

Market exploration: roll on roll off and containerised freight screening

Summary

To aid in scoping a potential competition, we are engaging the market in order to provide Border Force with an understanding of:

- what capabilities are already in development
- technologies which could be adapted from other market sectors
- novel innovations that could provide solutions

This request for information is not a commitment to subsequently launch a formal DASA competition.

Background

International trade is a vital component of the UK's prosperity. More than 481m tonnes of trade crosses the UK border, annually, in containerised traffic and roll on roll off ferry traffic (RORO). This figure is set to rise year on year. For further background please see [UK Port Freight](#) Border Force holds responsibility for the protection of the UK border, interdicting a variety of illicit contents including (but not limited to) narcotics, precursor chemicals, firearms, explosives, radiological and nuclear devices, and people. It is also responsible for ensuring correct duties are paid on legitimate freight. The vast majority of goods are legitimate and contribute to the prosperity of the UK. However, Border Force needs to be able to identify the illegitimate consignments from his high level of commerce.

RORO freight

RORO freight is predominantly centred on ferries and ports like Dover, Eurotunnel and Portsmouth. The contents of this freight is typically (but not limited to) housed in metal, fibre glass or canvas sidings and may be temperature controlled. It is a fast-moving stream of commerce, with schedules designed around meeting ferry/train bookings. Therefore, loads must be quickly screened, whether in juxtaposed configurations within neighbouring borders, or disembarking at a UK port.

Containerised freight

Containerised freight is most commonly encountered at ports, and the content is typically housed within steel containers. It is slower moving freight, though the process must remain fluid. Containerised freight may be temperature controlled and include intermodal ISO platforms suitable for being lifted on and off a variety of transport types.

Challenge areas

We are looking for solutions that will detect and identify multiple types of illicit content and improve the burden on operators, whilst aiding the flow of commerce. There are two challenge areas in which we are looking for innovative capabilities to detect and identify illicit contents:

1. Within RORO freight.
2. Within containerised freight.

We are interested in the detection and identification of illicit contents, but may also consider innovations which provide a significant improvement in detection alone. Please make this clear in your market exploration submission.

What we want

Border Force is interested in solutions that can detect and identify items in the following categories, which may be concealed within loads being carried, or within the structure of a vehicle:

- please address a minimum of one item from 'category 1' or
- please address multiple items from either 'category 1 or 2',

Category 1	Category 2
Narcotics	Firearms
Precursor chemicals	Radiological and nuclear devices
Commodities (taxable goods)	People
	Explosives
	Other illicit content

We are not interested in any technology that can just detect a single Category 2 item. It is expected that the technology will specifically identify content of interest by automation or operator assistance. There is a need for a high degree of confidence in the technology because an incorrect reporting of a threat item will result in a requirement for significant additional resource to mitigate and/or confirm the threat. The implementation of novel technologies must give consideration to the restrictions imposed by port operations, where space is often at a premium.

The focus on RORO and containerised freight in this market exploration is a starting point in the consideration of new freight detection technologies. Border Force will always look to scale any new and emerging technologies into other modes; it is likely that any technologies developed through any subsequent funding competition may ultimately be applied to a variety of freight detection environments. By completing the market exploration submission form neither DASA nor yourselves are committing to anything, but your submissions will be used to help the DASA focus the direction of the work and shape the requirements for a possible themed competition in this area in the future.

What we don't want

- Border Force makes extensive use of x-ray technology for freight screening applications; we are not looking for submissions based only on x-ray off-the-shelf technology. However, if a novel technique could be integrated into an existing capability which uses ionising radiation that makes a significant step change in capability, then this would be considered within scope
- a manufacturer just making minor improvements to algorithms for one of their existing systems would not be considered in scope
- the use of animals for detection are not within the scope of this market exploration activity
- we are not interested in receiving ideas for literature reviews, plans for paper-based studies or marginal improvements to existing capabilities This is not a competition and therefore we are not asking for costed proposals at this stage. This is a market exploration exercise and we do not commit to subsequently launch a formal DASA competition.

How to submit a market exploration submission form

Responses to this market exploration must be submitted via the DASA submission service, for which you will be required [to register](#).

You will be asked for a title and description of your innovation, then will be directed to answer six questions relating to your capability. The finance and delivery schedule can be left blank. We are seeking to understand what and how much further development is required for a complete solution to all requirements, or whether a combination of separate solutions is required. The information you provide will assist in developing a statement of requirements for potential future activities. At this stage you will not be held accountable to deliver to any of the timescales that you may give.

Submissions must be submitted by midday on Tuesday 14th April 2020.

Please only provide details of one product/capability per proposal. If you have a number of potential solutions, then please submit multiple proposals. If you have any questions, then please email accelerator@dstl.gov.uk with 'roll on roll off' in the subject line.

How we use your information

Information you provide to us in a Capability Submission for this market exploration, that is not already available to us from other sources, will be handled in-confidence. By submitting a Capability Submission 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, to the UK police and civil defence agencies, to European Customs administrations, and to the US Department for Homeland Security. The Defence

and Security Accelerator will not use or disclose the information for any other purpose, without first requesting permission to do so.