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Resilience



Detection, Identification & Monitoring (DIM) Uplift

Virtual Supplier day, 17th May 2022



Strategic Overview

- New Dimensions Programme
- CBRN Capability review
- Mass Decon Futures
- DIM uplift programme



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Aim of this event..

To provide information to suppliers about the role of FRS DIM, what we expect to be able to deliver with the uplift and the process. This is to enable suppliers to best represent their products to meet our need:

- The current role of UK FRS DIM
- The reason for the uplift
- What has been done so far
- What we are expecting to achieve from this point
- The process..



The current role of UK FRS DIM 1

- A number of strategically located assets
 - supplied by the Home Office via National Resilience/Lead Authority
 - hosted by selected FRSs.
- Suite of equipment in a bespoke vehicle
- Trained personnel within the FRSs
- Able to deploy into the 'hot zone' at a CBRN(e) event or support other operations..

The current role of UK FRS DIM 2

- The primary roles of DIM teams are to undertake the Detection, Identification and Monitoring (DIM) of CBR materials at a terrorist incident in 2 main ways:
 1. CBRN(e) Hot Zone (HZ) Scene Assessment
 2. Support to FRS Mass Decontamination operations.
- Detection: Confirmation of the presence/absence of a CBR or hazardous material.
- Identification: The determination of which CBR or hazardous material is present.
- Monitoring: Determine the continuing presence/absence of CBR or hazardous material at the incident scene and immediate vicinity.
- Categorisation: A partial identification of a CBR or hazardous material, or the 'type' of material it is. Eg, '*corrosive liquid*' or '*nerve agent*', without being able to specify which one..



The current role of UK FRS DIM 3

- DIM has developed a huge amount of experience dealing with FRS 'business as usual Hazmat incidents' (hundreds per year) and CT operations
 - Evolution of equipment
 - Working with partner agencies
 - DIM Advisor expertise.
- By far the busiest NR capability (52% of incidents, 70:20).

The current role of UK FRS DIM 4

- FRS DIM will deploy to a scene, with equipment, PPE and decon all carried in the bespoke vehicle
- Generally, a team of 2 Advisors will deploy into the actual scene of operations (hot zone), carrying the items of equipment deemed suitable for the specific task.
- It will not always be the same items, or will be all the items they have
- It will be based on professional analysis of the information and intelligence known, patient symptomology, what can physically be carried and the speed with which they need to deploy
- The items will be removed from cases and generally powered up before entry.
- They will be using detection devices as they advance into a scene. When materials are found or detected, they may take samples to analyse elsewhere, or may use identification devices if they have them with them..



FRS DIM in operation (assurance exercises)



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FRS DIM in operation (assurance exercises)



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FRS DIM in operation (G7)



- Multi-agency Initial Assessment Team
- Selected equipment
- Reduced PPE
- Smaller vehicle
- Positioned within the 2 principal scenes
- Rucksack based..



Reason for the review/uplift 1

- Review of Mass Decontamination operations and equipment
- Periodic review against threat evolution
- Lessons learned over years of operation..

What has been done so far 1

- Mapping & Scoping Phase
 - Multi-agency tasks & activities involving the use of DIM
 - 6 Categories – what we should plan to be able to deliver.
- Science & Technical Phase
 - Market survey
 - Ability to deliver against tasks and activities.
- Capability Review
 - Number, location and configuration of FRS DIM (modelling)
 - Equipment, people/skills and vehicles
 - Heavy & Light option considered
 - Costed Options – Ministerial Approval..



Mapping & Scoping

- Workstreams covered within Mapping & Scoping:..
 - Support to Mass Decontamination
 - Hot Zone Scene Assessment
 - Hand over to recovery
 - Recognition Of Life Extinct (ROLE)
 - Safe handling of contaminated fatalities
 - Searching wide areas for radiological materials (SWARM)
 - Support to the Environment Agency with air quality monitoring
 - Corrosive liquid attacks (431:224:42:31)
 - Support to Police operations (23)
 - Individual Chemical Exposure incidents (ICE).
- 10 became 8, 96 activities..



