Project Acronym:	**VICINITY**
Project Full Title:	**Open virtual neighbourhood network to connect intelligent buildings and smart objects**
Grant Agreement:	**688467**
Project Duration:	**48 months (01/01/2016 - 31/12/2019)**

Open Call. Guide for Applicants

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For more information on this document or the VICINITY project, please contact us in the following link

Content

1. Introduction

1.1. Overview of the VICINITY project

Summary

The primary aim of the VICINITY project is to provide interoperability to the owners of connected IoT infrastructures, and to enable value-added serviced. The VICINITY IoT platform is a (mostly) distributed approach. It includes neither central operator roles, nor central databases to store sensitive data about users. It connects different smart objects into a "social network" called virtual neighbourhood where the infrastructure owners may control their shared devices and data. The project seeks to enable value-added services on top of the networked IoT infrastructure elements. To facilitate this, VICINITY utilises an automatic discovery process of IoT devices using the most adopted semantic descriptions.

The virtual neighbourhood of interoperable IoT infrastructures enables the creation of a cross-domain environment to exploit and demonstrate the VICINITY value-added services in renewable energy, micro-trading solutions, AI-based services within health data analysis and the transport domain.
The VICINITY project invites proposers to extend the integration scope of VICINITY thanks to third party system integrators integrating IoT infrastructures beyond the capabilities of the consortium through open call proposals.

Challenge

The lack of integration and interoperability across different disciplines, vendors and standards prevents exploitation of the huge potential in successful large-scale IoT implementations.

Moreover, it is difficult to control the data flow and privacy settings between devices and services inside and outside of IoT infrastructures and their applications.
Identifying, configuring, managing and updating information concerning the IoT ecosystem demands technical expertise, which makes it less feasible for the smaller stakeholders, and ultimately may lead to a slow adoption rate among the users that may be in most need - especially within the eHealth and assisted living domain. Lack of technical expertise and/or lack of a suitable platform, such as VICINITY also hold back the adoption of cross domain applications for IOT in smart home appliances and green energy implementations, as well as how smart home systems are tied in with transportation and the nearby surroundings.

Solution

VICINITY presents a virtual neighbourhood of connected devices and services concept. This uses a decentralized approach that resembles in a social network. In virtual neighbourhood the users can create social network of devices and services and are able to fully control their desired level of privacy by configuring control access to their devices by other partners (i.e. "friends") in virtual neighbourhood.

When configured, data exchange between different devices and services is handled through the VICINITY Open Interoperability Gateway (providing Open VICINITY Gateway API). This reduces the

need to have a technical background in order to exploit to the VICINITY ecosystem by using VICINITY compliant IoT infrastructure.

VICINITY compliant IoT infrastructure needs to adapt its domain model to common VICINITY format provided by standardized Open VICINITY Gateway API by implemented of the simple VICINITY Adapter. VICINITY Adapter is usually provided by IoT infrastructure vendor. Once an IoT infrastructure is integrated, its owner can simply manage the access to his/her IoT data and controls using VICINITY Cloud web application.

Connections to standard IoT infrastructures are handled by the open-source VICINITY auto-discovery device. The device will automatically discover smart objects and they will appear in the user's device catalogue on the VICINITY Cloud web application. The user will then be allowed to manage the access rules to the discovered smart objects. [1]

1.2. Overview of the VICINITY 1st Open call

- Open Call launches: 15 March 2018
- Deadline: 15 June 2018
- Total amount of funding: 240.000€
- Industries of interest are: Start-ups, SMEs, companies, public authorities or research institutes/organizations, with legal entity established, that own/operate IoT platforms.

The application process

2. Application

2.1. Who can apply?

Financial support will be provided to individual SMEs, large companies, research institutes, and public authorities such as (city) communities, which are - established in an EU Member State or in an Associated Country which is qualified and is compliant with the rules of participation H2020. Only one entity per proposal will be admitted, so activities in co-operation with other organisations will not be considered eligible.
Existing partners ("beneficiaries") of the VICINITY Consortium will not be eligible for this call. All entitled applicants will receive fair and equal treatment, whereas available information and infrastructures will be equally available to all.

2.2. Open Call requirements

What kind of IoT infrastructures are we looking for?

We are specifically looking to fund proposals that provide new IoT Infrastructures to VICINITY. Some examples of infrastructures can be found in section 5 **Annex**. For example, your proposal might capture new data through sensors. The existence of these sensors would be made known via the

[1] For more technical detail please refer to technical detail of this document or functional and architectural design of the VICINITY (D1.5 Technical requirements specification and D1.6 VICINITY Architectural design).

