

Baselining and Raising the Nuclear IQ

Andrew Christensen, UK Defence Science and Technology Laboratory

UK OFFICIAL
DSTL/PS180910



What is nuclear IQ?

The concepts of ‘deterrence IQ’ and ‘nuclear IQ’ have gained prominence in recent years within NATO and in the UK^{1,2}. This is due to a more complex and unstable global security environment.

“We must build our nuclear IQ, and quickly”

Chief of the Air Staff, DSEI 2025 speech³

While there is broad agreement across the alliance over the benefits and need for this, there is no common definition for either term nor a consensus over how it ought to be enhanced or raised.

At Dstl, we loosely define nuclear IQ as: “an individual’s / organisation’s level of awareness, knowledge, and understanding of nuclear doctrine, policy, strategy, theory, and weapons, and the role these have in international relations and security”.

Why is raising the nuclear IQ important?

After the Cold War ended, there was a decline in deterrence and nuclear expertise within government and wider society. As a result, a whole generation of decision-makers and political leaders have had limited exposure to such topics.

A higher nuclear IQ equips people with the knowledge to make better, more informed decisions and avoid miscalculation + unintended escalation risks. This adds credibility to our deterrence efforts⁴.

While there are a number of pre-existing academic, government, and think tank initiatives to raise nuclear IQ, these have tended to focus on raising the awareness and understanding of policy-makers rather than building deep expertise amongst the analytical community. The aim of this work is to create a more coordinated, pedagogical, systematic, and targeted approach to training early-to-mid career defence professionals in the UK.

Aim: Assessing Dstl’s nuclear IQ

In 2025, Dstl conducted Training Needs Analysis to baseline the perceived capability and capacity of its deterrence workforce in order to identify current strengths and gaps.

To do this, we collected data on current behaviours, knowledge, skills, and experience (BKSE) in a self-assessment survey and analysed it using a combination of descriptive statistics and subject matter expert (SME) opinion.

The survey, which covered over 50 sub-capability areas as well as questions on the participant’s training preferences, was scored using the proficiency levels in the Pan-Defence Skills Framework.

