

Category : **Emergency room**

**A260 - First responder Advanced technologies for Safe and efficient Emergency Response FASTER project**

AM Cintora<sup>1</sup>; S. Gomez<sup>2</sup>; J. Ruiz<sup>3</sup>; O Carrillo<sup>3</sup>; FJ Carrillo<sup>3</sup>; MR Rodríguez<sup>3</sup>; AK Coll<sup>4</sup>; MÁ Semprún<sup>3</sup>; C Méndez<sup>5</sup>

<sup>1</sup>Emergencies Health Service of Madrid Community, Research Department, Madrid, Spain, <sup>2</sup>Emergencies Health Service of Madrid Community, Emergency Health Service SUMMA112, Madrid, Spain, <sup>3</sup>Emergencies Health Service of Madrid Community, Madrid, Spain, <sup>4</sup>Firefighter of Madrid Community, Firefighter of Madrid Community, Madrid, Spain, <sup>5</sup>Emergencies Health Service of Madrid Community, Catastrophe Department, Madrid, Spain

## **Introduction:**

Faster[1] is a H2020 research project [2] aimed at optimizing the response capacity of first responders in disaster situations with the objective of increasing the resilience of European emergency professionals to catastrophes.

## **Methods:**

It has been developed new technologies for International Urban Search and Rescue (USAR) [3] operational support. Innovative drones for mapping and logistical operations, Autonomous Vehicles with 3D and thermal camera, Portable Control Centre and resilient communications structure have been introduced in USAR procedures for increase the efficiency in the disaster response. It has been designed a scenario involving a simulated earthquake, with an area of collapsed buildings. FASTER tools have been testing in it, to confirm their usability in realistic, and hazardous environment. User feedback and KPI has been collected regarding the functionality and effectiveness of the FASTER tools.

## **Results:**

The initial assessment of the disaster area, has been improved with the results obtained within the UAVs aerial imagery. Risky manoeuvres have also been decreased by performing the 3D inspection, thermal vision and agile communications.

## **Conclusion:**

The tools tested have given a major step forward in improving the work dynamics of the health emergency and firefighter professionals[4]. The planning process and the management of the disaster has been facilitated and enhanced using innovative technologies. Professional methods of Assessment, Search and Rescue (ASR) of INSARAG(NATO)[3] have been increased its efficiency.

## **References:**

1. <https://cordis.europa.eu/project/id/833507/es>
2. <https://www.faster-project.eu/>
- 3 <https://www.insarag.org/>.
4. <https://tinyurl.com/aw4ybbyf>

**Image :**

**FIGURE 1-FASTER TOOLS TESTED  
in MADRID PILOT**

DRON WITH 2D CAMERA,  
SYRINGE CARRIER,  
GEOLOCATOR AND PARACHUTE



Autonomous terrestrial vehicle  
with thermal camera



Autonomous terrestrial vehicles  
with 3D mapping



Covid  
Protocol

*FASTER Tools tested in Madrid Pilot with INSARAG procedures*