their data

**1.2 Scope**

The aim of this section is to analyse the services offered by TrackMe in more detail. As already described in the Purpose part, TrackMe is a software that offers 2 different services:

* **Data4Help:** the service is designed to monitor and store the location and health status of individuals, acquired by smartwatches or similar devices, and share these data with third parties who request them. These stored data can be accessed by third parties only if they are authorized. In particular
  + **Individual request:** Third parties who want to access data of some specific user know his/her individual SSN or Fiscal Code.  
    TrackMe passes the request to the specific individuals who can accept or refuse it.  
    Finally, the information required is given to the third party only if the individual has authorized them, accepting previously the request. Otherwise third party is notified about the denial of the request.
  + **Anonymous group data requests:** Third parties can also access to anonymized data of groups of individuals. These requests are handled directly by TrackMe that approves them if it is able to properly anonymize the requested data. TrackMe will accept any request for which the number of individuals whose data satisfy the request is higher than 1000.

Individuals can become registered users after providing credentials, personal data and accepting the terms of use of Data4Help.  
Furthermore, every individual can view the stored data at any time to keep track of their health status and can update his own personal data, like weight, eight, etc.  
Third parties will also be allowed to subscribe to certain data in order to receive them as soon as they are produced, but at any time users can withdraw the authorisation to third parties to access their data

* **AutomatedSOS:** is built on top of Data4Help. It monitors the health status of the subscribed users and, when such parameters are below certain thresholds, sends a notification, with all the necessary information, to an external Ambulance Service, guaranteeing a reaction time of less than 5 seconds from the time the parameters are below the threshold
  1. **Definitions, Acronyms, Abbreviations**
     1. **Definitions**
     + A: aaa
     + Asac: ascnal
     1. **Acronyms**
     + Sacsc: asca
     1. **Abbreviations**
     + sacka
  2. **Reference Documents**
  3. **Documents Structure**