



International Forum to Advance **FIRST RESPONDER INNOVATION**

Quarterly IFAFRI Newsletter - Winter Edition - January 2021

International cooperation during challenging times

Looking back at 2020 and ahead to 2021

An in many ways eventful and challenging year came to an end: the COVID-19 pandemic, the extreme fires in Australia, the devastating explosions in Lebanon, and the earthquakes in Mexico and Turkey have once again shown the importance of international first responder collaboration and initiatives. IFAFRI has organised the exchange on different operational challenges by sharing good practices in this difficult year. The Forum has also ensured its main task of addressing first responder capability gaps by shifting exclusively to virtual communication platforms. 2020 was a year strongly focusing on the IFAFRI R&D Agenda, with extensive work on identifying funding programs that can contribute to close the IFAFRI [capability gaps](#) and also first successes in introducing IFAFRI and its outputs in the priorities of research programs.

When it comes to governance, it is with great pleasure that we can announce that,

with **Belgium** and **Greece**, two new countries have requested membership in IFAFRI for 2021. For this edition of the IFAFRI newsletter, we, therefore, spoke to [Ilse van Mechelen](#), coordinator at the National Crisis Center of the Belgian government, and [Georgios Eftychidis](#), manager of the European projects at the R&D department of the Greek government, to introduce the organisations that will represent both countries in IFAFRI.

We will also present projects that offer novel solutions in the field of crisis management and first responder innovation and give a recap of the IFAFRI events and activities of 2020, as well as an outlook of the upcoming events that might be of interest to you.

On behalf of the IFAFRI Chair, we wish you all a happy and successful New Year 2021! Stay safe and healthy!

The EC PMO

IFAFRI year in retrospective

Given the difficult circumstances in 2020, IFAFRI was limited to virtual events and meetings. Following the decision to pause the Capability Gap Committee meetings, taken in 2019, in 2020, the Forum focussed on dissemination and industry engagement. The events proved to be very productive, as can be seen from the overview below.

- **IFAFRI Virtual Research & Development Workshop 2020 – 17 June 2020**

The purpose of the R&D workshop was to discuss approaches to better engage and connect first responders and industry with the R&D agenda. The virtual workshop kicked-off with impulses from the EU-funded Networks of Practitioners: Patrick Padding ([I-LEAD, Law Enforcement](#)), Olga Vybornova ([e-NOTICE, CBRN response](#)), Monica Linty ([NO-FEAR, Medical Response](#)), and Wilfried Stefic ([FIRE-IN, Firefighting](#)), followed by a presentation by Milton Nenneman, U.S. Department of Homeland Security Science & Technology Directorate, First Responder Resource Group. Philippe Quevauviller, responsible for first responder-related research at the European Commission DG HOME, introduced a working session on a common IFAFRI R&D agenda. The subsequent session on joint IFAFRI topics explored the possibility of the inclusion of 'IFAFRI topics' into national and EU funding programs and identifying suitable formats of cooperation between projects addressing IFAFRI gaps.

- **Virtual Showcase Event – 8 September 2020**

On 17 September, the Stakeholder Engagement Committee (SEC) of IFAFRI held a virtual industry briefing with two North American companies [APX Data](#) (United States) and [First Responder Technologies](#) (Canada), presenting their first responder technologies. IFAFRI is taking steps to identify potential industry solutions (or partial solutions) for the IFAFRI common global capability gaps. This event is a part of the SEC work plan coordinating industry engagements through showcases hosted by various IFAFRI related stakeholders, in this case, the Trade Commissioner from the Canadian Embassy in Washington, DC. 34 participants from inside and outside IFAFRI attended this online event.

- **IFAFRI Annual Forum Meeting 2020 – 30 November 2020**

In adaptation to the COVID-19 necessities, the IFAFRI member country representatives convened virtually on Monday, 30 November 2020. After the annual updates from the US and EC PMO and presentations of IFAFRI relevant projects, the meeting focussed on the strategic planning of IFAFRI in 2021. The presentations consisted of an assessment of the Covid-19 response in Europe from Professor Jean-Luc Gala ([Centre for Applied Molecular Technologies](#)), Tiina Ristmäe ([CURSOR](#) Project, German [Technical Relief Agency](#)), Matthew Barger ([U.S. Department of Homeland Security](#)), and Philipp Dawe ([Defence Research and Development Canada](#)) who presented their Strategic Cooperation in Science and Technology. Furthermore, Georgios Eftychidis (Greece) introduced the work of the [Center of Security Study](#) (KEMEA) to the IFAFRI community.

