

OFFICIAL 01.10.2023 v2.01		
Q&A Responses - Intelligent Surveillance Trigger(OpTech Co-Creation)		
ID	Question	Response
1	Can one organisation be part of more than one proposal or in different consortia.?	Yes, an organisation can be part of multiple consortiums or provide multiple, but differing, proposals. Please do consider IP implications though if part of multiple consortiums. We will judge proposals in line with the evaluation criteria.
2	What is the 60K budget expected to deliver?	The 60K figure per solution provider is indicative and not a target or a maximum. A consortiums indicative budget is 180K. In this first phase up to March 2024 of funding the NSTIx Op Tech Co-Creation Space (OCCS) welcome both single and collaborative proposals to this challenge with direct funding of an approximate budget of £180K. We anticipate funding multiple organisations and projects to de-risk highly innovative ideas. Please indicate in your proposal what you can achieve in 3 months, but essentially, we would want a demonstrator to show potential for future development to unlock further funding. It could be a lab-based demonstrator, or something physically working. We'd also like to see reports on how you achieved your demonstrator.
3	Will you be providing data to work from?	No. Vendors will have to provide synthetic or real-world data or work with others who can supply this.
4	Can we assume that videos from other sources (e.g. CCTV) will be available in addition to UAV video stream?	No. We would like to see a demonstrator from a standalone system.
5	What is the initial information for a Person of Interest we should be starting from? Would we assume that it would be Facial recognition only? Or would there be other info, such as age, sex, ethnicity, height, weight etc?	There could be a rich source of information about the person of interest. If it can be lawfully obtained, then it can be considered.
6	Hosting of solutions is generally in the cloud, do you have your own storage and processing servers? A good deal of cost goes into data storage and processing also with GDPR considerations.?	An operational system will eventually likely be using the Authority's own storage. However, for this proof of concept/demonstration, we expect the suppliers to provide their own.
7	There could be multiple sensors so would there be other electronic equipment on that person?	Most individuals carry smart phones, although this cannot be relied upon.
8	Would the UAV have only video capability	There could be any combination of sensors on the UAV, and we would welcome research into novel sensors.
9	Can academic institutions be part of a consortia?	Yes.
10	Could the UAV capture all modes of positioning information?	Yes.
11	Are you considering UK only, or considering overseas potential areas of conflict and terrorism? Also, are you considering UAV data sources only, or will you consider UV and UUV potential use?	UAV data sources only. The system will need to be operational in a range of weather conditions from -10 to +40 deg C, but the position in the world should not affect the system at this early TRL.
12	Should there be an in built encryption ability within the system as the UAV may be used in an active war environment?	System security should be considered from an early stage and built into any device by design.
13	Will any of the UAV image be infra-red for dark capture?	We are open to various different possible sensors that you wish to put on the system, as long as the challenge criteria is met.
14	Other than SAR / LIDAR / cameras do you have any other sensors?	It is down to the solution providers to decide what types of sensors but they must fulfil the challenge.
15	Would you prefer us not to mention significant export opportunity?	Any overall developments that come out of this challenge can be exported subject to any national restrictions on exports that are in place at that time.
16	IP protection?	The system will need to be secure in the future, although only the ability to do this later is necessary now. See ID 12
17	There was a mention of the processing being unsupervised, does that mean the processing needs to run autonomously - or unsupervised as in there is no labelled data available?	Whilst we are looking at platform types which could support the mission, the drive for this challenge is for what the platform carries and how it can operate autonomously.
18	How low can you fly drones in urban environment?	The focus of this challenge is more on the sensors, AI/ML deep learning and pattern recognition. Though in operation any platform needs to stay discreet.
19	Is weaponization of drones an issue?	We are only interested in surveillance, not weaponization. We do not expect this in the first phase, but for future pieces it should be considered how to prevent this from being weaponized.
20	What could be the roles of academics in this as the process might not fit very well with the academic funding application model?	We'd welcome any collaboration that would fit within the academic model and the possible restrictions there. You could you be part of a consortium with someone else leading as a significant role or as a smaller advisory role, whatever fits into your resource allocation.
21	Can we use data from overseas supplier? (e.g. South Korea)?	If you have alternative routes to use data or synthetic data, please do include in your proposal.
22	In the report you mentioned a subjects heart rate, how do you access this?	This theoretically could be done using RPPG (remote photoplethysmography) sensors, this in an example of possible technology that could be used, you may well have other ways of identifying a subject.

