

Actions



Opportunity profile: MoD seeks punchy proposals for medical science

The Ministry of Defence's Centre for Defence Enterprise is offering £500,000 for projects related to defence medical sciences. Gretchen Ransow spoke to Neal Smith, capability adviser for medical sciences at the MoD, about the call.

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The CDE's call on defence medical sciences is open until 13 November, and is looking for innovative projects that will enhance the level of medical care for armed forces. It has two challenges—health surveillance and advanced medical systems for first responders—and proposals can address one or both of these.

What is your role at the MoD?

I put together a research programme addressing military medical science applications. This ranges from putting people back together after injuries from bullets and bombs to preventing infectious diseases and training healthcare specialists. There is an increasing focus on developing systems and devices that our frontline medics can use in conflict. It's also my job to find the best possible suppliers for that research, whether that's within the MoD and our Defence Science and Technology Laboratory, or wider government. We use a lot of small businesses and academia, often through opportunities from our Defence Human Capabilities Science and Technology Centre and the Centre for Defence Enterprise.

What is the CDE and how does it fit within the DSTL and the MoD?

The CDE was set up as a way for the DSTL to publish its challenges and highlight them to industry or academia. People who don't usually deal with the MoD might see us as a big, scary organisation. This is a route into working with us, and it's about suppliers answering questions we've posed. Not the final solution, but something that we can help them develop for the future. The CDE is

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By Gretchen Ransow

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about innovative ideas.

What's the background to this call?

The overriding thrust for this call stems from our experiences of the conflicts in Iraq and Afghanistan in the past 12 years. We've seen an unprecedented number of survivors from these military conflicts, and that's a result of advances in our medical care. But the big questions become how we retain those survival rates in the future, when we might not have access to a shiny field hospital like we have at Camp Bastion [in Afghanistan]. They might be in very hot environments such as jungles, or very cold environments. There might not be access to clean water, it might be very dirty—very different to what we've recently experienced. There might not be medics, or the timeline for evacuations might be much longer than the hour we currently enjoy—it might be several days before they can get to a hospital. And once they're in hospital, how do we then treat them? How do we provide the best care right through to their return to service, or how do we help them transition to civilian life?

How broad is the research brief?

We have tried to narrow it down to a couple of major challenges. One revolves around how we use medical data—we're getting a lot of devices to collect data and highlight and analyse trends, but how do we use that to provide care? How do we ensure that we have patient records from their point of wounding, right through the evacuation and move to a hospital? How do we link it to their fitness and nutrition standards?

The other aspect involves developing systems to help those on the frontline by providing better medical care. That could be helping individuals to deliver care to themselves if a doctor is not be available, or enhancing the safety of both the patient and the medic—the medics are putting themselves in a very dangerous situation as well.

Do the technology challenges parallel developments in the civilian health service?

Absolutely. We work well with the Department of Health and we want to draw in the expertise the civilian world has had. But it's a two-way street—we also see that there are a lot of things that we do in defence medical sciences that could inform civilian healthcare.

How well developed should the proposals be?

What we really want are things just off the drawing board, which we can help flesh out into a specific product or idea. But it must involve some research activity. We don't want something that we can buy off the shelf already.

Who can apply?

The call is open to all parts of industry and academia, and we won't exclude big companies. But we'd like to see teams from universities, subject-matter experts, and small and medium-sized enterprises. They have lots of ideas, but ones that they wouldn't necessarily have approached the MoD with in the past.

This call is also up on the Innovate UK's website. What is the relationship between the organisations?

We have a strategic alliance with them and partner with them to develop themed calls—it's a synergistic arrangement. In some instances, Innovate UK (formerly the Technology Strategy Board) has supported the CDE by supplementing funds that we have available. [In this call, there is no funding available from Innovate UK.]

How do researchers get involved with the networking event in

Glasgow on 30 September?

They can register right up until the day before, through the [CDE website](#).

Are there any selection criteria for it?

Anyone can go. As long as they're registered beforehand they're welcome to attend.

What will happen at the event?