During the last part of the Annual Forum Meeting, the IFAFRI representatives discussed the planned activities and strategic agenda of IFAFRI in 2021, such as the re-organisation of the IFAFRI committees and the planned handover of the IFAFRI chairmanship.

- **Virtual Research & Development and Stakeholder Engagement Committee in 2020**

In 2019 and 2020, IFAFRI hosted eight R&D Committee meetings and six Stakeholder Engagement Committee meetings.

IFAFRI projects and achievements

New IFAFRI website content

- Updated IFAFRI project repository

The new functionality allows introducing relevant projects and products directly into

the database. The new project repository is accessible via the [website](#).

- **Overview of national funding mechanisms**

An overview of national funding mechanisms relevant to IFAFRI is accessible via the IFAFRI [website](#).

New or updated IFAFRI information materials

All IFAFRI information materials are available on the IFAFRI [website](#).





HEROES ALSO NEED TO EXCHANGE IDEAS

Do you want to improve the effectiveness, safety and efficiency of first responders around the world? Let's come together to help first responders deal with the challenges they face in emergency situations.

JOIN THE DISCUSSION

Are you a first responder? Are you involved in industry, academia, government or media? Become a member of the IFAFRI group on LinkedIn to exchange views and keep up to date on all upcoming events.

Join the IRF community on www.internationalresponderforum.org

IFAFRI AT A GLANCE

To ensure the safety and security of the people they serve, first responders need more support to tackle increasingly complex emergency scenarios that require smarter and better equipment, communication tools and training. IFAFRI is a global network of public authorities that enables first responders to perform their missions more effectively, safely and efficiently. This global network also serves as a platform for the development of affordable and innovative technology so that the world's first responders can better respond to emergencies.

FAST FACTS

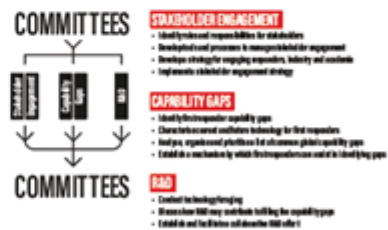
- Launched in 2014 by the USA
- Chaired by the European Commission (Secretariat)
- Member count five

STRATEGIC OBJECTIVES

- Defines a list of common capability gaps of first responders
- Provides a platform for international collaboration on innovative R&D initiatives and solutions
- Connects global first responder markets to inform and guide industry in making innovative technology available at affordable prices
- Provides unbiased information about relevant and available first responder technology

HEROES ALSO NEED SUPPORT

HOW DOES IFAFRI MEET THE NEEDS OF FIRST RESPONDERS?



CAPABILITY GAPS

- IFAFRI has identified 10 capability gaps commonly faced by the world's first responders:
1. The ability to know the location of responders and their proximity to risks and hazards in real time.
 2. The ability to detect, monitor and analyze potential and active threats and hazards at incident scenes in real time.
 3. The ability to rapidly identify hazardous agents and contaminants.
 4. The ability to incorporate information from multiple and non-traditional sources (e.g. crowdsourcing, social media) into their decision-making process.
 5. The ability to maintain interoperable communication with responders in any environmental conditions.
 6. The ability to obtain critical information in real time about the incident, personnel, or history of the incident.
 7. The ability to conduct rescue operations in a timely, efficient and safe manner.
 8. The ability to monitor the physiological signs of emergency responders.
 9. The ability to create a common data language based on data and information from multiple sources.
 10. The ability to provide appropriate and advanced personal protective equipment.

WWW.INTERNATIONALRESPONDERFORUM.ORG

New IFAFRI Members: Greece and Belgium

Interview with Ilse Van Mechelen, Belgium



Can you tell us something about your professional background and how you got involved in IFAFRI?

Since three years, I work as a coordinator at the [National Crisis Center in Belgium](#). I coordinate an EU funded project: the [Bullseye](#) project, which aims at developing harmonised procedures for first responders after a chemical or biological terrorist attack.

Before this assignment, I worked ten years for the governor of Antwerp at the emergency service unit. There I developed and coordinated multiagency exercises. Since there are multiple risks in the province of Antwerp - such as a huge harbour, nuclear plants, chemical plants, an airport, etc. - there were plenty of scenarios and learning opportunities, and I worked closely with all kinds of first responders. My first contact with IFAFRI representatives was at the Security Research Event in Brussels in 2018. In 2019, I visited the IFAFRI's Industry Day in Brussels, where I met Max Brandt, who is in charge of the management of IFAFRI on behalf of the European Commission.