23	Are you looking for a particular mix of collaboration mix of primes, academia, and technology companies?	No, we have no preconceived consortia mixes. As long at the proposal you put in meets the challenge you may have any mix.
24	What do you mean by unsupervised?	We would like as much decision making as possible without human interaction and are looking for autonomous capabilities.
26	Are you happy for the system to be integrated with Chinese components.?	In this early stage of development there no restrictions on component sourcing. Though we will have to consider at a later date the origin on components, IP etc.
27	What is the minimum TRL you are looking for?	We are looking for a demonstrator of a proof on concept by the end of 12 weeks. To give rough guidance, by the end of 12 weeks we would like to be at TRL3 or above.
28	What don't you want from this challenge?	We need to stress that the UAV or platform is not the focus of this challenge, its not the flying that's important. it's the intelligent analytics that we're interested in. These could be demonstrating something at a distance, using some heights and demonstrating something you know from a bench or a synthetic environment.
29	At the end of the 12 week period, are you looking for a demonstrator as the outcome for this particular challenge.?	Yes, low technology readiness levels of you know 3-4 five or six would be the aiming point. I think some sort of demonstrators here to show us the potential on how you could integrate this, but the early concepts are what we're looking for here to show promise for what would be a longer development of a capability over a number of years in the future.
30	There's a lot of technologies around in terms of facial recognition. Is that something that you're looking for in this particular challenge?	It absolutely could be and probably using as many other identifying analytics that we that people want to put forward, you know people have a signature on how they walk, so gate analysis might be interesting as well. Facial recognition or other signatures that that people might want to try and identify. But we're aware that there's a range of opportunities here and we don't necessarily have any direction that we want to focus people on. But the ones that could be taken that exist already and leveraged here might be advantageous.
31	In terms of identification of a person, there are certain ethical and legal compliance implications. Does that come into this particular challenge?	There's quite a lot of precedent for some of this elsewhere already, so the fact that this is probably a bunch of sensors that are being flown on a vehicle. None of that's really the focus of this challenge, the focus of this is around the technology itself. Saying that, it would be good to put some thought into the future ethical and legal implications so not to be tripped up by them at a later date.
32	So there might be individuals from the traditional surveillance sector that might have a technology, they might have some really interesting AI or machine learning algorithms that might be quite useful. But if they're not actually active in this particular market, are we looking for them to apply?	Yes, absolutely. I think we're aware that we have typical relationships with lots of familiar capabilities and areas of technology which have allowed us to, really progress, we have some mature capabilities at the moment. But we don't know what we don't know. And I think it would be really interesting to see where technology is really accelerated in other areas and see if we can identify opportunities to use that in this challenge. We would really, really welcome things that we've not considered before. We definitely don't know all the answers. This is an exciting area of technology moving very, very quickly and if there's others with, promising and exciting technology opportunities that we've not considered, we really welcome people to propose those ideas.
33	Can a single application exceed the figures?	The budget is indicative and not a target. We will consider proposals but will be very conscious of value for money. Your project can include partner contributions that do not receive any of this competition's funding so we will consider this also.
34	Are the timings for the project start and end dates flexible to accommodate contract timescales?	No, however the contract terms have been developed to enable the launch their projects on 8 <sup>th</sup> January 2024. If your organisation needs support to meet these, we are happy to address any questions ahead of the deadline.
35	Are you confident that this challenge is technically feasible?	Yes, we believe there are optical sensors and other technologies that are being used in other contexts.
36	Are you looking for us to track one or multiple suspects for this phase of work?	We want to focus on one suspect at the moment, but the ability to expand to more suspects in the future. Including the use of the drone platform or traffic management systems etc.
37	Are we exempt from current flight restrictions?	Ignore current legislation regarding extended range, don't let this be a limiting factor as we don't expect to fly a drone with novel equipment in the first 3 months.
38	Telecom provider information - can we get this?	We will already have some information sources. Anything that can id a person is in scope.
39	Tip and cue sensors - either on platforms or elsewhere?	There is a possible cascaded approach cross-sensors.

40	Are you looking for immediate action/intervention as a result of system/reliability of system?	An example given was of a person leaving a crime scene where police will follow etc. What is required is confidence in decision making but we don't want to place thresholds of reliability of results of systems.
