

**HII CLD:
Trusted Data Management
with Service Ecosystem (EIT 14605).
Telecom Italia Sub-granting
on task A1501 and A1521:
Consolidating “Mobile My Data Store”
and “Personal Expenses collection service” Apps.**

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1 Introduction and General Context

This document describes two sub-granting proposals offered to eligible contractors by Telecom Italia's SKIL Joint Open Lab [1], in the context of the High Impact Initiative named: "Trusted Data Management with Service Ecosystem", supported by EIT Digital in its Future Cloud action line.

The "Trusted Data Management with Service Ecosystem" initiative goal is to provide consumers and businesses with better tools and services to take greater control over the use of sensitive and personal data created by and about them. At the same time this data is enabling and stimulating the business growth – companies within the trusted service eco-system, accelerated by the HII, are developing innovative and trusted products and services which can be tailored and personalized for the specific needs of the individuals and businesses.

The objective of the two sub-grants is the development/consolidation of two Android mobile applications (based on preliminary Telecom Italia's prototypes), connected to the Telecom Italia's My Data Store platform, enabling users toward the collection and control of their personal data. My Data Store platform (MDS) has been realized inside Telecom Italia's SKIL Joint Open Lab [1].

Contractors are requested to provide evidence of expertise with the activities that are subject of these sub-grants, in particular Android mobile app development and Graphical User Interface

Chapter 2 of this document will describe in more details the non-technical aspects of the two sub-grants, reporting also the amounts, the evaluation criteria, the expected timeline, traveling and IPR issues.

Chapter 3, instead, reports the technical aspects, including a description of the context of the work and main requirements for the applications that will be developed.

2 Non-Technical Aspects

2.1 Conventions

In the rest of the document the following convention is adopted to differentiate between mandatory and preferred requirements:

- shall** A key word indicating a mandatory requirement. Solutions are *required* to meet all such mandatory requirements.
- should** A key word indicating flexibility of choice with a strongly preferred alternative. Equivalent to the phrase *is recommended*.

2.2 Sub-granted Activities and Budget

The two sub-grants will consist in the acquisition of two distinct Android software.

The sub-granted activities will consist in the development of two Android mobile Apps, connected to Telecom Italia's My Data Store platform (a Personal Data Store enabling users toward the collection and control of their personal data), based on the prototypes/mock-ups already developed and provided by Telecom Italia.

In details the offered sub-grants are the following:

- **Mobile MDS:** Mobile My Data Store app development.
This activity is part of the task 14605-A1501- "Trusted Data Management Platform(s) & Services".
It consists in the development of a working mobile version of the existing My Data Store (MDS) on the basis of the existing concept and prototype and of the already designed user interaction hypothesis. MDS is actually a web portal and includes the backend and the mobile interface mock-up enabling users to the control, collection and use of their data.
In the rest of this document this sub-grant will be referred with the name "**Mobile MDS**".
- **PMM App:** Personal Expenses data collection and Management app development.
This activity is part of the task 14605-A1521- "Trusted Data Management Service Co-Design and Applications Experiments"
It consists in the development of a vertical service in the form of a mobile app for Android devices. The app will be based on the prototype app (including concept, user interactions, and backend) already developed by Telecom Italia, called PMM (Personal Money Manager), and it must be developed (for the collection of the data) in the stand-alone and My Data Store compliant versions. Preferably it should also compliant with the Mobile MDS app.
In the rest of this document this sub-grant will be referred with the name "**PMM App**".

It shall be ensured the capability to deploy apps in Italian language even if some of the above mentioned sub-grants could require to be deployed in English (more precise details will be given later).

The amounts granted by the sub-grants will be:

- **Mobile MDS** on task 14605-A1501: up to maximum EUR 30,000;
- **PMM App** on task 14605-A1521: up to maximum EUR 25,000.

2.3 Evaluation Criteria

Each of the grant will be awarded to a SME or company with a good portfolio of previous works and proven experience in Android mobile app developing, in particular proven experience on Apps for handling sensitive personal data such as mobile Banking or Money Management services is a preferential criteria.

The organization receiving the grant will be selected, according to the selection rules of grantor, on the basis of its proven experience and portfolio of previous works, and on the basis of the further candidatures' information/detail provided.

Each candidate contractor can apply for one, the other or both the sub-grants, i.e. for the development of either one single app or two mobile applications. Preference will be given to the contractors that candidate for the development of both the Apps, in particular assuring both the stand-alone operation and the mutual interoperability/compliance of the two.

Other preferential criteria are related to the proven user interaction and user interface quality and expertise, and to the proven capability to ensure the delivery on time or, even to shorten the expected timeline (e.g. providing Gantt charts or the evidence of the usual deployment cycle and timing).

A preferential criteria is the availability to frequently attend the EIT Digital co-location center of Trento, in order to meet the sub-granter (Telecom Italia) for alignments, and possibly other partners of the initiative.

As general award criteria, preference will be given to Italian candidates (or European, but with resources with skills in Italian), given that the Apps have to be released also in Italian language and because of the testing phase will take place in one of the Telecom Italia's Living Labs in Italy, involving Italian native language final users. The capability to provide multi-lingual options (English and Italian) for the apps target by the sub-grant is another valuable criteria for the selection.