Mapping & Scoping (example activity)

Within Hot Zone Scene Assessment workstream		
Identification of Agent	CWA (known Nerve, Blister, Blood agents), in either liquid or gas form	Recognition of signs & symptoms of CWA attack and knowledge of PPE and procedures. [SA18]
		Classification of agent into H, G, V [SA19]
		Identification of the specific agent (threat list) [SA20]
	TIC in solid, liquid or gas form	
	Biological agent	
	Radiological isotope	

For each task:

- Time it needed to be started in
- Likely duration
- PPE level needed
- Equipment type
- Legislation



Mapping & Scoping 2

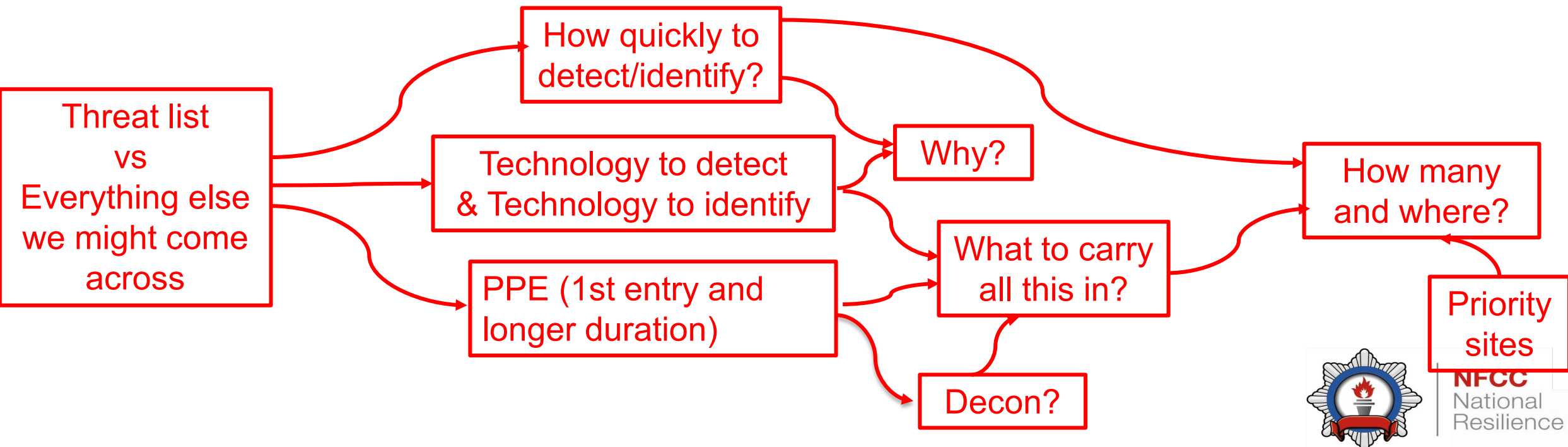
1. FRS role. Can deliver within current capability.
2. FRS Role. Could deliver with extended capability.
3. Not FRS role. Can deliver within current capability (NFCC-NPCC MOU).
4. Not FRS role. Could deliver with extended capability.
5. FRS Role. Cannot deliver.
6. Not FRS role. Cannot deliver..

	Can deliver within current capability	Could deliver with extended capability	Cannot deliver
FRS Role	1	2	5
Not FRS role	3	4	6



Capability Review

Within Scene Assessment		
Identification of Agent	CWA (known Nerve, Blister, Blood agents), in either liquid or gas form	Recognition of signs & symptoms of CWA attack and knowledge of PPE and procedures. [SA18]
		Classification of agent into H, G, V [SA19]
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Threat List

- Historically, the capability was driven by the equipment we had.
- We are now designing a suite of equipment to deliver a capability to meet a specific need
- This specific need is our 'Threat List'.
- Based on amalgamations of some open source and some restricted lists for chemical, radiological and biological materials
- This has driven the requirements within the suite of devices we are looking for..



Threat List

- The threat list will not form part of the tender pack documentation, as that will be open source
- The list will be available to suppliers on request once the tender process is started.
- In previous processes, suppliers were invited to state the capability of their device(s) to detect and/or identify materials on the threat list. What are your views?
- In previous processes, suppliers were asked to supply data from reputable test houses regarding the capability. What are your views?..