Belgium now decided to join IFAFRI. Can you outline the main reasons?

One of Belgium's main reasons to join IFAFRI is your work on identifying common capability gaps. As part of the [Bullseye](#) project, we did a gap analysis ourselves. There we experienced how time-consuming the identification of gaps is and how demanding it is for the emergency services to contribute. Therefore, we truly support the idea of identifying common capability gaps, which can be a starting point for further elaboration in every country. We can mutually benefit from each other's work, and it can help to avoid duplication. Network building and access to research and development are other important aspects allowing for the exchange of best practices and tools with new partners.

Finally, the international environment is a key working area for Belgium's National Crisis Center. The cooperation with neighbouring countries is, of course, paramount, but the international collaboration spreads further than this, we want to cooperate in crisis management with partners in and outside Europe.

How would you describe the Belgian first responder system and community? What are the main focal points and challenges in Belgium?

In Belgium, each discipline is very well organised, and they all have a good education and training program. The Belgian law stipulates that the different first responders should exercise together regularly. This is happening, but there is room for improvement. It goes without saying that the more first responders practice together, the easier they will cooperate in a real crisis.

In Belgium, the challenge we face is that the first responders are supervised by different departments in different Federal Public Services, which means that there is no common ground for education and training.

One of the next years' focal points will be public space management by using new technologies such as drones and artificial intelligence. While these can offer added value for information gathering in crowd management, they do not automatically make your emergency services innovative for situational awareness in large-scale operations or emergencies. The new technologies need to be carefully embedded in the emergency services system to be truly innovative.

In many countries, we saw a lot of praise given to first responders in the medical sector. In your view, what is the long term impact of COVID-19 on the work of first responders?

The medical first responders became more visible to the public. We will all remember the scenes in the hospitals of the COVID-19 patients and the totally covered and wrapped up medical first responders, not able to go to the toilet for 12 hours and to risk their lives for the patients' sake. In many countries in Europe, each night at 8 pm, people clapped and made music for the medical first responders in the first wave of the crisis. So the appreciation was huge and really came from the heart.

Along with the COVID-19 crisis came the extra appreciation of the medical services. In November, the new Belgian Minister of Health wrote his policy statement: the health system will be reorganised in the following years to enable high quality and accessible health care. Another focal point will be the stimulation of the cooperation between the first-line medical responders and the hospitals. In the short term, the federal medical personnel already got a financial bonus as a token of appreciation for their enormous efforts.

What are other important takeaways from this COVID-19 crisis for the IFAFRI community?

COVID-19 has shown us the importance of a comprehensive network. We hope that many stakeholders will realise that a crisis can occur at any time and that it does not stop at the borders. We are currently building a more robust EU crisis network. The stronger the network, the more resilient we are.

What are the main topics IFAFRI should focus on in 2021 and beyond?

In this fast-moving and evolving time, we should identify and work on the common capability gaps to adequately develop solutions to handle future crises.

The extension of the network is another relevant aspect. As mentioned before, disasters do not stop at the borders. The better informed we are, the stronger the network is, the more resilient we

will become.

Interview with Georgios Eftychidis, KEMEA



Can you tell us something about your professional background and how you got involved in IFAFRI?

I have an academic background in forestry engineering, and I have worked for several years in the private sector, developing forest fire management applications. This included a forest fire simulator provided to the Fire Service 15 years ago, installing forest fire detection and monitoring systems using visual and infrared sensors. I work in the field of European R&D projects related to civil protection and risk management topics since 1990. For the last ten years, I work with [KEMEA](#), the Greek Ministry of Citizen Protection Research organisation, where I am currently managing the European projects R&D Department. We are involved with IFAFRI by coordinating [MEDEA](#), a regional network of practitioners, supported by the EU Research and Innovation H2020 Program. We are focusing on identifying R&D gaps in various security issues, including natural hazards, disasters, and crises. Through the European Commission and David Rios Morentin, the Project Officer of MEDEA, we participated in meetings promoting IFAFRI. We are trying to align our approach to stay compatible and save time in our work.

What were the main reasons for the Greek government to join IFAFRI?

We participate as observers at this stage, but we have informed our Ministry, and the process for formal involvement is ongoing. We find the concept and the context of IFAFRI quite interesting for innovating how first responders' work can be supported.

