RESCUER

EXPECTED IMPACTS

... ON TECHNOLOGY:

- Establishment of a new trend in the market
  - Smart & wireless platform
  - Plethora of data sources
  - Semi-automated analysis
- Results with potential for becoming de-facto standards
  - UI guidelines & interaction model
  - Reference architecture
  - Ad-hoc communication
  - Portability & VM strategy
  - Multimedia data quality specification

... ON ECONOMY & SOCIETY:

- Significant reduction of adverse consequences in people's lives, for the economy, and for the environment
- Better image of the organizations involved in an incident due to the usage of modern technologies for effective and efficient emergency & crisis management

PROJECT CONSORTIUM

COMITÉ DE FOMENTO INDUSTRIAL DE CAMAÇARI

FireServ

Fraunhofer IESE

MTM Tecnologia Software Solutions

VOMATEC®

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RESCUER

RELIABLE AND SMART CROWDSOURCING SOLUTION FOR EMERGENCY AND CRISIS MANAGEMENT

EUROPEAN COMMISSION

COOPERATION

CNPq Conselho Nacional de Desenvolvimento Científico e Tecnológico

Ministério da Ciência, Tecnologia e Inovação

GOVERNO FEDERAL BRASIL PAÍS RICO É PAÍS SEM POBREZA

CONCEPT

The RESCUER project aims at developing a smart and interoperable computer-based solution for supporting emergency and crisis management, with a special focus on incidents in industrial areas and on large-scale events.

The players in the occurrence of a critical situation are:

- **Eyewitnesses**: people in the place of the incident who are shocked, frightened, and uncertain.
- **Operational Forces**: organizational units in charge of security and safety in the area where the incident occurred, e.g., police, fire fighters, and rescue forces.
- **First responders**: members of the operational forces or volunteers at the place of the incident who have little time for reports.
- **Command center**: group of people assigned to evaluating risks and making decisions in an emergency and/or crisis, based on information provided by eyewitnesses and first responders.
- **Affected community**: people close to the place of the incident who will most likely suffer from its impact.
- **General public**: informed by public communication means.

COMPONENTS

The RESCUER solution will be composed of four main components:

1) **Mobile Crowdsourcing Solution**, to support eyewitnesses and first responders in providing the command center with information about an emergency situation, taking into account the different smartphones that might be used and how people interact with smartphones under stress.

2) **Data Analysis Solutions**, which include approaches for integrating data from different operational forces as well as for combining, filtering, and analyzing crowdsourcing information mashed up with open data.

3) **Emergency Response Toolkit**, to provide the command center with the relevant information in the appropriate format and time to support decision-making in the different phases of an emergency.

4) **Communication Infrastructure**, to support the information flow between the crowd and the command center even when the traditional communication infrastructure is overloaded.

SCIENTIFIC OBJECTIVES

- Design of a user interface and interaction model that support safe and efficient provision of information and result in a positive user experience.
- (Semi-)automatic fusion, aggregation, and analysis of multimedia data, which will mostly consist of user-generated videos/photos taken from multiple points with variable content and image quality.
- Optimized aggregation of intuitive metaphors for visualization and manipulation of information. The challenge is to improve situation awareness while only providing information that is relevant for the decision to be made.
- Customized communication of the incident to the targeted audience through the semi-automated derivation of messages.
- Development of a peer-to-peer communication method to support ad-hoc communication between people in the crowd.