The EIT Digital KIC Partner (Telecom Italia) shall give financial support for the KIC added value Activity carried out by the Sub-grantee, within the limits specified by the Annual Grant Agreement.

The maximum amount of sub-grant under this Agreement is EUR 55,000 (i.e. EUR 30,00 + EUR 25,000, see Chapter 1), but shall in any case never exceed 60,000 euro within 2015 for the same contractor.

Candidate contractors are welcome to apply for the maximum granted amounts. In case of equitable portfolio and proven expertise, the preference will be given to the candidates guaranteeing more features and meeting the preferential criteria above exposed (including delivery time).

2.4 Timeline

The sub-granting procedure and activities will take place on the basis of the following timeline:

- within July 29th, 2015: publication of the present sub-grant call;

- August 7th, 2015: deadline for candidate contractors to apply;
- August 21st, 2015: contractor(s) selection and engagement;
- August 24th, 2015: start of the activities (T0 below);
- December 10th, 2015: end of the main development activities;
- December 31st, 2015: end of the activities.

Selected contractor shall comply with the following timeline:

- T0 + 30 days: app requirements definition and agreement (on the basis of previous prototypes and mockups), definition of user interactions, data flow and interface mockups;
- T0 + 60 days: first running version of the Apps (potential start of parallel testing activities);
- December 10th, 2015: final version of the Apps delivered (only small bug/interaction fixing or graphical tuning could follow);
- December 31st, 2015: at this time all documentation and software have to be completed, tested and approved.

2.5 Budget

The funding is 100% on a cost basis, and the budget of the sub-grant is:

- **Mobile MDS** on task 14605-A1501: maximum EUR 30,000;
- **PMM App** on task 14605-A1521: maximum EUR 25,000.

The contractor will be allowed to claim this funding up to the maximum of respectively EUR 25,000, EUR 30,000 or EUR 55,000 (depending from their candidature and the awarded sub-grants), on basis of cost claim.

2.6 Traveling and logistics

Most of the sub-granted activities are expected to be performed by contractors in their offices, while most of the interactions with the sub-granter will occur by audio/video conference or electronic means (e.g. e-mail, shared folders, etc.). Nevertheless, face to face meetings are expected to take place in Trento (Italy), at the co-location center of EIT Digital where Telecom Italia is located, for the kick-off of the activities and the following discussion of the requirements and app details. The contractor will be also required to travel to Trento for the activity alignments at least once every 6 weeks of activity.

All travel expenses are considered already included into the budget and extra travelling costs will not give right to additional funding/reimbursements.

2.7 IPR issues

Intellectual Property Rights will be discussed directly with the selected sub-grantee, following EIT Digital Guidelines.

2.8 How to Apply?

Responses to this call shall be sent to Lorenzo Cordin, JOL SKIL - Telecom Italia (lorenzo.cordin@telecomitalia.it).

Responses shall include the following information:

- Description of the company, relevant competences and experiences
- Link to portfolio of realized apps
- CV of the persons that will be involved in the project
- Contact person
- Specify if the application is for:
 - Mobile MDS
 - PMM App
 - Both the sub-grants
- Requested budget and motivation
- Agreement to move to Trento's EIT Digital node, to have meetings with the sub-granter, as stated in 2.6
- Agreement to respect the proposed project timeline (see 2.4)
 - Award criteria: ability to shorten the fixed deadline (providing Gantt charts or the evidence of the usual deployment cycle and timing)
- Prove expertise to develop Apps in Italian

Candidates will be evaluated with respect to their competences/experiences and their ability to complete the task according to the tight timeline of the project.

2.9 Information and Contacts

For more information on this call, please contact Lorenzo Cordin, JOL SKIL - Telecom Italia (lorenzo.cordin@telecomitalia.it).

3 Technical Aspects

3.1 Technical Context: My Data Store by Telecom Italia

The scope of the project is to seek and promote the development of products and/or services that take advantage of personal data. These applications must be compliant with the My Data Store (MDS) architectural framework which implements a privacy preserving personal data management paradigm (the Personal Data Store, PDS) that allows individuals to control and manage their personal data during their whole life-cycle, including:

- the data collection and storage, determining which data (of which type), from which sources (e.g. sensors, services or apps) and scope (e.g. with respect to temporal or space constraints) must be collected;
- the data access and disclosure/sharing toward other users, applications or services;
- the data maintenance, allowing the deletion of single or bunches of data records.

The gathered data are store in a personal, private and protected space based on cloud technologies.