Our Ministry includes the Hellenic Police, Fire Service, and Civil Protection. Thus, most of the first responders operate under its auspices. KEMEA, as a science-policy-practitioners interface organisation, has a role in bridging the gap between the relevant communities. We believe IFAFRI is a proper instrument to improve the interaction between them.

KEMEA prepared the last National Risk Assessment for Greece for the Greek Civil Protection (GSCP), submitted to DG ECHO. Having Memoranda of Understanding (MoUs) with other First Responder organisations, e.g., Coast Guards or the Emergency Services, KEMEA aims to link the R&D activities of the Ministry with other Ministries and Public Services in the field of citizen protection.

How would you describe the Greek First Responder system and community? What are the main focal points and challenges in Greece?

Following a series of fatal disasters in Mandra (flood 2017) and Mati (wildfire 2018) with tens of victims in a few hours, the system was recently revised. The government tries to bring more science and technology to the field, which is very good and promising. Scientific knowledge and modern methodology to address crises are currently considered as the main instruments to manage crises. On the other hand, the citizens' participation and volunteers' involvement remain limited, and GSCP plans to stimulate this. Our system is more response-oriented.

The main focal point is the accumulation of dangerous situations due to a lack of proper land planning and management combined with insufficient prevention measures in the zones that were developed in the last decades. Innovation should be thought of not only in relation to technology but also the improvement of planning and organisation.

From the police side, the Ministry moves towards predictive and intelligence-led policing, aiming to improve performance and address budget limitations. KEMEA supports the Ministry as regards the ICT and Artificial Intelligence aspects of this approach.

In many countries, we saw a lot of praise given to first responders in the medical sector. In your view, what is the long-term impact of COVID-19 on the work of first responders?

The pandemic is still running, and we need to provide the first responders of the medical sector with our support. In emergency situations, people always praise the work of first responders, but the State has to support the role and work conditions of the first responders to be efficient when the disaster hits. COVID-19 has revealed the first responders' role globally, with the medical sectors being in the first row. This can trigger discussions among the various first responder communities to assert their right to have proper work conditions and tools needed to address large-scale crisis situations. The issue of the security and safety of first responders becomes even more evident in the case of COVID-19.

How are you currently involved in the COVID-19 crisis, working on different projects and in different places?

The crisis is managed nationally by the General Secretariat for Civil Protection from the Ministry of Citizen Protection and Hellenic National Public Health Organization (EODY) from the Ministry of

Health. The State Secretary at the Ministry of Citizen Protection is in charge of managing the crisis situation from our Ministry's side, aligned with the Expert Committees of epidemiologists and infectious disease specialists, in direct line with the Greek government.

What are other important takeaways from this COVID-19 crisis for the IFAFRI community?

There are still needs in the context of global crises regarding common standards, Standard Operating Procedure (SOPs), and joint training for first responders. Although we cannot fit the same strategy to every crisis, we have to collaborate on a broader level. IFAFRI is a good example of how countries - not only on the European level but worldwide - cooperate on joint strategies. The pandemic shows us that we are confronted with significant challenges. However, we also have the capabilities and the right skills to combat these challenges together.

What are the main topics IFAFRI should focus on in 2021 and beyond?

The current pandemic should not make us forget the impacts of climate change and the related increased frequency and extreme behaviour of natural hazards such as wildfires, floods, but also hurricanes that can often lead to disasters. 2020 showed that not only pandemic-related disasters but also natural hazards could harm and disrupt societies. We have to improve telecommunications for first responders, use aerial platforms for monitoring operations, and give training and certifications to professional first responders.

IFAFRI Outlook – What's on the IFAFRI agenda in 2021?

Reform of the IFAFRI governance structure and the re-organisation of the three IFAFRI committee meetings

In autumn 2020, several informal bilateral IFAFRI exchanges took place, during which it was discussed how to advance the IFAFRI meetings and governance structure to enhance the Forum's maturity level. The discussion's result was that the work of the three IFAFRI committees is often overlapping and not time and resource-efficient. Therefore, the IFAFRI members agreed to merge the committees into a single **IFAFRI plenary group** with a **joint work plan** and develop a concrete process to implement the re-organisation in 2021.

Overview of IFAFRI-related research projects

In autumn 2020, the R&D Committee developed and shared an excel sheet with the IFAFRI Point of Contacts. The purpose of the document is to list national research projects addressing one or

several IFAFRI gaps. For each project, IFAFRI members get the opportunity to indicate whether they are interested in taking up an external advisory role and provide valuable feedback to the respective research project members. The participants agreed on a **multi-step process** during which the group will first further complement the excel sheet with their national research projects and enter their connection preferences. Secondly, project representatives should bilaterally agree with their advisors on how to process and start implementing the feedback loops and communication process. This initiative aims to strengthen IFAFRI's role in establishing contacts and strengthening connections between its members, industry, and the broader first responder community.

