

# A new solution to counter vehicle-borne IEDs and explosives

**Portendo AB**, Stockholm, Sweden

While much attention has focused on airline security in recent months, for very obvious reasons, vehicle-borne IEDs still pose a real and ongoing threat to the public and a major problem for security services.

'Target switch' is one of the terrorists' greatest advantages. It is not difficult to believe that, while the attentions of the authorities, media and public are focussed on airline travel; the terrorist groups are already looking for the next soft target.

Terrorists have already struck trains, such as the Madrid attack which killed 191 people and wounded 1,800 others; and the underground trains and buses, such as the London 7th July attacks, which killed 52 people and left 700 injured.

Vehicles have long been a powerful weapon for terrorists groups worldwide, and with the proliferation of suicide bombers, the threat is even more potent.

The potential devastation caused by exploding a large truck bomb on cross-channel ferries or in the close confines of the channel tunnel can only be imagined. The chaos and disruption and all the associated publicity caused by fires in the Channel Tunnel in recent years cannot have gone unnoticed.

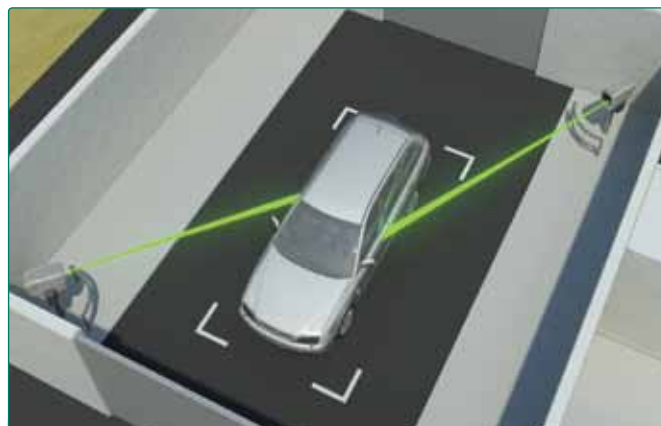
Vehicle-borne IEDs provide the terrorist with a number of major advantages, the first of which is mobility. Using a vehicle, it is possible to deliver the IED directly to the intended target. A vehicle also enables the terrorist to deliver much larger and more devastating IEDs – the bigger the vehicle, the bigger the bomb. The increased size allows the terrorist to use greater quantities of legally available materials such as ammonium nitrate, used in common fertilisers. This means that the terrorist only needs to obtain and use relatively small amounts of high-grade explosive for use in detonation. Less explosive means the bomb is more difficult to detect.

Vehicles are used for smuggling or moving explosive materials and components during the assembly phase and during the run up to the actual terrorist operation.

So how do we stop IEDs and explosives being smuggled across borders, onto trains, ferries or into public or secure buildings using vehicles, without disrupting traffic flow to an unacceptable degree?

Currently there are a number of detection methods available to law enforcement and security personnel, such as dogs, so-called electronic sniffers and swabbing. But they all share one major disadvantage: they all require security personnel to get dangerously close to the search vehicle, exposing them to the danger, should the vehicle bomb be detonated.

They are also slow and time-consuming. To address this problem, Swedish company Portendo has come up with a new concept in vehicle inspection.



The P.Eye-S aims a laser beam at the vehicle, and the reflected light is collected and analysed using the Raman scattering method.

It is called 'CheckPort' and it utilises the company's own proprietary technology in a new product called the P.Eye-S, a product jointly developed with the Swedish Defence Research Agency (FOI).

With the CheckPort concept and P.Eye-S system, it is possible to remotely detect traces of explosive residue on vehicles, inside an enclosed bombproof vehicle bay.

Vehicles identified for inspection will be asked to drive through the inspection bay in much the same way as they are at present. The driver will then be asked to leave the vehicle to present his or her documents in the adjacent border control office. While the occupants of the vehicle are in document inspection, the remotely operated P.Eye-S scanner working in conjunction with the CCTV system will examine target areas on the vehicle.

The P.Eye-S aims a laser beam at a particular area on the vehicle, then the reflected light is collected by the apparatus and is analysed using the Raman scattering method, which provides a unique molecular signature enabling selective identification. The particles are then compared and identified very quickly against an existing database of substances used in the manufacture of explosives.

The P.Eye-S can detect and identify a wide range of explosive trace substances of less than 20 micrograms, at ranges of two to five metres. Each scan takes about 30 seconds. This is quick, safe and reliable; and is able to work 24 hours a day, 365 days a year, with very little maintenance and training for the operators.

The technology works and has been tested by a number of government agencies worldwide, the first system should be available by the second half of this year.

## ABOUT THE COMPANY

Founded in 2005, **Portendo** develops and markets threat detection equipment for homeland security, military and commercial security industries. Portendo's patent-pending technology can increase safety and operational capability in high-risk environments by providing quick and reliable

detection of explosives, warfare agents and hazardous chemicals.

Portendo has several development co-operations with high-ranking research institutes, including the Swedish Defence Research Agency, as well as customer co-operations within the defence industry.

## ENQUIRIES

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