

I-REACT has just started. It will help in preventing and managing emergency situations. Thanks to I-REACT, emergency responses will be more coordinated, costs will be reduced and citizens will be actively involved.

## **SOCIAL MEDIA, SMARTPHONES, AND WEARABLES TO BETTER MANAGE NATURAL DISASTERS BY 2018**

An international project coordinated by Istituto Superiore Mario Boella from Turin involving more than 20 partners Europe-wide

Turin, 3rd June 2016 – The future of natural disasters management starts in Turin: I-REACT, a 6.5 m€ project funded by the European Commission aimed at creating a real time prevention and management system for natural disasters, has just started. The Istituto Superiore Mario Boella from Turin is the coordinator of a project that brings together 20 European partners, including research centres, IGOs (e.g., UNESCO), public entities and SMEs that will support the commercial exploitation of the project.

By 2018 I-REACT (Improving Resilience to Emergencies through Advanced Cyber Technologies) will implement a platform that, thanks to advanced technologies, will be able to gather and analyse various data sources to generate real-time information on floods, fires, earthquakes and other natural hazards. The interoperability with Copernicus Emergency Management Service (EMS), the liaison with UNESCO and with the International Strategy for Disaster Reduction (UNISDR) of the United Nations will further enhance the expected outputs.

I-REACT is built on the outcomes of the FLOODIS project, which ended in 2015 and was focused on implementing a crowdsourcing approach to support the emergency response in case floods. FLOODIS implemented a smartphone application to collect real-time reports from both citizens and civil protection agents, and to provide short and long-term projections of the flood extent for supporting in-field emergency rescue units. I-REACT exploits the same approach, multiplying the opportunities: on top of photos taken from smartphones, I-REACT will exploit also social media, capturing messages and images from Instagram and Twitter, it will collect satellite images as well as reports from wearable technologies (bands, smart glasses) worn by on-site operators.

By means of a BigData architecture built into the Microsoft Azure cloud platform, I-REACT will gather all the aforementioned information and will provide accurate and near-real time forecasts of emergency events. Citizens will be actively engaged through gamification techniques aimed at maximizing their inputs, i.e., data and pictures taken from their

smartphones. Gamification is the application of gaming concepts in non-gaming context, and it has been proven effective in engaging users and keeping them active.

I-REACT is a European project funded within the Horizon 2020 Program. Italy plays a pivotal role in the project. In fact, apart from its coordinator Istituto Superiore Mario Boella of Turin (a leading Information technology and Telecommunications research centre), the Politecnico di Torino, the Fondazione Bruno Kessler, Celi, JoinPad and CSI Piemonte are all part of the consortium. The team also encompasses various European partners that will support to design and implement I-REACT in order to facilitate its market uptake and its long term sustainability: Geoville, EoXplore, Terranea, Alpha Consult, UNESCO, Finnish Meteorological Institute, Meteosim, Bitgear, Ansur, Technical University of Vienna, Scienseed, Aquobex, Answare, and JRC (the Joint Research Centre of the European Commission).

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