Deliverable 1.1 - Identification of the eHealth Service to be tested

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1.1 DESCRIPTION OF THE IDENTIFIED E-HEALTH SERVICE

1.1.1 GOAL

The pilot action is part of a larger project that aims at testing the ability to develop innovative eHealth services as a driver for the development of the entire territory. The service that will be tested deals with the monitoring of health and physiological parameters and has as a main target self-sufficient elderly people currently non-tracked by institutional social assistance services.
The goal is to increase the ability to identify situations of fragility as well as to allow the preventive identification of anomalous degeneration in health conditions. Potentially, the activities should lead to the creation of a database that collects the health status of the elderly population residing in Val Cenischia and in the Giaglione Municipality.
The service will monitor parameters both on the medical-health side and on the social-assistance side, in order to have an exhaustive overview and to prevent and detect the rise of medical pathologies.

To avoid the risk of a mere technological experimentation, the supply and the demand will be properly analysed and matched in order to satisfy needs effectively perceived by the population and by the stakeholders. At the same time, current existing programs and future projects in the field will be investigated in order to design a proper integration.

1.1.2 TARGET

Based on deep conversations with different stakeholders (Quadruple Helix Approach), the subjects that will be identified for the experimentation must have the following characteristics:

- An age equal to or greater than 65 years.
- Residing in Val Cenischia or in the Giaglione Municipality.
- (Possibly) not currently benefiting from social assistance services.
- (Possibly) not currently being known by Social Services.
- (Possibly) not included in other projects activated by the Con.I.S.A[1].

According to the target, a group of early-adopters will be identified primarily on the basis of the indications provided by the municipalities and by social assistance services.
The final number of adopters will be established according to:

- the geographical position;
- the availability of connection;
- the relevance of the sample.

1.1.3 CONNECTIVITY ISSUES

The area subject to experimentation has been chosen because there are network infrastructures that allow a faster deployment of connections in rural areas.
Depending on the subjects identified as early adopters, TOP-IX will evaluate the most effective technological solution to guarantee the connectivity of individuals. Particularly it might leverage the FWA[2] operators (among the members of the TOP-IX Consortium) or it might directly implement dedicated point-to-point connections.

1.2 MONITORING DEVICE

On the basis of the dialogue with the medical and social assistance staff, the main characteristics of the eHealth device to be adopted within the Pilot were identified and are outlined here below.
The basic idea is to equip early-adopters with a user-friendly and highly automated wearable device connected to a centralized data collection service through a wireless connection.

1.2.1 PARAMETERS TO BE MONITORED

[1] Con.I.S.A is an intermunicipal Social Assistance Consortium to which all the Municipalities of the Valle di Susa have entrusted the associated management of social welfare services. The Consortium intends to pursue an integrated local system of interventions and a network of social services. https://www.conisa.it/it-it/home
[2] Fixed Wireless Access

The parameters as well as the service identified has been defined by means of co-design sessions involving all the stakeholders according to the Quadruple Helix Model.

On the medical side, the main parameters to be acquired are:

- Body weight.
- Blood pressure.
- Heart rate.
- Body temperature.
- Blood saturation.
- Rhythmic or arrhythmic frequency.

On the social assistance side, the data collection should also be integrated with information about the presence or absence of a family network and/or caregiver.

1.2.2 ADDITIONAL CONSTRAINTS

- **Backend infrastructure:** the service must collect data from wearable devices and store information in a dedicated database (on premise or in cloud). The system must offer the chance to proper set up rules and profiles for data access.

- **API[3] Connection:** The service must offer versatile APIs to manage integration with third parties' services and data consumption. APIs must follow standard best practices and ensure proper security levels.

- **Certified medical devices:** the chosen device/service must comply with EU medical devices legislation and namely with the Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 on medical devices.

- **Cost effective and scalability:** the price of the device/service must be compatible with the available Pilot budget. At the same time, it must enable a wider scale adoption for future systematization.

- **Privacy and Data Processing:** while implementing the service, transparency in the use of data and technology must be ensured. Moreover, considering that the service deals with the monitoring of sensitive personal data related to the medical sphere, for the test phase, it will be asked to all the beneficiaries to fill out a specific release whether with the aim of scaling the project it will be mandatory to identify a responsible entity holding the Data.

[3] API Application Programming Interface

1.2.3 IDENTIFICATION OF THE TECHNOLOGY PROVIDER

In order to properly identify the technology provider a co-design and a participatory approach will be adopted.

The main criterion (to detect the technology provider) will be the intention to give priority to local providers (based in the area of Metropolitan City of Turin).

Therefore, local business incubators will have a relevant role in the scouting of the SME or start-up offering devices and services for the monitoring. Particularly TOP-IX will cooperate with the business incubator of the University of Turin - 2i3t.

Moreover, the local sanitary district - ASL TO3 - will be consulted due to the specific interest in the area of intervention. ASL TO3, in fact, is going to activate a wider eHEALTH service on the entire district that includes the Pilot area. A strong synergy between the Pilot and this institutional service-driven action is desirable.