

Coordination and support action

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Innovative PROcurement for Visual Impaired People



TECHNICAL PROSPECTOUS

Uncovered needs to be openly discussed with the market

Open Technical Dialogue, Trieste, September 26th , 2016

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1 THE PROJECT

PRO4VIP (PROcurement for Visually Impaired People, www.pro4vip.eu/) is an European network of healthcare procurers and innovation policy makers that addresses the problem of visual impairment, a global issue that is on the rise as a result of the ageing population.

PRO4VIP aims to develop a **joint innovation procurement roadmap for novel cost-effective clinical devices and assistive technologies for visually impaired people**.

The PRO4VIP project (*PROcurement for Visually Impaired People*) main aims are:

- ✓ the creation and consolidation of an pan-European network of procurers of technologies for low vision, supported by a number of entities with different natures (technology experts, public procurers, associations of patients) active in the same field;
- ✓ challenging the market in developing new technological solutions for supporting people with low vision;
- ✓ the identification of a short- and long-term shared innovation procurement strategy for the development of suitable technologies (PCP, PPI, or a combination of the two).

In order to achieve these objectives, the project partners are engaged in the following phases:

- ✓ **needs identification**, aimed at identifying, categorizing and ordering of uncovered needs shared by PRO4VIP partners and stakeholders. This would lead to the design of business cases, i.e., a set of characteristics and functions that future technologies should contain in order to meet those needs;
- ✓ **comprehensive state of the art analysis and market consultation**, aimed at analysing current technological state of development in the field of interest and ensure that business case have identified a not available solution;
- ✓ **design of the identified innovative public procurement procedure (PCP and/or PPI)**. The definition of a procurement strategy that matches with PRO4VIP characteristics and objectives will be determined by a series of activities, as buyers engagement (among others).

2 INTRODUCTION TO THE OPEN MARKET CONSULTATION

PRO4VIP project partners organize two **open market consultations** to meet the EU industry and analyse the technology state-of-the-art in the field: in Trieste on September 26th, 2016, targeted to partially-sighted (PS) persons' unfulfilled needs, and in Barcelona on September 29th, 2016, targeted more on the clinical needs.

The technical dialogue, conceived as a proactive analysis of supply markets, will be focused on **concrete and common innovation needs expressed by the two primary targets of PRO4VIP, clinicians and partially-sighted people**, involved during 2016 in a series of focus groups across EU. PRO4VIP is interested to find out whether technologies are commercially available and acquire information about the level of coverage of the desired functionalities and performances, as well as the potential area of innovation for the development of new technologies in the field.

Through the open market consultations, the consortium will gather information to help decision makers, procurers and potential investors to:

- ✓ scan the market and assess the technology state-of-the-art;
- ✓ analyse and define hierarchy between unfulfilled innovation needs in terms of clinical devices and assistive devices;
- ✓ design prospective procurement models and approaches to solve the innovation gap between actual needs and solutions currently available on the market.

All the information about the project and the organization of these events are available on the project website and onto main local institutional websites.

The market consultation sessions are conceived and organized with due regard to the principles of **openness, transparency, non-discrimination and equal treatment**, in line with European procurement law. Participants are not expected to submit tenders or proposals at this preliminary stage. The competitive phase of the public procurement will be (eventually) conducted separately with open and advertised procurement procedure.

The market consultation does not lead to any obligations on the part of the contracting authorities involved in the PRO4VIP project or to any advantages, disadvantages, rights or privileges for the participants. The contracting authorities involved in the PRO4VIP project are not legally bound in any way by the outcome of the market consultation.

The market consultation will be conducted in the form of oral **MULTI-lateral consultation**.

Participants are kindly invited to manage a presentation of 15 minutes about specific, fit-for-purposes and innovative technologies, to complement the source of technical information acquired and form the basis for more in-depth state-of-the-art analysis.

In order to best understand the scope of the desired innovation and fruitfully participate to the technical consultation activities, the present “Technical Prospectus” has been developed to describe the emerged needs and specifically states the innovation objectives that will be pursued. The Prospectus, published onto the aforementioned websites, will be a “living document” which will be updated according to any project progress.

Referring to the open consultation event in Trieste, please note that places will be allocated on a first-come first-served basis.

Participation in these events is free of charge. You are kindly invited to register not later than 23th September 2016, by filling the registration form available here :

<https://www.areasciencepark.it/blog/2016/09/08/ipovedenti/#iscrizione>

In case of overbooking, you will be informed with an e-mail, otherwise you can consider confirmed your participation.

3 NEED ASSESSMENT METHODOLOGY

This document provides a description of the *user needs identification methodologies* that is used in the project in order to:

- ✓ identify relevant end user needs;
- ✓ defining the drivers that should guide technology developers interested in proposing new solutions in the field.