The envisaged handover of the IFAFRI chairmanship from the European Commission to another IFAFRI member country in 2021

The European Commission took over the chairmanship of IFAFRI from the United States three years ago. During the Annual Forum Meeting in November 2020, the IFAFRI Chair stressed the need to follow the Forum's rotational spirit and identify a new member country willing to take over the chairman role. He further emphasised that IFAFRI can only thrive on the strong commitment of the IFAFRI member countries. The IFAFRI Chair is willing to continue chairmanship for the upcoming six months until July 2021. However, if by mid-2021, no other IFAFRI member has taken over this role, the European Commission and the IFAFRI members will have to look into how to continue the Forum's work without a formal secretariat.

Other relevant updates

Furthermore, the IFAFRI Chair informed the participants that the Security Research Event 2020 had to be cancelled due to the Covid-19 pandemic. The European Commission also decided not to host a Security Research event in 2021. However, the Chair stressed that we would like to invite all IFAFRI members to the Security Research Event in 2022.

IFAFRI-related projects

Managing Wildfire: Focus on firefighters



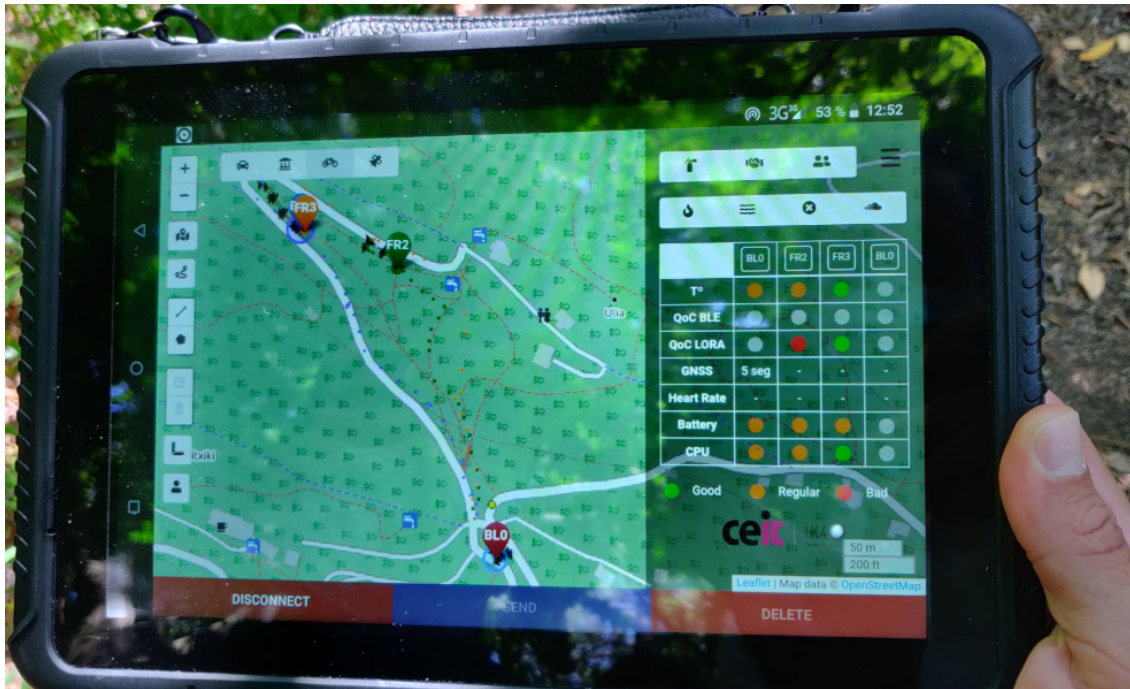
AIOSAT project: Using Technology to Trace and Track Fire Fighters

The Autonomous Indoor & Outdoor Safety Tracking system ([AIOSAT](#)) complete system is a tracking and alert system for firefighters, security, or emergency services involved in emergency situations. The device provides information on outdoor and indoor locations of first responders. It also establishes a stable data communication within the brigade or team to communicate each member's location and send the monitoring information of every node and sensor to the team leader's mobile application. As a result, team leaders can make better decisions on the safety of his/her deployed people.