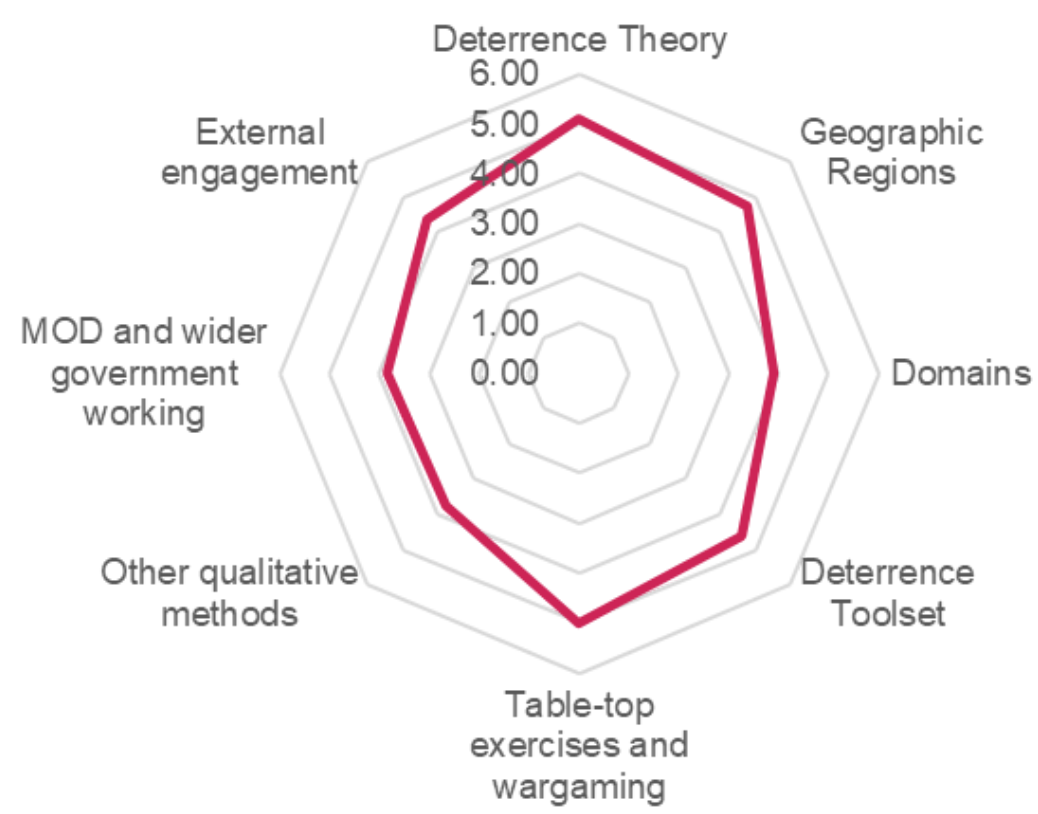


Figure 1: Example self-assessment survey scores

Approach

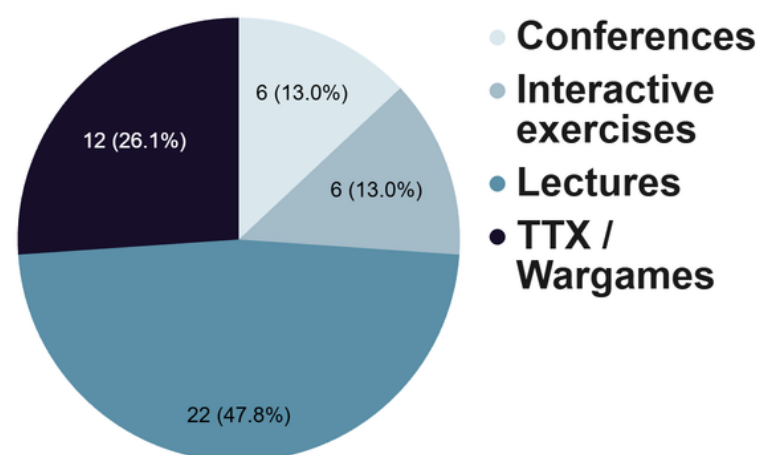


Figure 2: Delivery of training by type, April 2025-Present

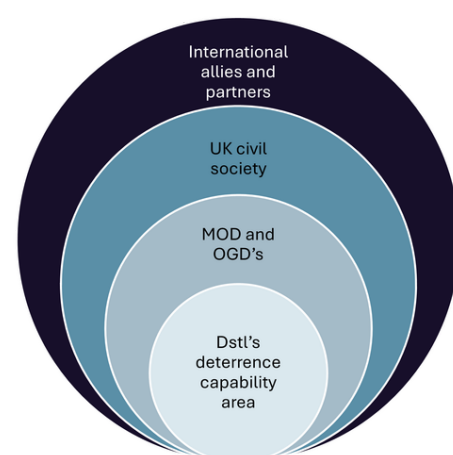


Figure 3: Nuclear IQ target audiences



Figure 4: Delivery of a Dstl nuclear deterrence wargaming event at RUSI

What did we learn?

The capability and credibility of our nuclear deterrence is based on the awareness, knowledge, and understanding of our decision-makers and political leaders, as well as expert parties, and non-expert stakeholders within wider society.

Training Needs Analysis is a useful process to baseline and raise nuclear IQ.

Dstl will continue to help raise the nuclear IQ at other organisations’ by supporting their training efforts. This includes AWE’s Broadening Perspectives on Nuclear Issues Programme and the FCDO-led Strategic Stability Programme⁵.

A key limitation of this work is the use of self-assessment survey scores. There may be a poor correlation between perceived and actual competence, so this approach will be iterated on to include more external validation in the future.

Future work could look at how we work with other government departments to raise the nuclear IQ among UK civil society and/or across the NATO alliance.

What would we recommend?

When conducting a Training Needs Analysis, we recommend that you consider the following:

1. Understand your training audience, reach, resources, and scale of ambition
2. Plan and think in the medium- to long-term time horizon (i.e. min. 3-5 years)
3. Decide whether you want to primarily focus on the breadth or depth of training
4. Consider how to differentiate / mark the progression from beginner to intermediate to advanced levels of training
5. Focus on BKSE that participants cannot otherwise receive from integrated / on-the-job training
6. Reduce the training workload by finding and promoting attendance at courses + online lectures hosted by other organisations (e.g. KCL, LLNL)
7. Prioritise the participants’ enthusiasm and work ethic over current performance
8. Work with academia, industry, international allies and partners, and think tanks as and when possible

References

¹ Wilton Park (2023). NATO’S New ‘Deterrence Baseline’ and the Future of Extended Nuclear Deterrence. Available at: <https://www.wiltonpark.org.uk/reports/natos-new-deterrence-baseline-and-the-future-of-extended-nuclear-deterrence/> [Date Accessed: 16/08/26].

² Wilton Park (2025). Europe’s Nuclear Future: 16th Annual Conference on Extended Nuclear Deterrence and Assurance. Available at: <https://www.wiltonpark.org.uk/reports/europes-nuclear-future-16th-annual-conference-on-extended-nuclear-deterrence-and-assurance/> [Date Accessed 29/08/26].

³ Ministry of Defence (2025). Chief of the Air Staff speech at DSEI. Available at: <https://www.gov.uk/government/speeches/chief-of-the-air-staff-speech-at-dsei-2025> [Date Accessed 16/08/25].

⁴ Ministry of Defence (2025). The Strategic Defence Review 2025. Available at: <https://www.gov.uk/government/publications/the-strategic-defence-review-2025-making-britain-safer-secure-at-home-strong-abroad> [Date Accessed 06/09/26].

⁵ Foreign, Commonwealth & Development Office (FCDO) (2026). Strategic Stability Programme guidance 2026 to 2027. Available at: <https://www.gov.uk/government/publications/strategic-stability-programme-guidance-2026-to-2027> [Date Accessed 19/08/26].

Acknowledgements

This work was funded by the MOD’s Defence Nuclear Organisation under the Nuclear Deterrence and Policy Analysis (NDPA) project.

Disclaimer

The content, opinion, and views expressed are those of the author and do not necessarily reflect the official policy or position of any government agency or organisation.

Crown Copyright

© Crown Copyright (2026), Dstl

This information is licensed under the Open Government Licence v3.0.

To view this licence, visit <https://www.nationalarchives.gov.uk/doc/open-government-licence/>. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Any enquiries regarding this publication should be sent to: centralenquiries@dstl.gov.uk