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Newsletter – November 2020

Welcome to this edition of the TERRIFFIC Newsletter. Back in March, we had planned to hold a week of integration and testing in Zurich, but the Covid travel restrictions put a stop to this of course. We succeeded in doing as much integration remotely as we could though and we made sure to use the lockdown over the Summer months to continue to push the development work even further forward. The good news is that we finally managed to meet face to face in September, successfully integrating many of the components in the TERRIFFIC System.

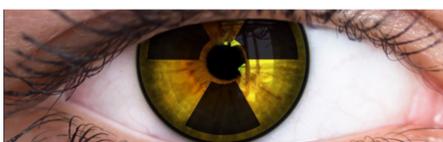
We are now hoping to be able to hold our next integration meeting, Covid-permitting once again. Once this work has been completed, our focus will turn to the Final Trial and field exercise in early 2021, as well as a Public Workshop in April, at which we will be demonstrating the complete TERRIFFIC System. More details of the Workshop will be published in due course and we really hope to see you there.

We have also been working together with our colleagues in the ENCIRCLE project on a CBRNe market analysis report, which will contribute to our exploitation activities and help to ensure the sustainability of both projects.

Thank you for continuing to support our project and of course you can always visit www.terrific.eu for the latest news and announcements.



Ulisse Gendotti, Project Coordinator, Arktis Radiation Detectors



Overview of the TERRIFFIC project

The TERRIFFIC project has brought together 10 European organisations, determined to deliver an important step change in the effectiveness of first responders during the first minutes and hours of a Radiological, Nuclear, explosive (RNe) incident.

TERRIFFIC is very importantly practitioner-driven, with the technical developments being made by R&D organisations and SMEs with significant experience of the military and first responder sectors. Together they are developing the TERRIFFIC System, ultimately looking to make it available commercially to CBRNe first responder agencies and critical national infrastructure organisations. CBRNe practitioners have been involved throughout the development process and will assess the various components, as well as trialling and evaluating the technology in the first quarter of 2021.

Some of the TERRIFFIC innovations include perhaps the world's smallest gamma camera, weighing only 300g, that can be mounted onto a UAV or UGV. A newly developed sensor can detect not only the type and location of a radioactive source, but by pairing it with innovative plume modelling software, it is possible to model how the radiation plume will disperse – even in a complex built up city centre.

Data and images from these sensors and cameras plus a new SIPR detector and handheld gamma detector will all be fed into the new augmented reality solution and the incident management system, hosted in the mobile detection van, to provide faster and more accurate information to incident commanders. Improved situational awareness can only result in better informed decision-making in those crucial first minutes.

But of course, another really important benefit of the TERRIFFIC System is that by sending this technology into the red zone first, a significant amount of information about the risks can be gathered before any first responders are deployed. Using innovative technology to reduce the exposure to risks both of specialist first responders and the general public lies at the very heart of the concept of the TERRIFFIC System.

Watch the TERRIFFIC First Trial Video to discover more about the project



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Integration and Testing



We held a successful two-day integration meeting with most of the project partners in September, except those that were unable to travel due to Covid restrictions of course. Even with everyone having to wear masks and observe the social distance rules, it was an extremely productive two days for us. Bringing different technologies together can often come with a few challenges, but the various project solutions worked extremely well together and we gained a huge amount of valuable information for our next stage.



The command and control system from Bruhn NewTech was integrated into the MODES van, which has been adapted in the project by Arktis Radiation Detectors. The integration of the new gamma camera from CEA and the SIPR detector from Arktis to the incident management system was also successful. The gamma camera was integrated with both the Hawker Q800X drone from AERACCESS and the Nerva XX UGV from Nexter Robotics. They were both put through their paces and came through with flying colours.



The augmented reality system, developed by the Luxembourg Institute of Science and Technology, had to be tested remotely, but we are very pleased to be able to report that it connected into the incident management system, CBRNe-Frontline from Bruhn NewTech, just as we wanted it to.

We are now organising stage 2 of the integration process and are hoping to hold another face to face meeting before too long, Covid permitting! This will set us up for the move towards the Final Trial and field exercise in 2021, in which the full TERRIFFIC System will be tested with practitioners utilising the tools themselves in a real-life scenario.

New video from École Centrale de Lyon

One of the partners in the TERRIFFIC project, École Centrale de Lyon (ECL), has been developing an innovative new plume modelling software solution, which processes the data from the detectors that are mounted on the drones and robots. Depending on the type and location of the radiation source that has been detected and the prevalent weather conditions, the software produces a dispersion model, showing in which direction, how far and how quickly the radiation plume will spread. The real innovation here is can calculate this even in a built-up environment in a city centre.

ECL has created this short video, which explains in simple terms how the various technologies work together to provide essential information for an RNe incident commander. We hope you enjoy watching it.



ENCIRCLE and NOTICE

The results of the updated market analysis report from our sister project ENCIRCLE is now available. The updated report includes an assessment of CBRN Needs and Gaps, Specifications and Standards, Market assessments, Procurement, Policy and Civil Protection and Defence perceptions.

You can access the report by logging in to the ENCIRCLE Catalogue, Networks and Forum and access the report from the Resources folder or by registering for access to the Catalogue on the ENCIRCLE website at: <https://www.encircle.eu>.

The project is also looking for feedback and suggestions for the sustainability of the ENCIRCLE cluster which are outlined in the ENCIRCLE Discussions report which is also available in the Resources folder.

eNOTICE project <https://www.h2020-enotice.eu/> is building a European network of CBRN training centres, testing and demonstration sites. The aim is to bring together training professionals, practitioners, R&D and policy-makers to enhance CBRN training capacity, resulting in improved preparedness and incident response.

The results of a recent joint webinar with the FIRE-IN, DAREnet, MEDEA and NO-FEAR projects on just-in-time training in the context of medical, flood and CBRN response operations are now available online at: <https://cloud.h2020-enotice.eu/index.php/s/8i7G88ZxCynLMR#pdfviewer>



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