**Requirements**

**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 diseases.
* The system should allow user to insert their ‘chronic disease’ and ‘profile data’.
* The system should ask the individual to choose which smart devices to be communicated by the application.
* System should retrieve health and location data by exploiting the APIs that are provided by smart devices application.
* These data must be stored in Data4Help database.

[D1] – Individual users have an active smart device.

[D2] – Smart devices used by individual users can monitor following features; location, heart rate, EKG, blood pressure, fall detect.

[D3] – Smart devices used by individual users provides an interface to retrieve health and location data.

[D6] – The health and location data provided by smart devices is accurate and real-time.

* [G2] Individuals can share their data with third parties which they allowed.
* The system should allow individuals to define and update their pre-confirmed third parties.
* If the third party who request the data is not in pre-confirmed list, then the system should send a confirmation notification to individual.
* If individual confirms the request, then the system should share data with the third party.
* If individual rejects the request, then the system does not share data with the third party and send notification to it about request rejection.
* The system should send a request to the individual, third parties seeking access to data is not in the list that the individual is allowed to access.

[D4] – Each individual user has a valid SSN or Fiscal Code.

* [G3] Individuals can update their personal information they have used while registering and delete their own account.
* The system should allow individuals to view and update their profile information.
* The system should allow individuals to delete their accounts. All information must be deleted when the account is deleted.
* The system must accept individuals as 'active' by default when registering.
* The system should allow individuals to switch between active and deactive status.

[D5] – Each individual user enters valid and correct information while registering.

* [G4] Individuals can see and select which information is shared with which third parties, when information of these individuals is shared.
* The system should allow individuals to add or remove third parties from the pre-confirmed third party list.
* The system should provide individuals can select the third parties they want to share their data with.
* The system must provide the system data flow to the individual without notification, if the third party sending the request is on the pre-confirmed list approved by the individual.
* When the information of the individual is shared with third parties, the request information and the shared third party information must be kept in the database of the system to be viewed to the individual.
* [G5] Individuals can see and track their own data.
* The system must display the held data.

For third parties

* [G6] Third parties can access specific individuals' data.
* The system should check if there is an active individual in the system registered with the third party SSN.
* The system must reject requests made by an deactive individual or non-valid SSN.
* The system should check if there is a third party requesting the request in the individual's pre-confirmed list.
* The system should send the result of the request directly to the third parties if it is in pre-confirmed list of individual.
* The system must send requests to individuals from third parties that are not on pre-confirmed list as approve notification.
* If the third party who request the data is not in pre-confirmed list, then the system should send a confirmation notification to individual.
* If individual confirms the request, then the system should share data with the third party.

[D4] – Each individual user has a valid SSN or Fiscal Code.

* [G7] Third parties can access anonymized data of a group of individuals.
* The system must evaluate requests from third parties.
* As a result of the evaluation, if the number of people whose data is desired is higher than 1000, the system should share the data with the third party. otherwise the request must be rejected.

**AutomatedSOS:**

* [G8] Sends a notification to the nearest hospital in 5 seconds when health values of individual fall below a certain threshold.
* The system should allow third parties, who are Data4 Help customers to offer ambulance services, to choose their status in the system.
* The individual registered in the Data4 Help must be able to activate or deactivate the SOS service.
* The system should take health values of individuals and control them with thresholds.
* The system should send notification to the nearest active third party(hospital) if the health values of the individual fall below a certain value.

[D7] – Third parties have as system which receives notification from AutomatedSOS and can dispatch ambulance to requested location.

[D8] – Latency of sending SOS notification to third party is less than 3 seconds.

[D9] – Network reliable and available.

[D10] – There are threshold values which are defined by a health organization.

[D11] – Individual users never turn their data acquisition devices off.

* [G9] Individuals can keep their SOS history.
* After sending the SOS notification, the system must keep track of information such as health values, location, notification time of the individual, and the third party that the information is shared in TrackMe's cloud.
* The system should allow individuals to follow their SOS history.

**Track4Run:**

* [G10] Organizers can specify paths for running.
* The system should allow the organizers to define the date and place for run.

[D12] – Path defined by organizer is valid and accurate.

* [G11] Individuals can register to run as a runner with unique code of organization.
* Each run must have a unique code.
* The system should allow the individuals to register with unique code.
* [G12] Runners can track the path and their location on the map in real-time during the running.
* The system should provide a map to runners for displaying his/her location and the path during the run.

[D13] – Location services of runners are available and accurate during run.

* [G13] Organizers and spactators can see runners' instant locations on a map.s
* The system should provide a map to spectators and organizers for displaying the path and the location of all runners during the run.

[D13] – Location services of runners are available and accurate during run.

**NON-FUNCTIONAL REQUIREMENTS**

Data4Help:

Individuals:

* [G1] Individuals can collect and store their data on Data4Help.
* System should retrieve and store data which are provided by API every 30 seconds in local storage (text file).

**AutomatedSOS:**

* [G8] Sends a notification to the nearest hospital when health values of individual fall below a certain threshold.
* Taking health data of individuals leads at most 1 second; the duration comparing with the threshold must be at most 1 second.