Due to the innovative fusion of several technologies with specific sensors and configurations, persons can be located in indoor or outdoor scenarios with good precision. The nodes have GNSS IMU Pedestrian [Dead Reckoning](#) and Ultra White Band inter-distance sensors, and they work with no fixed infrastructure deployed for them. The location, node status information, and the alerts generated are transferred into a mobile and visual application for the team leader and the Incident Command Post application by configurable communication systems (meshed and point-to-point solutions). In exchange, the command can complete this information with external data and propose safer and more efficient steps for the positive conclusion of the intervention.

The whole intervention is recorded into both applications and could be replayed to analyse the steps and subsequently improve the team's procedures and reactions.

One of the best points of this system is that the deployment time is very fast, as, for the indoor case, it only needs a LORA gateway installed on the ground or already installed in the vehicle. Moreover, the technologies are well known and stable, so the system is cost-efficient.



The Cutting Extinguishing Concept (CEC) or methodology in firefighting operations

Södra Älvsborg Fire & Rescue Service (SERF) has conducted, in collaboration with the SP Technical Research Institute of Sweden, scientific studies based on reported and documented experiences from almost ten years' practical implementation of the [Cutting Extinguishing Concept \(CEC\)](#) or methodology in firefighting operations.

The concept or system consists of means for detection and scanning with infrared technology, information, and decision support combined with the COBRA cutting and extinguishing technical equipment for precision firefighting and high-pressure ventilation created by a high-pressure fan to optimise the efficiency of the COBRA. The COBRA is ready for use immediately on arrival on site. The concept is integrated into normal fire-engine trucks with 1 + 4 firefighters but is also a part of the lighter quick response unit with two firefighters developed by SRSA, the First Response Unit.

MBIE Rural Fire Bid

The research project [MBIE Rural Fire Bid](#) funded by the New Zealand Ministry of Business, Innovation, and Employment examines wildland, rural fire fighting, and firefighters' experience during these disasters. The research stresses that wildland firefighters face multiple challenges during their day-to-day operations, including smoke and carbon monoxide (CO) inhalation, physical exhaustion, and dehydration which are made more problematic by the lack of ability to accurately and continuously track the status and location of wildland firefighters.

Two of the greatest needs for wildland firefighters are location-based tracking and environmental monitoring. This review of technology literature as it pertains to wildland firefighting applications supports the enhanced improvement of existing market technologies for location tracking and carbon monoxide detection. Integration of these technologies into a wearable platform would meet the high priority goals of smart firefighting cited as a need for future research by multiple organisations (DHS, NIST, NFPA, etc.).

Project: Human+ Living Lab

The German National Relief Agency (Technical Relief Agency - THW) develops an AI-based system to support the situation center and first responders in their track and trace rescue missions. This project can enhance the rescue efforts and bolster the efficiency in emergency relief on site.

The German research project Human+ Living Lab (financed by the German Federal Ministry of Education and Research, BMBF) is evaluating an artificial intelligence (AI) based system developed to scan social media channels. The collected and analyzed information will be used to support the situation centers of end-users during the missions.

The evaluation of the AI-based system takes place based on realistic scenarios, and the exact needs of the end-users will be looked into and considered. One example of the system's last exploitation was the explosion in Beirut, Lebanon, on 4 August 2020. For search & rescue tasks and for the German Embassy support 50 THW (German Federal Agency for Technical Relief) first responders from Medium Urban Search & Rescue (MUSAR) team were deployed to Lebanon.

Simultaneously, THW VOST Team (Virtual Operations Support Team) was activated to scan social media and provide information to the MUSAR team. The Human+ Living Lab algorithm was combined with the VOST usual working methods, and therefore, significant improvement of the flow of the operation could be presented. The system will be further developed using scenarios like Covid-19 and the refugee situation. For additional information, please contact THW:



An example of a plotting map of the Human+ Living Lab

Project SERA: Encountering the Risk of Earthquake: a Forecasting Tool

SERA is the 'Seismology and Earthquake Engineering Research Infrastructure Alliance for Europe', responding to the priorities identified in the call INFRAIA-01-2016-2017 Research Infrastructure for Earthquake Hazard.

