



An Roinn Cosanta
Department of Defence

SFI Public Service Fellowship 2023

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| 1. Name of Governmental Department or Agency |
| Department of Defence |
| 2. Title of the Project |
| DOD1 Horizon Scanning for future Technology Capability Development needs of the Defence Forces |
| 3. Description of the Project |
| <p>In September 2020, the Department of Defence and the Defence Forces (hereinafter referred to collectively as the <i>Defence Organisation or abbrev. DefOrg</i>) published a feasibility study which examined the establishment of a Research, Technology and Innovation (RTI) capability for the Defence Organisation. The study concluded that the establishment of such a capability is “feasible and would deliver a range of benefits to the DefOrg and would contribute to national prosperity through an economic multiplier effect”. Establishment of this capability is now part of the Department of Defence and Defence Forces Strategy Statement 2021 – 2023.</p> <p>This project will be a horizon scanning activity focused on assessing the future capability needs of the Defence Forces, in the context of the RTI and associated Defence strategies (White Paper on Defence (2015)) and the Government’s response to the Report of the Commission on the Defence Forces (2022).</p> |
| 4. Project Scope |
| <p>To form a coherent and properly justified vision of long-term developments in a variety of areas, and rationalise their potential consequences for future defence capability development needs. This should include:</p> <ol style="list-style-type: none"> 1. Assessment of the environment related to technological development in the context of future security, political, economic, climate and social issues. Potential sources of information could include scientific research, strategic foresight and technological foresight. <p>The areas of interest might for example include:</p> <ul style="list-style-type: none"> • Information and Communications Technologies (ICT) including Wireless Communications, Artificial Intelligence (incl. Machine Learning), Virtualisation and Simulation (incl. Cyber-physical systems) and Cybersecurity. • Peacekeeping including Imaging Systems and Drone Technologies • Climate Change and Sustainability including Novel energy storage strategies and systems. • Disaster Relief including Water Systems, Survivor Detection, Humanitarian Aid Delivery • Medical Technologies including Diagnostics, Virtual health and Wearables |

2. Analysis of information, horizon scanning and foresight techniques to extract trends and analyse their meaning. This will include evidence collection from a range of stakeholders.
3. Identify opportunities, risks and threats by considering the influence of trends and possible future environments on national defence interests and goals. The aim is to identify future opportunities as well as risks and threats.
4. Identifying a suitable number of possible “futures narratives” based on technological development, economic activity, climate or environment developments or any possible future with relevance for defence.

5. Skills/Expertise Required

1. Rigorous research and data analysis skills, including experience in both quantitative and qualitative methodologies.
2. Expertise in relevant technology areas
3. Knowledge of current and future defence capability developments especially in the areas of emerging and disruptive technologies.

6. Expected Outputs of Project

A working document that will identify the relevant trends in both emerging and established technologies, accessible to both strategic and operational staff, that will provide working signposts to technological developments and a methodology for future horizon scanning by Defence personnel both those with, and without, a research background. Horizon scanning and future scoping could help to inform future areas of need for inclusion in initiatives such as the [SFI-Defence Organisation Challenge](#).

7. Working Arrangements

Flexible: The Department of Defence has adopted a blended working system (40:60). It is envisioned that the researcher will either follow the blended working pattern of the host unit, or work remotely with occasional physical attendance on sight in either Newbridge or Dublin.

It is expected that some national and international travel for scoping visits or conference attendance will be required.

Please note that while working within the Department of Defence the secondee may need to access classified information. Therefore, the selected secondee will be subject to personal security clearance procedures as required by Department of Defence, prior to commencing their fellowship appointment.

8. Expected Timeline

12 months part-time (with possible flexibility for 6 months full-time) to be agreed by the Dept of Defence and SFI with the appointed researcher.

9. Contact Details

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Philip Mudge: Head of Unit, Research Technology and Innovation