VICINITY directory and the data should be published in VICINITY. Can you provide a new adaptor for this infrastructure and can you enrich VICINITY domain or the VICINITY cross domain approach?

To apply for funding, a proposal must:

1. **Integrate a new IoT infrastructure into VICINITY**, where IoT infrastructure can be
   - Real "edge" devices, appliances, IoT gateways, etc., or
   - Proposer's IoT infrastructures including the connect devices;

   technically, the integration into VICINITY includes in particular the development of a VICINITY Gateway API (based on REST API) compliant adapter for the above IoT infrastructure.

2. Co-operate with the VICINITY partners to **demonstrate of the open call project's results** within the duration of the proposed project; this includes:
   - Provide support for testing and system integration within the overall VICINITY framework.
   - Provide access to the new IoT infrastructure to enable the VICINITY consortium to test and use the IoT infrastructure.
   - The results should be demonstrated in the VICINITY General Assembly (Q1-2019); also, a video of the demonstration should be recorded.

3. The proposal must **explain** how the IoT infrastructure **supports existing use-cases, services, and/or business models in VIINITY**, or new ones, and/or undertake co-creation activities. Information about the value-added provided by the project, the business model selected and the co-creation activities undertaken should be included in the interim and final report.

The proposals will be evaluated according to the benefit for VICINTY, its long-term impact, its technical excellence and soundness, and the capability of the proposer to achieve the objectives of the proposal (see Section 3.2).

A proposal should consider the following points:

- Explain the IoT infrastructure and how it will be integrated in the VICINITY platform,
- Compatibility of software with standardized HW platforms, e.g. Raspberry PI.
- Explain the demonstration environment of the IoT infrastructure.
- Show the new data for exchange via VICINITY and its value for VICINITY.
- Provide information explaining how your proposal will interact with VICINITY and its long-term impact on VICINITY (e.g. value-added services or business models enabled, etc.).
- Show how to demonstrate how the project is going to increase the VICINITY impact.
- Provide constraints and preconditions of the connected IoT infrastructures in pilot sites and/or lab conditions.
- Explain how stakeholders are brought to VICINITY. Co-create with other stakeholders: involve the relevant people (developers, citizens, communities, NGOs, municipalities, researchers, utility companies, larger technology companies, etc.) in collaboratively defining and running your proposal. You need to obtain letters of support from the relevant and upload them in your application.
- Explain the available of resources and capabilities required to carry out your project.
- Carry out an evaluation of your technology to find out if it is fit for purpose.
- The proposal should provide or foresee a data management plan, if needed.

2.3. Prepare and submit a proposal

Proposals must be submitted:

- Electronically through the VICNITY page on https://www.f6s.com/opencall1vicinity ;
- The language used in the proposal should be English;
- Before the deadline announced in the call announcement.

For further information of FS6 platform, please check the document "VICINITY F6S Walkthrough"

2.4. Funding conditions

The financial support to be provided to the third parties in this First Open Call totals 240.000€. The third parties involved in the 1st Open Call will be funded to a maximum of 60.000 € per project.
Participating projects will be focused on the provision of new IoT Infrastructures to be integrated into VICINITY.
Projects that are eligible for receiving VICINITY funding shall provide the following activities and expected achievements:

1. **Integrate a new IoT infrastructure into VICINITY**
2. Co-operate with the VICINITY partners to **demonstrate of the open call project's results** within the duration of the proposed project
3. The proposal must **explain** how the IoT infrastructure **supports existing use-cases, services, and/or business models in VIINITY**, or new ones, and/or undertake co-creation activities.

2.5. Timeline

- **Call open for applications:** 15th March 2018 at 9:00 (Brussels time)
- **Deadline for the proposals:** 15th June 2018 at 17:00 (Brussels time)
- **Notification of selected projects:** 31st July 2018
- **Project Start:** 1st October 2018
- **Project End:** 31st March 2019

3. Evaluation process

3.1. Who will evaluate my proposal?

The proposals will be evaluated as submitted. The evaluation will be carried out by independent external experts and the scientific/technological coordinator, and the coordinator. In order to ensure transparency and confidentiality, each selected expert should sign a declaration of confidentiality concerning the contents of the proposals they read and they should also confirm the absence of any conflict of interest.
The outcome of the evaluation will be a ranked list of all proposals, based on the scores obtained by each proposal.