Threat List vs suite of devices

- We are intending (where possible) to have a suite of devices to allow every material on the threat list to be detected and identified by 2 of the devices using different technologies (orthogonal confidence).
- We are not looking for a single device that can identify everything, but is prohibitively expensive
- We accept that 'detection' of many solid and liquid materials may take place by physical observation and not using devices..



Prior Information Notice

- Issued in January 2022
- Tender will be broken into 'Lots'
- Lotting will enable a suite to be procured within rules..

Lots in the PIN 1

1. A device to detect gas and vapour chemical materials, using photoionisation detection
2. A device to detect gas and vapour chemical materials, using other technologies (including sufficient levels of oxygen for human respiration and to determine the presence of flammable/explosive atmospheres)
3. A device to identify solid and liquid chemical materials, using infra-red spectroscopy.
4. A device to identify gas and vapour chemical materials, using mass spectroscopy.
5. A device to identify gas and vapour chemical materials, using flame photometry
6. A device to identify gas and vapour chemical materials, using colorimetry.
7. A device to identify solid and liquid chemical materials, using raman spectroscopy..



Lots in the PIN 2

- 8 A device, system or process to identify or classify solid and liquid chemical materials, using 'wet chemistry' and detector papers
- 9 A device to identify solid, liquid, gas or vapour chemical materials using any other technology not listed in any other lot
- 10 A device to identify biological materials, using lateral flow assay (LFA)
- 11 A device to identify biological materials, using polymerase chain reaction (PCR)
- 12 A device to detect emitted gamma and neutron radiation
- 13 A device to detect emitted alpha radiation
- 14 A device to detect emitted beta radiation
- 15 A device to identify gamma emitting radiological isotopes
- 16 A device to measure and record the dose of ionising radiation a person has received..



Process

- Tender run by Merseyside Fire & Rescue Authority as Lead Authority
- Scoring used against the specific points in the User Requirement and Technical Specifications.
- Leading devices in each lot invited to present and demonstrate at a User Trial.
- The intention is that a group of practitioners will then carry out an evaluation regarding the 'usability' of the device.
- Success will be based on a weighted total of the first scoring, price and practitioner's evaluation (User Trial)..



Process

- If you need to register on the procurement portal, navigate to www.precontract.due-north.com/Register



Register free with ProContract Minimum requirements

Begin your ProContract supplier account registration by filling in a few details below:

Organisation name

Email address
By clicking 'Continue registration', you agree to the [Terms and Conditions](#) & [Privacy policy](#).
[Continue registration](#)
Already registered? [Login here](#)

Why should I register with ProContract?
Registration is free and your company profile will be immediately available for opportunities managed by over 30,000 buyers from over 400 private, public sector and 3rd sector organisations.

What happens next?
Once we have verified your company name and email address you will be asked to complete a short registration process including basic company details and contact information. Upon submission, your registration application will be reviewed by the ProContract team and you will be sent an email address confirming next steps.

Do I receive opportunity alerts?
Following successful registration, as part of your company profile you can stipulate your preferred opportunity areas of interest along with geographical locations to which you can supply your goods & services. Overnight, your interests will be matched against the latest published opportunities and you will be notified by email. The email will contain links to review, and if you wish, express your interest in each of the opportunities.

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Buyer	Title	Interest window	Estimated value:
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- [National contracts register](#)
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Process

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Register free with ProContract

[Minimum requirements](#)

Begin your ProContract supplier account registration by filling in a few details below.

Organisation name [?](#)

Email address [?](#)

By clicking 'Continue registration', you agree to the [Terms and Conditions](#) & [Privacy policy](#).

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Implementation

- For each successful device, we then expect to develop:
 - Risk Assessments for the use of the device;
 - Operational guidance;
 - Our own training programme, in conjunction with our current Training Service Provider;
 - Bespoke stowage arrangements for the vehicles;
 - Test and maintenance regime in conjunction with our existing 'Prime Contractor';
 - An amended assurance programme..

Questions?



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