

CBRNe World looks at companies that are developing CBRN training systems

Lifting the burden

THE old days of NBC training are long gone. While it might still not be the favoured end to a good exercise, the chances of it being concluded with a massive rocket barrage followed by buckets of instant sunshine are slim; instead CBRN is likely to be slipped into the exercise via IED or the odd poisoned ketchup bottle. Equally, the role is wider and less concerned with confirmation of the bleeding obvious – birds falling out of the sky and CAM reads... four bars, I think we might have an attack. Instead, it is about identifying the flavour of home-made laboratory and whether it is Thallium or Polonium in the gin and tonics.

This has been a difficult time for military NBC schools. For years they were able to follow a set course, only enlivened by the slow march of technology. Now the threat has gone supersonic and the technology refresh is approaching lightspeed, yet the pace of change in course curriculum remain agricultural. One reason for this is a lack of red force focus; is the threat this week terrorists in Baghdad or lunatics in Pyongyang? Better to teach the core essentials and try and slip a few modules on the side.

The focus also depends on the quality of the school and the amount of experience that the troops on the ground are getting – soldiers under threat from chlorine IEDs in Iraq are going to pay little credence to talks about Soviet 122mm rockets. Yet the military have it easy compared to the civilian forces, where there is often a binary approach to CBRN training – it is either there or it is not. Depending on the threat level and resources there might not be any CBRN training at all, and for 11 months of the year that is fine – then Nato, G8, Winter Olympics and Eurovision arrive, and you have a need. Equally, Nato has a range of agreed standards. If you can offer training and capability to that standard then you can't be going far wrong, but



Some civil CBRN schools are coming up with innovative ways of training, but they are in the minority ©CBRNe World

for the civilians it is very centre - and even lecturer-dependent – there is still a shortage of qualified instructors for civilian CBRN worldwide.

Command and conquer

Perhaps because CBRN is an insurance policy – we don't think it will happen, but we'll make our basic payments just in case it does – there is still little alacrity in picking up the pace. In that area of slack (it can't be called a vacuum), as some governments realise the challenges commercial opportunities are being created and some companies are stepping up to the plate. At the strategic level there is VectorCommand Ltd, based in a country house near Portsmouth in the UK. They provide training and assessment technology, scenario development and exercise support for Gold and Silver Commanders in the police and emergency services. Rod Stafford, Director of Command Development at

Vector Command explained how the system works. "While 3D simulators are fine for tactical-level training – for on the scene incident command – there is a need to train Silver and Gold Commanders in a realistic, cost-effective manner," he said. "We are trying to help support this type at a fixed location – the Police National CBRN Training Centre (PCBRNC) at Winterbourne Gunner – and also at their deployed natural place of command. This marks VectorCommand out from other companies offering systems for fixed facilities, but not mobile variants. We offer a combination of information delivery systems – every electronic variant, SMS, email, audio, video, etc – through the normal means, so if it is supposed to be an email then it is an email and appears as an email should, rather than on a slip of paper with 'email' written on it. We do this to test reaction, procedure and also judgement – so they need to time manage and

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Lifting the burden

assess whether it is important – as opposed to being handed the piece of paper so you know it is relevant. We are trying to create the reality of the incident – we use photography superimposed with photo realistic CGI of whatever the incident is. For example it will show a real chemical plant in its real surroundings, so if there is a residential area behind it, it will show that. The systems utilises simulated CCTV views that the plant cameras would show – but if they don't think to utilise that they don't get given it – they have to think about it.

"Local government and agencies are used to tabletops, which can create a false sense of reality, while we will network all the command centres together – so Fire sees the same as Police at the same time, and they all see the results of individual actions that they did earlier. There is the ability to pre-programme the scenario so it can change if they are doing too well, increase the level of complexity, or change wind direction, etc. We simulate participant actions so you think you have responded to a real incident; it is the same concept as train-as-you-fight...

"Just because you have elements of scenarios in the background you don't have to play them," he concluded. "As the controller, you have a reasonable amount of control over how it develops. Any major changes need to be in at the design stage though."

Paul Forbes, the former head of the PCBRC at Winterbourne Gunner, explained the origin of the system. "We wanted it as close to reality as we could get," he said. "A lot of CBRN is about making people comfortable with their kit and we wanted this to be the same. We wanted to keep it immersive and force them to sweat a bit. We are trying to force people to stop focusing on the minutiae and look at the strategic. Too many exercises allow people to merely attend, and they get credits for that rather than participating. A typical scenario will force people to be active – and do things like turn on the TV to get a quick overview of what is happening, which is what you do in a real incident. Operational experience for CBRN or Counter Terrorism, as opposed to public

order or firearms, is very rare, and since we don't want to have to do it on the day it is important that we try and do more."

The system has a lot of promise; it is being used in some areas as a way of assessing whether people are up to the job of commanding in these sorts of scenarios. Currently there is no formalised approval procedure, though all parties would like to see one. "We have the potential to say to people that they failed," said Paul Forbes. "We are able to assess it, but currently we don't. At the moment we only offer critique, and mostly positive critique, and we want them to get better. Currently there is no independent assessment of pass or fail, though we are looking at it."

This is perhaps the apogee of these sorts of systems, the joy of it comes in being mobile – it can be transported in a few Peli cases – and can be set up wherever the usual command centre would be. Not only does this add verisimilitude, but it also cuts down on travel – meaning people can stay in port longer. Whether this will ever be used to the extent that it can judge peoples' fitness for command – and probably promotion – is another thing. Most likely it will be an "additional factor" to traditional ones, but it is a useful tool in the armoury of preparation for these events – in both preparatory and preventative modes (it stops people who can't handle the strain ever getting into that situation).

