

# News story: Market exploration: point of care diagnostics

## Summary

On behalf of the UK MOD, the Defence and Security Accelerator (DASA) is considering the potential for a competition to develop effective Point of Care (PoC) diagnostic devices to aid the diagnosis of individuals exposed to biological or chemical agents.

To do this we need to collect information to better understand the current market capability for the provision of PoC devices to enable earlier diagnosis and treatment of individuals exposed to a range of different biological and chemical agents. This information will provide us with the knowledge on what potential PoC diagnostic device solutions already exist, novel solutions in development and areas that potentially require further investment by MOD.

Please note that this request for information is not a commitment to subsequently launch a formal DASA competition.

## Background

Defence against debilitating infectious agents, including those associated with biological warfare (BW), represents a key challenge for UK Armed Forces. Throughout the history of armed conflict, Disease and Non-Battle Injury (DNBI), particularly infection, has caused significant morbidity and mortality among deployed forces.

There is a need for rapid diagnostic technologies for affected individuals and personnel involved in response and recovery work.

Technologies that enable rapid diagnosis of individuals exposed to biological or chemical agents are currently limited. They are time-consuming, resource intensive, provide a limited identification capability and frequently rely on reach back to laboratory facilities. This limits the clinical usefulness of the results generated. PoC diagnostic devices represent an attractive solution to this problem. These may be used in austere environments by UK Armed Forces. They may also be used in a doctor's surgery or at the patient's bedside. Regardless of location it is anticipated that such devices will provide quick feedback and impact significantly on the trajectory of patient care.

There is a requirement for novel PoC diagnostic device solutions, regardless of technology readiness level, for eventual deployment by UK Armed Forces in a variety of scenarios.

## What we want

At present, there is a limited diagnostic capability within the theatre of operations. More complicated multiplex technologies, capable of detailed analysis of patient samples, are generally found at locations where infrastructure is good and sufficient expertise is situated to analyse and interpret complex data outputs. Simpler technologies may be found closer to the frontline; however, their output is limited in terms of sensitivity, specificity and diversity of targets.

We are interested in any PoC technologies that would enable the diagnosis of individuals exposed to a wide variety of agents, regardless of technology readiness level. These can be targeted at the agents themselves or at host biomarkers that change as a result of exposure. Our ultimate goal is to provide simple-to-use PoC diagnostic devices that are capable of complex outputs.

It is anticipated that new PoC diagnostic devices will have:

- minimal false-alarm rates
- high levels of equipment reliability
- high levels of specificity and sensitivity
- capability for the detection and identification of a broad spectrum of agents
- function in all operational conditions
- be as small as possible and deliver timely information

It is anticipated that successful platforms will be able to be exploited in both the military and clinical sectors with applications in deployed environments, primary and secondary healthcare settings.

By completing the Capability Submission Form neither DASA nor yourselves are committing to anything, but your submissions will be used to help DASA focus the direction of the work and shape the requirements for a possible themed call in this area in the future. Your submission will also help us to identify your interests in this area, and where appropriate we can introduce you to your regional DASA Innovation Partner to discuss any future activity.

## What we don't want

We are not interested in technologies that will require sophisticated infrastructure, logistical chain or need a high degree of user expertise.

We are also not interested in solutions that involve incremental or marginal improvements of existing technologies.

This is not a competition and therefore we are not asking for costed proposals at this stage. This is a market engagement request for information exercise and we do not commit to subsequently launch a formal DASA competition.

## **How to submit a capability submission form**

Complete the [Capability Submission Form](#) (MS Word Document, 887KB) (noting the word limits) and then email it to [accelerator@dstl.gov.uk](mailto:accelerator@dstl.gov.uk) by midday on 26 March 2019 with “Point of care diagnostics” in the subject line.

Please only provide details of one product/capability per form. If you have a number of potential solutions then please submit multiple forms.

If you have any questions then please email [accelerator@dstl.gov.uk](mailto:accelerator@dstl.gov.uk) with Point of care diagnostics in the subject line.

## **How we use your information**

Information you provide to us in a Capability Submission Form, that is not already available to us from other sources, will be handled in-confidence. By submitting a Capability Submission Form you are giving us permission to keep and use the information for our internal purposes, and to provide the information onwards, in-confidence, within UK Government. The Defence and Security Accelerator will not use or disclose the information for any other purpose, without first requesting permission to do so.