

Bonn, 2<sup>nd</sup> October 2019

## **A new European research initiative will develop innovative ways of detecting victims trapped under debris**

In the face of natural or man-made disaster, urban search and rescue teams and other first responders like police, medical units or civil protection race against the clock to locate survivors within the critical 72-hour timeframe, often at their own peril due to the presence of instable structures or hazardous environments. In order to speed up the detection of survivors trapped in collapsed buildings and to improve working conditions for the first responders, the CURSOR project will devise novel technologies using drones, miniaturized robotic equipment and advanced sensors.

The project will most notably deliver the innovative CURSOR Search and Rescue Kit, which features miniaturized robots and different types of drones. The robots are equipped with chemical sensors that detect a wide range of chemical substances indicating human presence. They are carried from the operations headquarters to the disaster site by a transport drone. On site, the robots work independently in clusters searching for survivors. Additionally, the Mothership UAV (Unmanned Aerial Vehicle) acts as an aerial hub that produces high-definition imaging for accurate visualization of the disaster zone and allows communication with the control centre.

The initiative ultimately seeks to match the operational needs of search and rescue teams with current technological capabilities. In order to achieve this objective, the CURSOR team, which includes 15 European partners and one Japanese partner\*, involves first-response practitioners from four European countries; research organisations that will provide leading-edge technology; and small and medium companies that will develop key innovative components and commercialize the project results. Other relief practitioners will be involved as members of the project's First Responder Board, responsible for technology validation and standardisation activities.

"First responders have practical experience on the field and developers the technical know-how," explains Klaus Dieter Büttgen, coordinator of the CURSOR project at the German Federal Agency for Technical Relief (THW). "Through this unique collaboration between technical partners, industry, academics and first responders, expertise will be transformed into a novel technology that contributes to locating buried victims more swiftly and with less risk for the people conducting the research operation."

The European Commission granted €7M to the CURSOR research proposal under the Horizon 2020 funding scheme and the Japan Science and Technology Agency granted €0.5M for the collaborative research. The project was officially launched in September and will run for three years.



## **NOTES TO THE EDITOR**

### **\* Consortium partners**

#### Practitioners

Technisches Hilfswerk - Bundesministerium des Innern, Germany  
Entente pour la Forêt Méditerranéenne, France  
Merseyside Fire and Rescue Authority, United Kingdom  
Service Départemental d'Incendie et de Secours de la Savoie, France  
Hellenic Rescue Team ATTICA, Greece

#### Small-to-medium enterprises

EXUS MEPE, Greece  
C4CONTROLS, United Kingdom  
International Security Competence Centre GmbH, Austria  
Trilateral Research Ltd, Ireland

#### Industry

ARTTIC S.A.S., France (Project office)

#### Research

Tohoku University, Japan  
Institute of Communications and Computer Systems, Greece  
SINTEF AS, Norway  
Commissariat à l'énergie atomique et aux énergies alternatives, France  
The University of Manchester, United Kingdom

#### Non-for-profit association

German Institute for Standardisation, Germany

**Members of the First Responder Board:** International Search and Rescue Advisory Group, Regione Liguria, USAR.NL, USAR US, National Research Institute of Fire and Disaster (Japan)

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