**1. INTRODUCTION**

**1.2 SCOPE**

The TrackMe system is designed to provide individuals to track their location and health status regularly and, if necessary, to ensure that it is forwarded to third parties. TrackMe supports three different servises such as Data4Help, AutomatedSOS and Track4Run.

In Data4Help, when the individual register to the system, the system takes personal information of them for instances SSN, e-mail, gender, chronic disease that have and nationality. In addition, infividual's location, pulse, blood rate and heart rate is taken with the help of sensors on the smart device. These data are stored in a database and shared with third parties if requested by them within the permission of individuals, such as a hospital. On the other hand, this system supports access to anonymized data of groups of individuals when the identity of them should not be identified by these third parties. At the same time, individual will be able to follow own data via the application and to approve or reject the third parties that want to use own data.

AutomatesSOS, the second service offered by TrackMe, is more engaging for especially elderly people. The data of individuals registered to AutomatesSOS are tracked real-time. The values, such as pulse meter, accelerometer, gyroscope and barometer, related to the health data of individual are taken and controlled by thresholds. When the health data of these people fall below a certain threshold, the health status and location of them are transmitted to the nearest hospital. An ambulance is sent to individual by providing the necessary service by the hospital. After the SOS notification is sent, individuals’ health status, location, notification time and which third party is shared with this information keep on TrackMe side and the individual will be able to view it in history at any time.

Another service is Track4Run supports to organizers define a path for run. Organizers define the running date and location on TrackMe. Runners register to organization and track own path and position in real-time. The instant positions of the runners are shown to the organizers and spectators on the map.

**1.3 Analysis of World and Shared Phenomena**

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| World | Shared Phenomena | Machine |
| * Having a smart device. * Having a unique SSN. * Making the monitoring data to receive. * Measuring of values (pulse, velocity, etc.) with sensors. * Measuring health data and location by smart device. * Dispatching ambulance. * Defining threshold values. * Organizing a run. | * Receiving individuals’ profile data. * Receiving health and location data from smart device. * Transmission of the received data to the application. * Requesting personal or anonymized data. * Defining pre-confirmed list. * Notifying individuals about data sharing request. * Approve or reject data sharing request. * Notifying third party about data request rejection. * Showing requested data. * View data share history. * View own data. * Notifying third party (e.g. hospital) * Defining the path. * Enrolling to run. * Tracking runners. | * Controlling SSN. * Storing the received data in database. * Controlling anonymization. * Checking pre-confirmed list. * Preparing requested data. * Storing data request. * Comparing measured values with sensors and threshold values. * Storing SOS information. |

**1.4 GOALS**

We thought about the possible customers, Data4Help, AutomatedSOS, Track4Run what they should provide them, so we planned to give our system these features:

**Data4Help**

For Individuals

* [G1] Individuals can collect and store their data on Data4Help. The desired data from individuals are: profile data, health data, location data and chronic disease.
* [G2] Individuals can share their data with third parties which they allowed.
* [G3] Individuals can update their personal information they have used while registering and delete their own account.
* [G4] Individuals can see and select which information is shared with which third parties, when information of these individuals is shared.
* [G5] Individuals can see and track their own data.

For third parties:

* [G6] Third parties can access specific individuals' data.
* [G7] Third parties can access anonymized data of a group of individuals.

**AutomatedSOS:**

* [G8] Sends a notification to the nearest hospital when health values of individual fall below a certain threshold.
* [G9] Individuals can keep their SOS history.

**Track4Run:**

* [G10] Organizers can specify paths for running.
* [G11] Individuals can register to run as a runner with unique code of organization.
* [G12] Runners can track the path and their location on the map in real-time during the running.
* [G13] Organizers and spactators can see runners' instant locations on a map.