

Myths and misses

In the last of four articles, Lieutenant-Colonel Rick Barker dispels some common misconceptions about CBRN Defence

This final column will look at three misconceptions. The first deals with how confidently we could state that an event is truly over. The next tackles the trade-off between trying to prepare for all eventualities and putting all the eggs in the basket of greatest likelihood. Finally, a bit off-topic, a short dissertation on the pitfalls of setting priorities.

It's not over until it's over... But what is "over"? There are two questions that can arise from this phrase: when is the crisis over, and when is the consequence adequately dealt with? The former is complicated by the so-called binary incident which, while less

likely than a single event, is something that promises to challenge any responders. It involves either a dual release – not necessarily simultaneous – in which one effectively masks the other, or an incident (CBRN or other) that attracts responders who become the target for a second event.

The success of the binary release relies on instilling confidence in the responders that they have identified the nature of one hazard, to the extent that they do not continue to investigate and miss the other occurrence. Imagine a chemical attack followed by a biological one. In this case, "over" does not really occur until a full assessment of all possible hazards has been carried out.

The second "when is the crisis over" situation might begin with an explosion followed by a CBRN release timed to occur after responders have arrived on the scene. Alternatively, the CBRN attack could precede the explosive one. As in the binary incident,

care must be taken to thoroughly assess all possible hazards in the situation before fully committing unprotected responders to the scene.

Just as challenging is determining when the consequence has been adequately dealt with. This can mean trying to judge when the last release has occurred and, later, when the affected area has been successfully returned to a state that allows for its normal use. The first aspect can be achieved only by a thorough search of the area in question, to locate any suspicious devices or substances. The second normally requires thorough decontamination and very careful verifications with highly sensitive detectors. The difficulty of restoring the post office in the USA after the post-9/11 anthrax incident demonstrates how challenging this phase can be.

Rarely would authorities be fully confident that the incident was over, but a combination of pre-planning,



When does an event become over, and 'normality' resume? ©DoD



How soon before markets become a target for non-conventional attacks too? ©DoD

foreknowledge, competent responders and modern equipment could permit informed decisions to be made. As always, having realistic and imaginative exercises can contribute greatly to preparedness for all eventualities.

We need to focus our efforts on...

Not surprisingly in today's climate of fiscal restraint, there is a tendency to limit the scope of CBRN preparations. One common notion is to concentrate defences on transportation hubs, and this seems logical given the attacks in New York, London and Spain. It does not, however, bear witness to the history of measures and countermeasures whereby adversaries customarily seek weak points, vulnerabilities, and Achilles heels. Since 2001, aircraft have been relatively untouched by terrorist actions due, at least in part, to enhanced security. Now that the security of bus, metro and railway hubs is also being tightened, we can expect the "bad guys" to shift their focus in other directions.

In words familiar to many in the CBRN community, one observer recently stated that our defences have to be effective 100 per cent of the time, while our adversaries have to be effective only once to achieve their goals. This sobering thought does not

bode well for a cheap and easy solution, but it does highlight the danger of putting our faith into a limited number of defensive strategies.

PRESS RELEASE

(tongue-in-cheek)

The Government sincerely regrets the damage and injuries that resulted from yesterday's CBRN attack on the marketplace. In our defence, we would like to point out that, if the attack had been directed toward the train station or the airport, our defences and responses would have been more than adequate to prevent similar effects.

First, we have to prioritise

A misconception that seems common in government and industry alike is the belief that presetting priorities is an invaluable tool for optimising the use of scarce funds. Since CBRN acquisitions normally are directed to filling crucial requirements, it is often difficult to prioritise and, indeed, dangerous to do so. Any measure without a countermeasure is a weakness that could be exploited, so any unfulfilled acquisition could

lead to vulnerability.

Consider this simple example. You are asked to indicate the relative priorities of four initiatives, in anticipation of there being insufficient funds to pursue all four. You develop a rating scheme that produces a merit score for each of them and insert these into a table for comparative purposes.

Initiative	Merit Score	Cost \$ (or € or £)
Project #1	100	1000
Project #2	80	500
Project #3	60	400
Project #4	40	100

Assume now that you are given \$1,000 for acquisition. According to your preset priorities, you are bound to acquire Project #1 due to its high merit score. However, the other three projects total \$1,000 as well, but carry a cumulative merit score of 180, far above that of Project #1. In terms of cost-effectiveness, they would seem to be a better bargain and they would address more shortfalls. Additionally, if we divide the merit scores by the costs, we find that Project #4 gives the best bang-for-the buck – 2.5 times that of Project #1.

The lesson is that setting priorities can be a useful exercise but should be done with full knowledge of how the priority list will be used and the degree of flexibility that will be permitted. Often, it is better to do a cost-effective analysis after knowing how much funding is available.

This brings to a close this short series on CBRN Myths and Misses although there are undoubtedly many more misconceptions that can affect the successful conduct of CBRN responses. Perhaps the best tools to avoid their pitfalls are an ever-questioning mind and a striving for full knowledge of any situation.