On the day, we will outline what we want and why we're doing the work. Military partners with experience in Afghanistan will explain how they would use their innovations and previous winners of CDE grants will demonstrate their experiences of working with us.

There's also an opportunity for potential suppliers to arrange one-to-one workshops with myself, or my colleagues. We'll give some feedback to say "That's a possible idea, please submit that" or give direction if it's something that might need tweaking. In addition, small businesses have access to a whole range of people on the day.

It might also be advantageous as a networking event for building partnerships to apply for other research work or grants from other bodies.

The event will also cover a CDE call on synthetic biology.

Yes. There are a lot of commonalities between the calls, especially in terms of the target people we want to reach. It's a good use of resources—it ensures that we can take the right number of technical experts from the MoD, rather than having them go to two separate events.

Is attending the event a prerequisite to applying?

No, not at all. We'll also be broadcasting a webinar on 12 October, where I'll probably repeat a lot of what I've said in Glasgow and answer questions via the website. We also had some successful bidders last year who didn't attend on the day or the webinar. And we're available to answer questions on an ad hoc basis between the launch event and the end of the call.

What kind of background should applicants have?

We're looking for a whole range of things: they might be healthcare providers, medical-device manufacturers, data-handling experts, software developers, ergonomic experts, or experts in economics or in life sciences.

Are you looking for collaborative proposals?

It's not a prerequisite. But we're happy to see a proposal from a couple of parties, whether that's a small business partnering with a larger business, or a small business partnering with academia.

What advice would you give to academic researchers?

Within DSTL, we have more than 100 academic institutions working with us at various times. There's nothing very different from applying for a CDE-funded project than having a grant from a research council. But this is a punchier sort of project. We're looking for a proof-of-concept that we can develop over the course of 3 to 6 months.

This is defence-driven research—are there any confidentiality concerns?

Most of the projects we will undertake here will only be commercial

confidences; we probably won't give any access to anything around military secrets. Nothing will be classified.

How is intellectual property handled?

IP will always remain with the supplier. We'll have user rights but we'll very rarely call on that.

The document says the research can address one or both of the challenges. What would a proposal addressing both look like?

The only area I can think of would be where we're looking for novel diagnostics and then how that data is processed. Novel diagnostics is covered in the second challenge and data processing in the first. But it doesn't matter to us as long as it addresses one of the challenges.

What happens after the application is submitted?

Once the application is submitted via the online portal, five or six people, including scientists from across the DSTL and some of our military advisers, will assess each project. We'll then have a decision conference to review each proposal against our requirements. Then we'll make our selection based on the merit of each of the proposals, not how much funds we have available. From experience, we generally fund around five or six projects from a call of this nature.

Is there an interview stage?

No. But we always provide feedback. If there's something of interest that falls outside the CDE's remit, it might be something we can pick up elsewhere or we can direct them somewhere else. There's no such thing as a bad idea.

What's the average award value?

We've had projects ranging from £30,000 to £120,000. Grants are usually somewhere in the middle of that. [The call specification says that the MoD is more likely to fund a larger number of lower value proposals, for example up to £100,000, than a small number of higher value proposals].

Are institutions required to contribute funding?

We don't expect any matched funding.

Are there any expenses or costs that can't be claimed?

I wouldn't use this as an opportunity to kit out a new lab or have some new retooling for civic equipment. We expect all resources to be in place already. We'll fund researchers' time, travel and subsistence if they need to come to meetings with us, materials they might need in terms of research, and even some subcontracts. But it's for the research and not anything else.

What happens at the end of a successful CDE project?

At the end of the first phase, we look at where we go next. We might expose products to a wider range of our military partners, so they can have input in tweaking them. We're also developing a commercial plan with some of our CDE suppliers. We might say: "This is something that we're interested in. We might not buy all of it, but we'll help you develop the next phase for commercialisation or help you get further funding from research councils, industry or business angels." It's not one size fits all, but we'll always look for a way of taking it further. And we will look very well on things that have crossover into civilian life.

Do you expect to run a call like this again?

We'll probably run a medical call this time next year. The CDE also issues themed calls about once a month and we have what's called an enduring challenge, which is an unsolicited call. All the details are on the CDE's website.

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