

TERRIFFIC!

Rob Munro introduces a new scheme to directly improve the response to an RNe incident

To complicate things even more, the situation can often be extremely dynamic. The continued presence of the perpetrators or terrorists at the crime scene and the potential combination of the RN attack with a conventional attack are genuine threats. Changing meteorological conditions, the fragility of the buildings damaged by the explosion, the presence of secondary IEDs (improvised explosive devices) timed to explode after the arrival of the first responders, the presence and state of the victims, and the reaction of the general public are all further complications.

Faster response time

For the incident commander, it is vitally important to find out as much about the situation as possible and that situational awareness is updated dynamically,

accurately and quickly. Improved situational awareness and a Common Operational Picture will ensure that the Incident Commander is able to make better-informed decisions.

In particular, the evolution of the radiation plume and determining the extent and severity of the contamination and the dimensions of the control zone are essential elements.

An improved initial response would certainly contribute to fewer victims, less damage, more effective use of resources and in turn reduce the direct and indirect costs of a CBRNe incident. However, the early-stage information can be somewhat limited and is often not quickly available. Detection and measurement networks are not adequately adaptive and dynamically responsive, including the repositioning of detectors to follow the evolution of the contamination.

Horizon 2020 project

A project which has received funding from the European Union's Horizon 2020 research and innovation programme will deliver a step change in the effectiveness of first responders during the first hours of an RNe (Radiological, Nuclear, explosive) incident. TERRIFFIC is designed to lead to reduced response time, fewer risks for the response team, and less human intervention in the operation due to a higher number of automated processes and extended mobile detection capabilities.

Within the project, explosives are only being considered in the context of a RDD scenario, in which the characteristics of the explosion and the explosives used will influence the development of the radioactive plume. Detection and analysis of explosives is not within the scope of TERRIFFIC.

Tools for early and Effective Reconnaissance in cbRNe Incidents providing First responders Faster Information and enabling better management of the Control zone



Modular technology

TERRIFFIC aims to enrich the broader European response to RNe events by developing a set of modular technology components in a comprehensive system. These will include new detectors, mobile detector units, algorithms, drones, robots, dispersion models, information management software, and decision support systems.

The project will also provide detailed information on the applicability of some developments within a chemical and biological context, so while the focus is on RNe, the outcomes are intended to have a wider impact.

Throughout the project, dedicated Key Performance Indicators will measure the progress towards targeted performance goals, such as significant acceleration of the time terrain interventions can be commenced to more accurate, and near-to-real-time estimation of the

control and exclusion zones. Advanced mixed-reality technology will also be leveraged to provide first responders with ad-hoc available and continuously updated information during operations.

Practitioner workshop

All aspects of the project are practitioner-driven. Leading-edge technologies will be provided by the R&D partners, whereas

“TERRIFFIC will deliver a step change in the response during the first hours – reduced response time, less risks for the response team and less human intervention.”

key innovative components will be developed by SMEs already involved in military or first-responder markets taking on the commercialization of the TERRIFFIC system and its components.

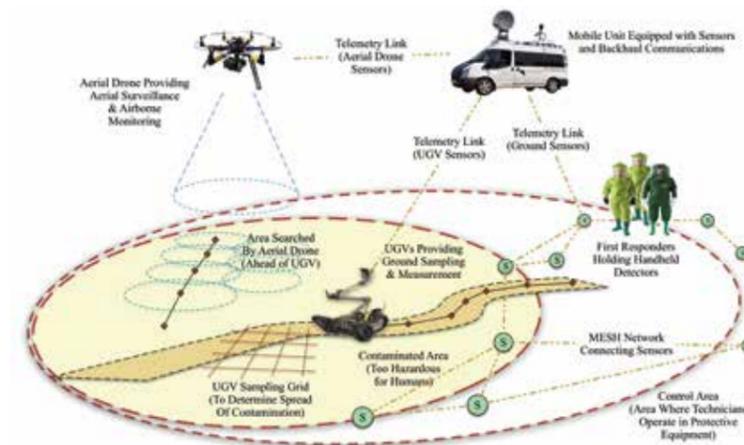
The practitioners will be strongly involved throughout the development process, components assessment and technology trialling. The project will also leverage results from previously successful FP7 projects and will cooperate closely with ENCIRCLE on the CBRN Cluster and with eNOTICE on training and technology testing and assessment.

The first TERRIFFIC Public Workshop took place 6-7 November in Paris, hosted by the French Fire Brigade National Federation. During the workshop practitioners' needs were collected during the first hours of an RNe incident to define the specifications of the TERRIFFIC System, based on a set of pre-defined scenarios. These scenarios were in turn put together with the assistance of operational first responders to ensure their relevance and prioritization.

To get involved in TERRIFFIC or to find out more about the project, please visit www.terrific.eu.

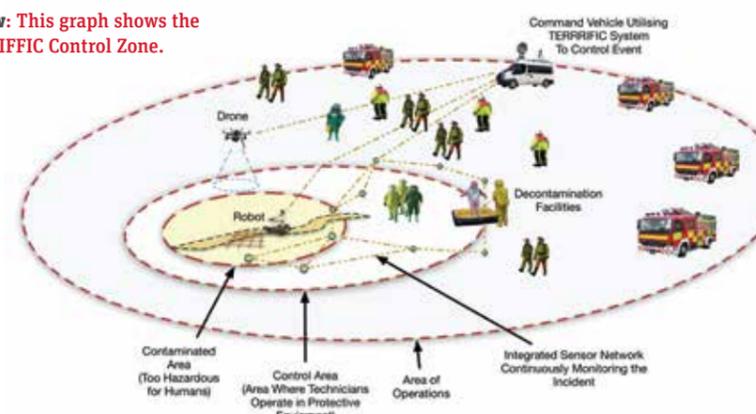
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Rob Munro from ARTTIC is the dissemination lead in the TERRIFFIC project and has 12 years' experience of working on European-funded projects, including CATO, TARGET and DRIVER+. Before that he worked for leading brand identity and design consultancies on major brands including HSBC, ConocoPhillips and O2.



Above: The TERRIFFIC system will improve situational awareness.

Below: This graph shows the TERRIFFIC Control Zone.



UK police practise CBRN response.

The first hours of a response to a CBRNe incident, and especially a radiological event, are particularly critical. Responders are looking to contain the most severe consequences, stop the ongoing criminal or terrorist threat, save victims, manage the crime scene and organize an effective response. This is also the time when first responders are most at risk as the nature, extent and intensity of the contamination is still unknown and secondary devices or contaminated objects may still be present.