41	Are people aware they are being tracked?	Yes, at times they may aware and they may use counter surveillance. Solutions need to be discreet.
42	Selectors for identification - high classification level?	Yes, sensitive data
43	Can we see the ACE report ?	If successful in your application details will be shared but the report will not be for general release
44	Are MOD involved in this call/ACE outcomes ?	Defence have no solution for this at present. We will demo the solution and share outcomes across government and brief more widely.
45	Has ACE considered SAPIENT programme?	Yes, this will be reflected in the report.
46	Do you need persistent coverage?	Any solution could be a few systems that are discreet but can work together.
47	Would you consider laser tracking?	Possibly, but we want to steer you away from any specific solutions as we are looking for innovation and credibility when assessing.
48	Is it initial suspect /target identification or do you know who they are and you want to track?	Normally when a person leaves a building (visual range) and then track, situations are dynamic and things change/vary (don't be fixed to specific scenarios). Just can you ID a person when they leave a place and track them.
49	Are you looking to apply a combination of machine/team?	Yes. Potentially the machine IDs the person, ground team confirm and machine continues to track
50	Do you want a solution that focuses on multiple profiles?	Keep it simple - train to a person and we can extend in the future See ID36
51	Can we involve people who do not seek funding?	You can also include specific people or organisations in your application that will not be seeking funding. For example, taking guidance from a subject matter expert, using facilities for testing that is given to you for .
52	Have you completed a risk assessment against this challenge? How do you know the technology exists?	See ID 35
53	Solutions could use a variety of sensors to track someone. Is it possible to include them?	See ID 35
54	Telecoms providers have a wealth of information to help with this. Are we able to draw upon this data or is this prohibited?	HMGCC will have lots of sources of data already but for the trial solution providers are able to use a wealth of data sources that they seem necessary. Include these suggestions in your proposal.
55	Will there be human intervention in between?	Yes, perhaps. Ideally we want something that will feed intelligence to humans at really high accuracies. Different components may be used to enable this.
56	Will we know the start location of the target?	Typically we are looking for people when they are entering and leaving a building. We will know the start location or have a high degree of accuracy around this.
57	How risky is this project in terms of being established? Is there a chance it could be pulled?	We are keen to understand the base/MVP level of the solution as we can't progress if this isn't complete. Beyond this, we want this to form part of the future business case. There is support on this project internally for future opportunities if the project is successful.
58	Are there any specific requirements around vetting/clearance required?	Not currently.
59	Should the focus be on optical sensors?	Optical sensors may play a part in the solution, but as we are looking for innovative ideas it is likely that others sensors or combination of sensors may be needed to satisfy this challenge.
60	What funding is eligible	This is direct funding from HMGCC not grant funding, all time and material costs are eligible and we fund 100% FEC
61	Should I submit the breakdown of shared costings between consortium members?	Within the proforma that can be found on the KTN iX platform for Intelligent Surveillance Trigger, please include breakdown of costs between each consortium member.
62	With consortium proposals does only one submission need to be created or should the partner institute also submit?	Please only submit one proposal, but make reference to your consortium partners.
63	Is mobile phone direction finding in scope?	We want to be able to ID a person of interest so yes this in scope as it could be one possible route. But you should also be cognisant that a person of interest may also be wary of carrying a phone so this method may not also be applicable and alternative methods should also be considered.
64	We missed the briefing call, is there a way to see a recording?	Yes, please visit the KTN iX platform for Intelligent Surveillance Trigger and you will find links to the briefing calls.
65	Is there a word/page limit for submission?	The KTN iX portal does have a word limit of 300 words per section. However, there is no limit on word count on your attachments, or how many things you attach. There is also no word limit in the proforma, which needs to be filled out and submitted as an attachment.
66	How many ideas do you intend to take through the pitch day and how many do you intend to fund?	We can't of course give confirmed figures at this stage as it will be judged on the merit of the proposals. But with previous Challenges we average inviting 5 applicants to the pitch day and fund on average 2 applicants. We have a larger funding envelope for this Challenge than normal, so we'd hope to invite more than 5 to pitch day and fund more than 2.

67	Is the person(s) of interest the trigger or activity that may be picked up the trigger and is tracking required?	The person/persons of interest would be the trigger as opposed to any activity captured by the payload on any platform, tracking post detection would be in scope if it were possible.
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