The overall objective of [SERA](#) is to contribute to improving access to data, services, and research infrastructures and deliver solutions based on innovative R&D in seismology and earthquake engineering, aiming to reduce the exposure of our society to the risk posed by natural and anthropogenic earthquakes. To this end, SERA will:

- Involve the communities involved in previous successful projects, including NERA and SERIES;
- Offer transnational access to the largest collection of high-class experimental facilities in earthquake engineering;
- Offer virtual access to the main data and products in seismology and anthropogenic seismicity;
- Promote multi-disciplinary science across the domains of seismology, anthropogenic seismicity, near-fault observatories, and deep underground laboratories to achieve an improved understanding of earthquake occurrence;

- Revise the European Seismic Hazard reference model for consideration in the ongoing revision of the Eurocode 8;
- Develop the first comprehensive framework for seismic risk modelling at a European scale;
- Develop the new standards for future experimental observations in earthquake engineering and the design of future instruments and networks for observational seismology;
- Develop reliable methodologies for real-time assessment of shaking and damage; Expand access to seismological observations;
- Network infrastructures and communities in the fields of deep seismic sounding, experimental earthquake engineering, and site characterisation;
- Provide an important contribution to the construction and validation of EPOS;
- Provide effective communication and outreach to all stakeholders.

First responder Advanced technologies for Safe and efficient Emergency Response (FASTER)

FASTER is a H2020 funded project that involves a consortium of research, social and technical partners and first responder organizations.

FASTER addresses the challenges associated with the protection of first responders in hazardous environments, while at the same time enhancing their capabilities in terms of situational awareness and communication.

First responder Advanced technologies for Safe and efficient Emergency Response (FASTER) is a H2020 project aiming to help and protect first responders during their operations and enhance their capabilities in situational awareness and communication. FASTER is developing a set of tools that includes ergonomic wearable devices, sensors, autonomous air and ground vehicles, artificial intelligence capacity, augmented reality interfaces, autonomous vehicles, K-9 support technologies, resilient communications, and a common operational picture for mission planning and monitoring. Read more about FASTER and its activities [here](#).

User-centered design is a key aspect of the project, with research and development carried out in collaboration with first responders. Accordingly, FASTER tools are being tested and validated in a series of international scenario-driven pilots in Spain (earthquake scenario), Italy (flooding), and Finland (indoor terrorist event). Pilots provide an opportunity for the technical teams to test their innovations, for first responders to train with the FASTER tools, and for other interested stakeholders to witness them used in action. A video summary of the first FASTER pilot, held in Madrid on November 17, 2020, can be viewed [here](#). The upcoming pilots in Monalieri (January 27,

2021) and Kajaani (March 10, 2021) will each feature a different subset of FASTER tools, as appropriate for their respective scenarios.

Academic Contribution: Effective crisis communication before, during, and after natural disasters (Suzan Sidal, Leiden University)

The following text is a summary of a Dutch-US American [research project](#) on effective crisis communication on basis of a case study in Hoboken, New Jersey during and after Hurricane Sandy in 2012. It offers an assessment of a top-down approach to risk communication. This piece of research also addresses the IFAFRI capability gaps 4 and 5.

When Hurricane Sandy devastated the east coast of the United States in 2012, New Jersey faced significant issues responding adequately to the natural disaster. After being confronted with the deadliest and most destructive hurricane for centuries, policy-makers of the city of Hoboken decided to introduce a more science-based policy and started close collaboration with scientists to improve preparedness in the future. Concerning various published policy documents, plans workshops, and activities, the research project “Urban Resilience” assessed how emergency communication between public organizations and citizens contributed to community resilience.



FEMA Guideline in Crisis and Emergency Risk Communication indicating major stakeholders and civil organizations

The local government was not equipped with additional and provisory communication means like HAM radios or satellite telephones on a governmental level. Still reliant on mobile phones and internet connection, the communication with safety staff was disrupted when the hurricane hit. As a result, relief supplies arrived later than planned, and the coordination of first responders was substandard. Besides, an emergency management center was missing, which crippled a coordinated and efficient first response.

The US Federal Emergency Management Agency (FEMA) communication system consists of different actors and organizations reaching from the state level to civil society organizations. On the federal level, the Hudson Regional Health Commission and FEMA act as mediators and advisory boards for the local government to clarify resources and capabilities and additional personnel for emergency relief. Since New Jersey's government promotes a strong mayor system, the City Hall and local government are the central actors directing and coordinating emergency relief and communicating with the command staff. These agencies also include the public information officer, safety officer, and liaison officer disseminating information to citizens and other community members about emergency relief and urgent safety orders.