While VectorCommand provides support for senior incident training, another UK company, the CBRN Team, provides tactical-level training. This is perhaps slightly more complicated than the arrangement that VectorCommand has. While VectorCommand's services and scenarios are for supporting the national, regional and local training centres, the CBRN Team is in direct competition with such centres. Ian Day, Operations Director at The CBRN Team, explained their role. "CBRN Team has been operating for two and a half years as a commercial company that does training on CBRN matters: it offers a turnkey solution for the customer. The customer can be broken down into two parts: the military – which already knows about CBRN and is looking to

increase that knowledge, warning and reporting, for example – and the civilian side, where it is new and they don't have the background detailed information, so we normally have to start from a blank piece of paper.

"There was a shortage of qualifications for CBRN in the market, so we brought in a BTEC (Business and Technical Education Council) in PPE at a Level 4 (the equivalent of three 'A' Levels) level. Only two per cent of BTECs are Level 4, so it is a high standard and this has helped the emergency services understand PPE and what needs to be used and why. We are now working on Level 2 (equivalent of 4 GCSEs), and we are part of the working group for respirators – for the next standard of fitting – and we are going to be offering City and Guilds, so we can offer smaller qualifications for smaller courses. We offer five levels of training for the customer on equipment, such as radiation detectors: level one is where we show them how to use it, two is how to use it, skills and drills, area survey, rad levels on a map, three is to be an instructor, four is to take the commander and teach them how to deploy it effectively – they don't need to know what the battery life is but they need to deploy it – five is e-learning to go through the lessons again. The difference between a commercial company and an NBC School is that if you go to the British NBC School, for example, it is set on equipment and drills for the British Army; we are international and need to learn about different respirators for example – we write the books and manuals on those in the host language. The big difference is they teach well on their kit and procedures but we need to be more flexible as we need to learn other equipment and procedures."

Nato rules

Currently, one of the CBRN Team's biggest contracts is with Saudi Arabia, and this is no surprise. The strength of Nato is in its standards; every school has to match them and as long as they do Nato will remain a difficult market to crack. Countries outside Nato, however, don't have this multi-national

crutch and need someone who can set them benchmarks, which is where companies such as the CBRN Team come in. "Non-Nato countries are our biggest market," said Ian Day. "They don't have standards, their personnel changes every two-to-three years and they don't have the depth in homeland security. One of the questions I am asked is what do you teach them – and we are inspected by the DTI – and we will teach them principles of decon, but where do you get the pamphlets from? In the UK they are all restricted, but in the US they are on the Internet and it is open-source: the US principles are the same but they are open-source. Some Nato countries like the enhanced training we offer; many military still focus on traditional NBC, rockets, shells and mortars, but when it comes to terrorist devices we are looking at a satchel of chemical, so even for Nato some of it is new. Military doctrine says wear full PPE, but there is a school of thought that says wear a face mask and go in and save lives – there is a difference in doctrine between military and civilian and they want to know the differences. I also know a lot of people I can bring in; for example, there is a gentleman who specialises in terrorist labs, how they are built, what the differences are, and you can't get that type of training in Nato countries."

That said, the competition is fierce

for the military – and getting fiercer. Establishments such as Oberammergau and Sonthofen are taking Release Other Than Attack (ROTA) and terrorist threat seriously and offering courses of an ever-wider variety. Yet Ian thought the market for such training would remain buoyant. "If you are talking about being trained on a new rad detector that you have bought, for example, then they won't send 50-100 people to France with all the costs," he said. "High ranking officers will go to the schools, but the vast majority will be done in the host nation. Customers do find the cost of going to these schools is very high, while we will do the training in their country. Most military schools won't do that; we will spend six-to-seven months in-country training them, and because we are a commercial company we can be very cost effective."

The training is only part of what the CBRN Team offer, as they also help countries in the procurement of CBRNe capability. This would seem to be an example of the law of diminishing returns, however. As countries build up to a level where they can deal with the CBRN threat in their country, their need for companies to take them by the hand reduces. Ian Day admitted this was the case, but said the period where they needed help might be a little longer than first assumed. "We don't do a course and walk away; we get a lot of

calls and emails about equipment, etc.," he said. "Whereas, with the schools, once you do a course and walk away that is it. We set up intense training for a year or two, and then they will take it from there, but as people move and get promoted we find we will have to do refresher courses for new instructors and we offer courses on how to be an instructor – which is a skill which has nothing to do with CBRN. Lots of schools won't do that – they want qualified instructors."

Civil qualifications at both the tactical and strategic level are clearly the way forward; not only do they provide a sense of achievement and assessment but they will also offer a clearer eyed view of CBRN. One of the problems CBRN suffers from is the feeling that it is a 'Black Art' practised by the arcane – something as mundane as a BTEC helps strip it of this illusion (would Harry Potter have been quite so mysterious if he had done SATs?). It will also force people to think and challenge whether the status quo is the best way – there is nothing better for challenging the existing system than doing something innovative and being told you have 'failed'. The military is (currently) free from such personal development goals, yet there is no doubt that good ideas in the civilian side of the piece will find them incorporated somehow.



Is CBRNe becoming too complex for traditional NBC schools that don't want to change? ©CBRNe World

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