Currently My Data Store already integrates various heterogeneous personal data source related to the individual. Examples are:

- Data sensed in mobility by the sensors embedded on the widespread personal devices, such as smartphones or tablets. Those data include: locations (by GPS sensors or WiFi), social interactions (e.g. events such as the traditional call records or the exchange of text messages), movements/activity patterns detected by the accelerometer, proximity records via Bluetooth, the usage of personal application (executed on the device);
- Data generated or collected by generic mobile apps (e.g. games, instant messaging applications, ad-hoc applications such as personal expenses manager) or specific application exploiting the new generation devices (e.g. NFC payments, etc.);
- Data collected from other external connected devices, such as sensors connected to the smartphone (e.g. environmental sensors, wearable sensors, etc.), or directly connected/transmitting to the data collecting platform (smart/home objects in the IoT approach);
- Data gathered from online services (e.g. content publically published by the individual on social networks, such as tweets or others)
- Data gathered from organizations about their customers/users to whom they offer some services (e.g. network operators, service/utility providers, retailers and fidelity cards/programs, etc.).

All these sources are integrated into My Data Store toward the development of a data connector exploiting the offered APIs to collect personal data, under the control and accordingly to the preference of the user.

As part of the EIT Digital Future Cloud High Impact Initiative, Telecom Italia aims to provide a framework for Trusted Personal Data management, built around the role of My Data Store (as far as any other PDS) as tool granting transparency, trust and control to data owners (individuals). The architecture supports the developers in building trusted and transparent applications compliant with a user-centric personal data management model, and offers facilities (such as the secure storage of the collected data) and potentials (such as those arising from the fusion of different data sources).

The My Data Store framework provides a set of APIs for accessing the users' personal data in compliance with their disclosure/exploitation preference (based on the data type and source, the requested periods, the quantity, the required anonymisation/aggregation level, the specific application/services requiring the information, etc.).

My Data Store is made of backend, server-side services, a Web portal and a Mobile application. The Web portal makes available to granted users a set of features for managing their data:

- Collection Area: in the Collection Area users can choose how data types are collected and stored;
- Sharing Area: users can set the disclosure policies of the different type of collected data by granting different levels of access to different third parties or services/applications;
- Deletion Area: users can delete single records or large bunches of the collected data;
- View/Auditing Area: the user can see in detail the data collected by and about their selves, and can gain awareness on the meaning, potential and value of their data by means of statistics, aggregations and visualizations.

The My Data Store design focuses on simplifying the user experience by providing people with a limited, but clear and powerful set of capabilities.

My Data Store is extensively used in the Mobile Territorial Lab (MTL, [2]), a long-term living lab engaging a real community (involving more than 100 individuals, parents in young families). The participants of MTL are provided with a smartphone and access to My Data Store where they manage their personal data, continuously and passively collected through their smartphone, empowered with Telecom Italia software. Thanks to the support of EIT Digital, My Data Store will be also experimented in a federated MTL lab (called LivLab - Livorno Living Lab) in partnership with a big Italian retailer (Unicoop Tirreno), where the user data space is further enriched with the detailed data of the purchases done with the fidelity card.

3.2 Mobile MDS (on task 14605-A1501)

Sub-granting activity objective is the development of an Android mobile version of Telecom Italia My Data Store, following an already existing concept, mock-up and design. The app can reuse the interface designed and the already devised interaction flow, or improve it, on the basis of a joint requirements analysis with Telecom Italia.

Main requirements for the mobile app that will be developed are listed as follows:

- [R1] Compatible with Android OS \geq 4.0, multi-screen and multi-resolution;
- [R2] It must be developed in EN language, preferably with multi-language support (including ITA);
- [R3] Start development from existing mock-up and user interaction flow;
- [R4] Interact with My Data Store through existing API to view/modify Data Management settings;
- [R5] Ensure the concept and the primary requirements of My Data Store in terms of control and auditing on the access, collection and usage of personal data on the mobile phone;
- [R6] Ensure the possibility to integrate other compliant personal apps (e.g. the PMM app – see 3.3) with the Mobile My Data Store.

3.3 PMM App (on task 14605-A1521)

Sub-granting activity objective is the development of an Android mobile App with focus on Personal Expenses collection and Money Management, starting from an existing and working prototypal version (including concept, user interactions, and backend) already developed by Telecom Italia. The work will focus on strengthening and improving the GUI of the existing app, adding a few new functionalities (including the integration with external services, see [R5]) and making it fully compliant with the My Data Store framework.

Main requirements for the mobile app that will be developed are listed as follows:

- [R1] Compatible with Android OS \geq 4.0, multi-screen and multi-resolution;
- [R2] It must be developed in IT language, preferably with multi-language support (including EN);
- [R3] Interact with My Data Store through existing API to read/store personal data;
- [R4] Enable insertion of new expenses (date/time/amount/category/...);
- [R5] Enable the automatic collection of new expenses from text messages (SMS) associated with cards (this will be realized integrating the text analytic and classification services offered by Spazio Dati S.r.l. [3]);
- [R6] Enable the automatic inclusion and the categorization of expenses retrieved from other sources connected to My Data Store (e.g. retail data);
- [R7] Divide expenses in categories with reports and statistics;
- [R8] Enable setting budget and notification if exceeded;
- [R9] Allow both stand alone and My Data Store compliant deployments of the app.

4 References

- [1] SKIL Joint Open Lab - Telecom Italia: <http://jol.telecomitalia.com/jolskil/>
- [2] Mobile Territorial Lab: <http://www.mobileterritoriallab.eu/>
- [3] Spazio Dati S.r.l.: <http://www.spaziodati.eu>