Civil society organizations are not listed in the FEMA Disaster Management Framework as mandatory actors. However, they are included in the national operations center as crucial non-governmental partners that assist and coordinate with the local government. In Hoboken, the Community Emergency Response Team (CERT) mobilized volunteers and stood in close contact with citizens to coordinate and activate emergency relief. The over 5000 volunteers positively impacted the overall situation by replacing the missing man force in the town. Direct communication with citizens and other non-governmental stakeholders was efficient.

Still, establishing an emergency operation center with CERT's help indicates the strong network and community participation in Hoboken. The lack of coordination on the governmental level was compensated by civil society actors' efforts, including CERT and the American Red Cross.

The case of Hoboken in New Jersey reveals that effective communication and emergency relief are components that are strongly reliant on each other to foster community resilience and robustness before and after natural disasters. Educating citizens and promoting citizens strengthen not only community networks but also awareness. Moreover, risk education for citizens and the procurement of alternative communication channels and tools for public organizations should not be excluded from the government agenda. In fact, strong preparedness efforts and crisis communication plans combat further disruptions and any negative long term effects on communities.

Suggestions for further reading

Below, you can find articles about innovation and several other projects related to first responder technology in the light of the COVID-19 crisis.

- [Five ways humanitarians use technology to deliver during COVID-19](#)
- [Coronavirus contact-tracing apps: can they slow the spread of COVID-19?](#)
- [France, among others, used drones to enforce the country's lockdown](#)
- [Senate Passes Resolution to Make 25 September National First responder Appreciation Day.](#)

Upcoming events


COVID-19 has forced many organisers of events to postpone or organise events virtually/ The ongoing uncertainty concerning the development of the pandemic makes the list of forthcoming events below conditional.

17-18 February 2022 (Rescheduled) | First Responders Conference

 Melbourne, Australia

The purpose of this conference is to improve the health outcomes of people who are treated by First responders by preparing First responders for a wide array of situations so they can adequately assess and manage all types of injuries and situations. First responders' opportunity to improve health outcomes through proactive assessment and correct management relies on sound knowledge of the latest evidence. This timely conference provides an opportunity for first responders to gain these evidenced updates. Read more [here](#).

07-09 April 2021 (postponed from 26-28 January 2021) | CBRNe Summit USA

 Las Vegas, Nevada, U.S.

Intelligence-Sec is looking for IFAFRI members to speak at the CBRNe Summit about IFAFRI, its way of working, and its results. More information about the summit can be found [here](#) and [here](#). Please contact the organisation for more information.

CBRNe threats are increasing, and also the threat of lone-wolf extremists carrying out random attacks in major cities. During our international event, you will hear perspectives from military and civil officials who deal with CBRNe incidents. Many government departments and agencies across the region have realised the importance of CBRNe capabilities, and preparedness and budgets have been increased to deal with the new type of threats faced to civilians.

CBRNe Summit USA will focus on a number of key topics across the whole spectrum of the CBRNe domain such as local Nevada State CBRNe Response Capabilities, Chem-Bio Countermeasures, and Response strategies, International CBRNe Response and Preparedness, US Preparedness and Response to CBRNe Threats and Attacks, First responder Techniques – Hazmat and Decon and Combating Infectious Diseases across the US. Read more about the event and registration [here](#).

27-29 April 2021 | CBRNe Summit Europe

 Brno, Czech Republic

CBRNe Summit Europe is returning to Brno, Czech Republic, for our 7th annual event. Many major cities across Europe have faced critical incidents over the past few years. With terrorism threat levels high across Europe and the increased use of chemical agents being used by terrorist organisations, this is a key event to attend.

During our international event, you will hear perspectives from military and civil officials who deal with CBRNe incidents. Many governments across the region have realised the importance of CBRNe capabilities, and preparedness and budgets have been increased to deal with the new threats faced to civilians.

CBRNe Summit Europe will focus on a number of key topics, such as military and civil agencies' capabilities, first responder techniques, asymmetrical threats, medical countermeasures to chem-bio threats, decontamination developments and techniques, countering IED's, CBRNe threat intelligence, CBRNe forensics, and many more. For registration and more information, click [here](#).

Call for input and feedback newsletters

Thank you for reading the first IFAFRI newsletter of 2021. We are always happy to receive input and feedback for our newsletters. These can be projects and events relevant for the IFAFRI network, but also suggestions for interviews. Feel free to reach out to us, and we can see if we can include it in the upcoming newsletter.

Also, if anybody in your network is interested in receiving these newsletters, please let them sign up by sending an email to ifafri-pmo@ecorys.com.

Together we spread the word of IFAFRI!

Kind regards,

Project Management Office of IFAFRI

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