Advancing Innovation for First Responders

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Policy context
“Research and innovation is essential if the EU is to keep up-to-date with evolving security needs. Research can identify new security threats and their impacts on European societies. It also contributes to creating social trust in research-based new security policies and tools. Innovative solutions will help to mitigate security risks more effectively by drawing on knowledge, research and technology.”
Research on Disaster Resilient Societies
## Horizon 2020 security research

<table>
<thead>
<tr>
<th>Research Areas</th>
<th>EU contribution</th>
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<tbody>
<tr>
<td>Border and External Security</td>
<td>135.159.556,73 €</td>
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<tr>
<td>Critical Infrastructure Protection</td>
<td>45.784.681,38 €</td>
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<tr>
<td>Digital Security <em>(DG CNECT)</em></td>
<td>169.966.944,19 €</td>
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<tr>
<td>Disaster Resilient Societies</td>
<td>171.449.753,47 €</td>
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<tr>
<td>Fight against Crime and Terrorism</td>
<td>200.717.369,74 €</td>
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<tr>
<td>General Matters</td>
<td>36.929.193,50 €</td>
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<td>SME instrument phase</td>
<td>42.886.274,17 €</td>
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<td><strong>Grand Total</strong></td>
<td><strong>802.893.773,18 €</strong></td>
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ANYWHERE
EnhANcing emergencY management and response to extreme Weather and climate Events

The ANYWHERE project is building a multi-hazard early warning system to support first responders during floods, storms, forest fires, droughts etc. One focus of its research is to study the activation of flash flood warnings of previously identified at-risk areas. This will enable first-responders to anticipate the impact of flash flood at the municipal level and to pre-identify priority targets (bridges, flooding roads, drinking water and wastewater treatment plants, etc.) during such events. Warnings will also be designed for sensitive buildings such as hospitals, schools or industries located in flooding areas.
2018-2020 DRS Call

- **SU DRS01-2018-2019-2020**: Human factors, and social and societal, and organisational aspects for disaster-resilient societies – 5 MEUR


- **SU-DRS03-2018-2019-2020**: Pre-normative research and demonstration for disaster resilient societies – 6 MEUR

- **SU-DRS04-2019-2020**: Chemical, biological, radiological and nuclear (CBRN) cluster

- **SU-DRS05-2019**: Demonstration of novel concepts for the management of pandemic crises
Human factors, and social, societal, and organisational aspects for disaster-resilient societies

- Research and innovation in support of improved preparedness and risk awareness related to natural or man-made disasters from a societal viewpoint in view of creating a resilient society in Europe
- Research to assess social media and other crowd-sourced data in emergency situations for different disaster scenarios (positive and negative impacts)
- Research encompassing the whole risk management cycle (from prevention and preparedness, communication, to response and recovery) with focus on risk awareness and response

Addressing diversity in risk perception, vulnerabilities, understanding, better transfer of research outputs to meet citizen expectations regarding risk acceptance and awareness. Multidisciplinary teams with CSOs, first responders, (national, regional, local, city) authorities and involving citizens representative of European diversity for different types of disasters: development of a culture of improved preparedness, adaptability and resilience to risks, including the use of social-media and crowd-sourced data, and the involvement of citizens in the investigations and possible validation of tools and methods.
Novel solutions improving the protection of first responders against multiple and unexpected dangers, or enhancing their capacities by addressing related research and innovation, in particular in 2018:

- **Sub-topic 1 – Victim-detection technologies**: saving time taken to detect victims who are not visible, enabling more efficient and faster rescue operations leading to higher chances of saving lives and reducing injuries

- **Open Sub-topic**: other technologies for use by first responders (involving a large number of organisations) on e.g. communicating and smart wearables, light-weight energy sources, situational awareness using UVA and robots etc. (see text of call), the list is not exclusive. Requirement for testing and validation of technologies / methodologies not only in labs but also in training installations and in-situ deployment. Interdisciplinary teams to be involved. Participation of first responders in a systematic manner and new methods on how to involve them and organise their interactions with researchers.
Pre-normative research and demonstration for disaster-resilient societies

Insufficient harmonisation and standardisation hampers interoperability of equipment and procedures implemented by first responders, also leading to market fragmentation. Pre-normative research may address this issue effectively. In 2018, focus will be on:

- **Sub-topic 1 – Pre-standardisation for the security of water supply**: based on legacy of FP7 development of detection technologies to analyse drinking water, and strategies to integrate current technologies in the existing water safety network, interconnecting safety- and security-related networks of sensors that are deployed among water supply and distribution networks. Focus on networking testing facilities developed by water utilities to demonstrate the use of current sensor technologies for the purpose of both safety and security of water.

Expected impact: full awareness of water supply facilities about the necessity of designing monitoring networks capable of detecting both contamination risks (safety) and deliberate poisoning (security).

**TRL 6 to 7**
Community of users and Projects explorer
A COMMUNITY OF USERS FOR SECURE, SAFE AND RESILIENT SOCIETIES

In a world facing growing risks from man-made and natural disasters, the security of citizens, infrastructure, and assets is a high priority for the European Union.
Use the map below to search through the contact database, and find a community of users in your local area.
A Community of Users on Secure, Safe and Resilient Societies (CoU)

Volume 2

Mapping EU policies and FP7 research for enhancing partnerships in H2020
Exploring how to improve data access
Interface (DG HOME) / Database (DRMKC)

Matrix

Natural disasters
Critical Infrastructures
...... etc
Safety and security

Info summary

When referred to programmes without info sheets
Avoiding new sheets

When referred to programmes with on-line catalogue

When referred to SEC or other programmes

Info sheets ("frozen")

CIP  CBRN-E  ... ...

WEBSITE

Based on different levels of interactions and "thematic nodes"

ACTION 1
Setting information search

ACTION 2
Project interactions
Support to analysis (Users)

CDRIS  SEC  CIP  BES  FCT

POL.  RES.  IND.  PRACT.  CIT.

Database

X  X
X  X
X  X

CORDIS  CORDA  Etc.
Goal of the Forum

The goal of this Forum is to assist First Responders across the globe in conducting their missions more effectively, safely, and efficiently by providing information that may influence the global market to develop affordable and innovative technology.
Outputs of the Forum

The Forum will have two concrete outputs which are of direct relevance for the EU: the identification of common capability gaps (i.e. technologies, equipment) and the definition of common research priorities in the field of first responders.
## Participants

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<th>Japan</th>
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<tr>
<td>Australia</td>
<td>Mexico</td>
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<tr>
<td>Canada</td>
<td>Netherlands</td>
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<tr>
<td><strong>European Commission</strong></td>
<td>New Zealand</td>
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<tr>
<td>Finland</td>
<td>Spain</td>
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<td>Germany</td>
<td>Sweden</td>
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<td>Israel</td>
<td>United Kingdom</td>
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Commission Decision to join

- **Commission Decision C(2017) 2564 of 27.04.2017** on the participation of the European Commission in the international Forum to Advance First Responder Innovation

- **On 25 October 2017**, the Commission took over officially the chairmanship of the International Forum to Advance First Responder Innovation (IFAFRI) from the US Department of Homeland Security
The objective for the Commission in participating to this Forum is twofold

- Ensure the **coherence of EU security research in the field of First Responders with the global efforts.**
- **Support the competitiveness** of the EU Industry in the First Responder area; and to
Thank you for your attention