Mobile Applications for Emergency Response and Support
MAPPERS

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Civil Protection

Regione Autonoma Friuli Venezia Giulia

(CP-FVG)

Palmanova, UD – Italy

Meeting report – 13.2.2015

This report is meant for internal use. The data collected are to be solely used for the purpose of research and for the support of project actions.

Attending:

- ✓ Claudio Garlatti - Technical director (CP-FVG) and MAppERS EAB member
- ✓ Members of Functional Centre (CP-FVG)
- ✓ Simone Frigerio (CNR)

Aims of the meeting: identify smartphone benefits for CP-FVG in compatibility with internal actions, regarding prevention and emergency management. The output can be a support for HCRD and CNR within MAppERS-V frame.

1) How many and which types of risks does CP-FVG manage? Which are the priorities of action related to different risks, such as number and amount of interventions? In which sectors would you see the benefits of a smartphone application (SA)?

CP-FVG is responsible for natural and human-made hazards at regional level. The agency manages a centralized control station for the whole regional territory, leading local centres at municipal level. Concerning the typology of events, CP-FVG covers all natural hazards; the region is deeply affected - in terms of frequency - by hydro-geological, seismic, fires, avalanches events and relevant assistance. A SA is potentially useful both for citizens and specialized volunteers, with different spatial distribution. In case of seismic or flooding event, the involvement of population is fundamental, whereas the role of volunteers become compulsory in the phase of events assistance. Concerning the number of activities, the majority of actions are related to people safeguard. As a consequence, GPS location/tracking combined with simple data collection become the most important and useful tools integrated in a SA.

2) In case of a SA testing, how many volunteers would you integrate? Do you think that their technical background would be helpful? Do you think that a training session after the development of a SA would be suitable?

CP-FVG has gained long-standing experience in natural hazards and territorial involvement. It represents a rescue service with its own professionals and volunteers, who practice activities locally on the field and remain constantly updated by attending frequent refresher courses. The CP-FVG internal planning contemplates a team of 4 volunteers for every municipality to carry out a local training support. Standard training materials can offer a homogeneous technical awareness and a training session for SA appears functional in terms of usefulness of service, purpose of the tools and time schedule of each single service included.

3) Do you think that the population is a useful human data source using a SA? If yes, could you represent the agency in charge of the internal training?

CP-FVG considers fundamental the active presence of citizens in emergency preparedness and emergency phases, especially for their spatial distribution and their "sense of territory" (evident in this region, ed.). In a territory with a central management of rescue service, the ability to actively include population as human sensors becomes a major point in the emergency response and preparedness. However, this action can improve serious risks as redundancy and incorrect information, and consequently wrong awareness and risk estimation. The background copes with a correct training, which has to be homogeneous, centralized and constantly updated by the feedback of users. Population already follows some local meetings promoted by CP-FVG, especially devoted on divulgation and general training for hazards and consequences. The final purpose is to create a general awareness and preparedness for pre- and emergency phases.

4) CP-FVG operates through a headquarters and several branch offices. In your opinion, should a smartphone application handle wide integrated or separate solutions? Shall the collected data be managed and processed in a branch or sent and processed locally?

A SA has a different role if designed and applied at a large or local scale (e.g. regional). The utility is evident in both cases, but the aim needs to be well defined in order to avoid the development of a good quality solution, but too general and inefficient in the context. CP-FVG would apply both cases with specific management and objectives, following what actually is the internal management in the agency. Specific reports, information collected for damages, instruments revisions, support of field activities and pre-emergency controls underline the actual advantage of a SA, due to user-friendliness and the almost real-time capacity of data gathering. This approach has to be used preferentially at municipal and local scale. The final purpose is the continuous control and real-time reporting by volunteers, which is fundamental for preparedness and territorial management. On the other hand, a central approach is clearly useful for a post-processing of data, supporting planning and decision-makers for distribution of resources. Exceptions should be made in case of serious and high-level damages. Here the active role of central headquarter becomes compulsory.

5) Do you have experience in past or on-course smartphone applications for rescue or civil protection?

CP-FVG developed *MoPIC* (Mobile application for Emergency Plan sharing for municipality). The application is used for communication and alerting based on user geo-location. Any crowdsourcing solution is included. CP-FVG is strongly committed to amplify the network and the contribution of human sensors within its own data, which are constantly upgraded and processed. The screens available in *MoPIC* are described in Figure 1. The technical staff suggests a review also for *ALPSAR* and *GEORES* as SA supporting rescue services, but not adopted by CP-FVG.

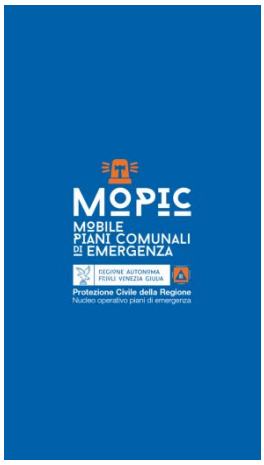
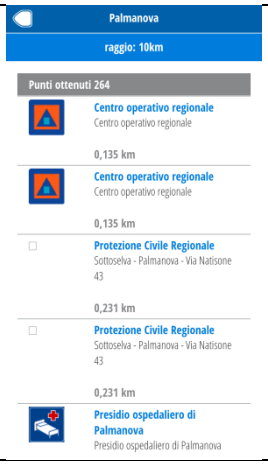
6) With a SA what kind of information would you need to collect in the area? And for what kind of action?

Data collected by a SA have to be previously standardized, avoiding redundancy and variability. The information has to be simple, functional to the aim and direct visible. Every kind of post-processing has to be managed by CP-FVG. Concerning the location of several field surveys (mountains or narrow valleys), the data sending has to allow an offline gathering and disposal of post automatic sending by availability network, independent by users' action. Concerning frequencies of actions by the CP-FVG, the best contest for smartphone utility concerns people local conditions, monitoring checks, type and location of damages and roads interruptions.

7) What kind of data would you collect among video, text, image, geo-location, tracking, and sensors-linked measures? Consider the possibility of text boxes with pre-compiled dropdown list, avoiding free fields for volunteers.

The dropdown menus are not actually available in CP-FVG. They would require an analysis made by technical offices based on actions planned for volunteers. The ability to update list by volunteers is a fundamental task, to update a field of a theoretical text list. Text, locations, and photos should be the mandatory info required. A push notification and central messages by manager office would be a strategic improvement, checking location of volunteers in the territory in real-time and supporting a location-based continuous communication system, for required support and activity on field.

Figure 1. *MoPIC* frame and single screens.

	Starting screen		Menu screen with emergency number for first aid. Five actions are available: EXPLANATION OF MOPIC, REGIONAL ALERT, MAPPING SERVICE. Last ones are ACCESS FOR OPERATORS and DATA UPGRADE. Last two are not available to end-users but only for maintenance and administration.
	MAPPING SERVICE The tool offer a dissemination of critical points in case of emergency and offers and explanation of risk information filtered by location.		REGIONAL ALERT The critical risks are linked to the municipality selected by map. In this view Industrial and avalanche risks are excluded and consequently not included in the guideline.
	The risk guideline for the municipality involved offers a large explanation of concept of risk, which activity CP-FVG offers as rescue service and preventions measures suggested to population.		After zooming on municipality the tool offers a spatial buffer of 10 km (editable) with a list of command or rescue points in case of emergency, with the distance by location benchmark of user.