

Clustering European strengths in detection equipment



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The consumer that's looking for a new car can use standard specifications and independent user tests to help decide which one to buy, assuming of course that those specifications have been reliably tested. But for high-tech detection equipment – something that has a big impact on our safety – the standardisation of specifications and independent tests are just in their infancy. Hence the European project CREATIF.

In the world of CBRNE detection equipment (see box) every country develops its own test protocols and determines for itself what is tested. Not a tenable situation according to the European Union. Hence the EU safety project, CREATIF, whose aim is to establish a network of test facilities for CBRNE detection equipment, including a plan to maintain that network. TNO is playing a prominent role as one of the seven partners in this project (running from 2009 until 2011).

'CREATIF has had a strong start,' says Dr Albert van der Steen of TNO. 'The participants have been organising workshops, publishing newsletters and working to harmonise standards, among other things. Such powerful international cooperation

can much more quickly generate solutions. And if something happens, the platform will be consulted first. That's the way it should be.'

TNO project leader, Martien Broekhuijsen, is just as enthusiastic: 'The workshop last November was attended by 69 people from 14 European countries, including test experts from more than ten renowned research institutes as well as manufacturers, end users and policymakers. They all underwrote the need for standardisation. One prominent representative of the EDA, the European Defence Agency, pointed out that the armed forces of the various EU member states shared this need.'

'A research institute that performs a detector test along with the end users must focus on the

scenarios in which the equipment must operate,' Broekhuijsen explains. 'You can test all kinds of technical characteristics like sensitivity and speed in an ideal laboratory environment but what does that say about operational use? Such equipment should be tested by an independent institute according to standard methods whereby it is clear to the buyer whether the equipment is what he or she is looking for. Take three different scenarios: a white powder letter, a *dirty bomb* (an explosive, combined with CBRN content), and an invisible toxic cloud that is spread by a terrorist during a major event. Each of these situations requires different detection equipment and protocols.'

Broekhuijsen feels that CREATIF is a valuable cluster of strengths. 'The joint knowledge of all those involved enables us to work towards good, well considered standards. I've seen how we can all generate momentum. There is still some way to go but in the end the purchaser for the fire brigade will have the same level of certainty that his product fulfils his requirements, just as the consumer that buys a new car.'

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Testing a biodetector in operational conditions.

Photo: TNO

CBRNE

CBRNE stands for chemical, biological, radiological, nuclear or explosive substances. The acronym is used for various categories of weapons of mass destruction and threat, from lethal toxic clouds and radiation to hidden explosives in a container ship that docks at a major port. To combat such hazards, detection equipment is being developed all around the world. And TNO is a major player in the world of C, B and E detection.