3.2. What does evaluation measure? Marking Criteria for Evaluation of Proposals

The evaluation will be done based on the following criteria:

- **Benefit for VICINITY:** Identification, relevance and amount of benefit for VICINITY's (or other) use cases, services, business models; elements to improve benefit of infrastructure (25%).
- **Long-term impact:** sustainability of access, availability of IoT infrastructure, and impact on new or existing business models within or beyond VICINITY (25%).
- **Excellence and soundness:** clarity of problem and solution; novelty; soundness of solution; management of sensitive data (25%).
- **Capability of the proposer:** quality of the team, availability of IoT infrastructures to VICINITY partners, coherences of workplan, tasks, resources (25%).

For further information, see the document "VICINITY Evaluation Criteria"

In order to avoid misuse and waste of resources, the following rules will lead to rejection of a project:

- Appropriateness of costs/efforts: The proposals shall include an estimation of the costs and efforts required. If costs are considered as inappropriate for the estimated effort and/or results by at least two members of the evaluation board, the project shall be rejected.
- Exclusion of similar projects: If two or more proposals have a large overlap or similarities with other projects in this call (or other ICT30 calls), the lower ranked will be rejected. This is the case if at least two members of the evaluation board raise this concern.
- Exclusion of already funded projects: If a project is already funded by another H2020-ICT30 call, it shall not be funded and will be rejected.

4. Support options

The information of the Open call is gathered in the VICINITY web page:
http://vicinity2020.eu/vicinity/content/open-calls

4.1. FAQ

The consortium will maintain a frequently asked questions (FAQ) section available in http://vicinity2020.eu/vicinity/content/open-calls. It will be updated continuously. For specifically technical details check first the available documentation in the website.

4.2. Helpdesk services

The answers that you can't find in the FAQ section can be submitted by contacting opencalls@vicinity2020.eu . Here, you can get support regarding technical matters or the proposal.
There will be different events in which the open call will be presented and support will be provided in preparing the applications. Follow the web site and also de social networks accounts of the project to get information about the open call.

5. Annex

IMPORTANT NOTICE: Please note the following:

1. The IoT infrastructures named below are indicative aiming to give concrete examples to interested applicants. Any other solutions not specifically mentioned in the list below, are also eligible.

A broad range of solutions, covering different IoT domains are eligible. The IoT infrastructures in the list below are there to guide you in creating ideas which are relevant to VICINITY but are not mandatory.

Examples of ELIGIBLE Infrastructures
SMART ENERGY
Connected appliances with huge load control capacities that can be acting as alternative for energy storages such as connected water heaters
Connected devices that allows peak-load shifting such as HVAC systems, smart-oven and smart fridges
e-vehicle charging and or discharging (via the grid)
Integration of utility scale energy infrastructures: a.) Renewable generation resources: mainly solar and wind; b.) Utility scale Energy storages with fine control of charging and discharging power.
Integration of small (residential) scale energy infrastructures: a.) Solar generation with remote controlled capabilities; b.) Energy storage with remote controlled capabilities.
Low power IoT gateway challenge-IoT data collection and transmission to VICINITY under battery power
ASSISTED LIVING
Air quality measurement for personal monitoring systems using room sensors or tags, wearables, with data transmission to personal device and/or carers
Hypothermia and/or hyperthermia for room and/or personal monitoring systems using tags, wearables, with data transmission to practitioners and/or carers
Asset location system for use in hospitals or care-homes using tags, wearables, with data transmission to practitioners, monitors, personal device of carers and/or visitors
Patient location system for use in hospitals or care-homes using tags, wearables, with data transmission to practitioners, personal device of carers and/or visitors
SMART MOBILITY
Smart parking integrated solutions, featuring the use of e-vehicle and on-site IoT sensors
Air quality measurement utilizing IoT sensors at municipality level

Efficient location of parking space between different parking infrastructures
Smart logistics and fleet management for improved vehicle remote monitoring
IoT Solutions for connected Vehicle-to-Vehicle communication
SMARTCITIES
Smart Lighting infrastructure
Municipal services for citizens engagement and participation in urban planning
Integration of connected devices to publicly available data for traffic or travel management using, image and situation streamed data
Integration of connected devices for vehicular access to neighbourhood areas managed by authorisation and authentication devices
Integration of connected devices to publicly available weather and traffic data for peak load services
Mobility options based on traffic data supplied by smart neighbourhoods and connected devices.
SMARTBUILDINGS
Connected devices that allow tenants to predict water and/or water usage
Connected devices that allow the facility manager to predict operations for maintenance
Connected devices that allow the building manager to control/follow up devices when peak-load are detected
Smart IoT energy management (such as smart plugs, energy metering devices) to allow participation in active Demand Response schemes
OTHERS
Smart irrigation-measures soil humidity combined with weather forecast to control water supply