The identification of common unmet needs was realized through:

- ✓ an ***ad-hoc survey*** targeting both individuals with low visions (263 complete responses from different European countries) and healthcare professionals (general doctor as well as an ophthalmologist/ophthalmic surgeon as well as a low vision specialist);
- ✓ **3 focus groups** involving individuals with low vision conducted in 3 different countries.

Referring to the latter, 3 focus groups involving between 15 to 20 PS persons with low vision were organised in order to analyse and define hierarchy between partially sighted (PS) persons' unfulfilled needs in terms of assistive devices. They were held in:

- Utrecht, the Netherlands, the 15th of April 2016;
- Nicosia, Cyprus, the 23rd of April 2016;
- Izola, Slovenia, the 7th of May 2016.

Lasting between 4 to 6 hours, the focus groups were moderated by two English-speaking moderators: one lead country moderator from EBU's member organisation and one moderator from the consortium. In conducting such sessions it has been found useful to bring together stakeholders from multiple locations, since a perceived inefficiency or need can be simply due to local customs and practices at one site. It is also a good practice to have an experienced facilitator to conduct the session, to enliven it and to draw out issues and ideas, as well as a subject domain expert who can guide the facilitator with respect to the subject's technicalities.

The discussion was designed to gather information from the PS people regarding to the following common topics, emerged as statistically relevant from the questionnaires:

1. **INDOOR AND OUTDOOR ORIENTATION AND MOBILITY**
2. **READING AND WRITING**
3. **PERSONAL CARE**
4. **ACCESS TO INFORMATION, GOODS AND SERVICES**
5. **SOCIAL INTERACTION**

4 THE UNFULFILLED NEEDS OF PARTIALLY-SIGHTED PERSONS

4.1 TOPIC 1: NEEDS RELATED TO INDOOR AND OUTDOOR ORIENTATION AND MOBILITY

N.	Need description
1	<p>A very accurate navigation instrument that lets you find your way independently, outside and inside, both in the built environment and in nature terrains, without walking into something.</p> <p>Being able to stroll independently; walking or running, whether or not combined with other means of transport, on existing routes or routes you have chosen yourself. Being able to find precise locations such as an entrance to a building, the front door of a house, or a forest trail.</p> <p>In the current situation you need many different assistive tools and route planners that don't work everywhere. Not all trails and areas are covered and they are not accurate enough. They usually do not allow you to take your personal preferences into account.</p> <p>Finding your way or route without walking into something and with your hands free. And you should have the possibility of walking without having to use your ears to listen to instructions, and people who are deaf or have a hearing loss should be able to use it too. (FG:Utrecht)</p>
2	<p>A navigation instrument that could be combined with a bicycle, walking frame, wheelchair, scoot mobile or that is built in a <i>robot guide dog</i>, to find your way around independently without bumping into something or falling over. PS People are now dependent on public transport; they run the risk of walking into something; they cannot always ride on a bike or drive a vehicle (anymore); they have to use a number of assistive devices next to each other to find their way independently and, if they have trouble walking, they cannot always use a guide dog and cane. (FG:Utrecht)</p>
3	<p>(Re) finding locations that have been marked by others or by yourself with very accurate (digital) beacons or landmarks that produce a sound or another signal if you approach them. (in combination with Need 1.1) This way, a tent, path, house, traffic crossing, specific bus or bus stop can be (re) found. (FG:Utrecht)</p>
4	<p>Being able to see better in the dark. Glasses that (in the dark) filter out bright lights and reflections and make the environment somewhat lighter. Many PS people experience interference from the background light emitting from street lighting, vehicle lights and reflections of a wet road surface, all of which make it more difficult to see when its dark. (FG:Utrecht)</p>
5	<p>A lightweight and strong pair of magnifying glasses, with auto focus, which would make it easier to use whilst cycling or navigating a boat, and easier to follow moving objects.</p>

	Looking through magnifying glasses takes a lot of time especially when you have to try and focus them. Focussing with the currently available magnifying glasses takes too much time and effort. They are also too easily broken to take everywhere with you. (FG:Utrecht)
6	An information board for a public service or a street sign nearby, that is read out to you immediately, or displayed on your personal device without you having to take a picture of it first. In more and more places there are digital information boards indicating which bus or tram stops there, or whose turn it is in the queue for a public service. (FG:Utrecht)
7	A traffic light with an audio signal that is easy to find and that indicates the direction to walk in using a vibro tactile arrow and/or speech output. So you can be completely sure about which crossing direction is safe at that moment, without any doubt about the place or direction. (FG:Utrecht)
8	A navigation system that can assist with outdoor orientation and mobility to enhance independent traveling. (FG: Cyprus)
9	A navigation device to assist with safe and independent traveling by bus (locate bus stops, identify bus number, destination) (FG: Cyprus)
10	A device to access the information inside a complicated building (locating offices, steps, elevators, bathrooms, reception) (FG: Cyprus)
11	Any sustainable mobility aid for outdoor and indoor orientation. (FG: Slovenia)
12	A device which accurately detects and recognition of different obstacles and ability of providing information to the user. (FG: Slovenia)
13	A device that provides information about current position, distance, bus number, ability to read signs and names of streets and house numbers. (FG: Slovenia)

4.2 TOPIC 2: NEEDS RELATED TO READING AND WRITING

N.	Need description
1	<p>Quick and easy reading of various texts; search for information and (re)find it without having to read the entire text all over again. The overview that is being missed because of the visual impairment must be compensated for by the ability to quickly select topics, based on titles and core of the content.</p> <p>Reading and searching for information in texts is very time consuming with the current assistive tools and is too inflexible to incorporate individual preferences, sources and situations. (FG:Utrecht)</p>
2	<p>Reading from a screen with minimal light while the contrast is maintained. Bright light and the back-lighting from a screen are prohibitive for many eye conditions. Because digital text is often the most easily accessible, PS people often read from screens. (FG:Utrecht)</p>
3	<p>To have quick and easy access to (study) books in a form that is readable for you (magnification and speech output). To be able to use source files of books would be very helpful here. In the current situation, reading aloud and converting of books or texts takes up an enormous amount of time. In study or work situations this causes problems. (FG:Utrecht)</p>
4	<p>A single device to allow reading from a near or far distance that is small in size and easy to operate (FG: Cyprus)</p>
5	<p>A device that allows the PS person to create his/her signature in the same homogeneous manner. (FG: Cyprus)</p>
6	<p>A high performance device that would combine “zoom-in, zoom-out” functions and enable users to read near and far information with the option of adjusting desirable settings. (FG: Slovenia)</p>
7	<p>Different types of glasses that would have better magnification and users would be able to choose the one that suits her/him best. (FG: Slovenia)</p>

4.3 TOPIC 3: NEEDS RELATED TO PERSONAL CARE

N.	Need description
1	Household appliances that are designed for all, so that all appliances on the market, and all their features, can be used independently by PS persons. (FG:Utrecht)
2	Products in a supermarket should be easy to find and the product information accessible onsite. (FG:Utrecht)
3	To be able to identify stains on clothing and on the face, so you know whether or not you look neat and attractive. (FG:Utrecht)
4	An accessible kitchen scale that will display in a clear way quantities and liquids. (FG: Cyprus)
5	A device that will automatically shade windows in a room where bright sunlight causes photophobia to PS persons living there. (FG: Cyprus)
6	A device that can be inserted to telescopic cleaning tools to manage spots and dust in surfaces high above not seen by PS persons. (FG: Cyprus)
7	A device that would recognize products in the supermarket and in the household that would read labels, measure different measurements and provide user feed accurate feedback. (FG: Slovenia)
8	A device that detects spots on clothes and impurities within the household. (FG: Slovenia)
9	Glasses with adequate magnification which would enable users to perform precise tasks such as sewing. (FG: Slovenia)

4.4 TOPIC 4: NEEDS RELATED TO ACCESS TO INFORMATION AND SERVICES

N.	Need description
1	Universal payment terminals that are easy accessible and to operate and can activate personal preferences for accessibility options when there is contact with your debit card. Payment terminals at the tills in shops are all different, often small, hard to read, hard to recognise for contact-less payments and do not have speech output or any clearly audible beeping signals. (FG:Utrecht)
2	All apps must work with the options currently available for accessibility on smart phones and tablets. Many apps cannot be fully used by PS persons as these do not work with the options available for accessibility that many tablets and smartphones have. (FG:Utrecht)
3	The verification methods and websites of all banks must be accessible. Not all banks have accessible websites and verification systems that are usable for PS persons. It is, therefore, not possible to select a bank of your choice to arrange your banking. (FG:Utrecht)
4	An ATM that will allow PS persons to operate it independently. (FG: Cyprus)
5	A device to access information displayed on signs in a supermarket such as what products can be found in the aisle. (FG: Cyprus)
6	A program to inform me if persons I know are in the same room as myself. (FG: Cyprus)
7	A program or application that would run on computers, smartphones and other devices (ATM, ticketing machines, check-in machines), that would enable color and contrast adjustments, font size and audio output. Plus, that would be compatible with the whole system (bugs would be totally eliminated). (FG: Slovenia)
8	A device that translates visual information into audio information (that would help users to read signs, gain various and crucial information from the environment (outdoors and indoors) that are essential for understanding particular room and that are basic for safe functioning. (FG: Slovenia)

4.5 TOPIC 5: NEEDS RELATED TO SOCIAL INTERACTION

N.	Need description
1	Recognising people you meet or you are looking for on the street, at a party or another social occasion, so you can greet them, or approach them for a chat. For PS persons, recognising people is often a problem, making them embarrassed in social situations and often dependent on others taking the initiative. (FG:Utrecht)
2	Recognising the non-verbal communication of people in your nearby environment or the people you are talking to, so you know how someone means something. PS persons now often miss the non-verbal signals of the person they are talking to. (FG:Utrecht)