

News story

AUKUS trial advances AI and autonomy collaboration

The UK's armed forces and Defence Science and Technology Laboratory (Dstl) recently collaborated in an AUKUS trial in Australia.

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([government/organisations/defence-science-and-technology-laboratory](#))

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Dstl and UK armed forces collaborated with Australia and the US in an AUKUS trial to accelerate the adoption and understanding of artificial intelligence (AI) and autonomous systems.

The AUKUS Trusted Operation of Robotic Vehicles in Contested Environments (TORVICE) trial aimed to identify and resolve vulnerabilities of robotic vehicles and sensors that affect autonomous systems. Understanding and mitigating the impact of such threats is critical to effective and reliable use of such systems on future operations.

The TORVICE trial follows the first AUKUS AI and autonomy trial held in the UK in April 2023. In December, AUKUS defence ministers announced their intent to integrate Resilient and Autonomous Artificial Intelligence Technologies (RAAIT) into national programs in 2024. The TORVICE trial takes us a step closer to adopting these technologies in the land domain.

During the trial, US and UK autonomous vehicles conducted a large number of missions, such as, route reconnaissance while subjected to a range of effects generated by Australia. Outcomes will improve the resilience of AUKUS AI and autonomy systems when subjected to electronic warfare, laser and position, navigation and timing (for example, GPS) attacks. This will also ensure systems reliably deliver capability in the testing environments of the modern battlefield.

Guy Powell, Dstl's technical authority for the trial, said:

“The TORVICE trial aims to understand the capabilities of robotic and autonomous systems to operate in contested environments. We need to understand how robust these systems are when subject to attack. Robotic

and autonomous systems are a transformational capability that we are introducing to armies across all 3 nations.”



Dstl military advisor, Lt Col Russ Atherton, said:

“The science and technology will be an absolute game-changer and give us operational advantage. The ability to deploy different payloads such as sensors and logistics across a larger battlespace will give commanders greater options than currently exist.”

Accelerating the development of these technologies is expected to have a massive impact on coalition military capability while reducing risk to warfighters.

This collaboration enables all 3 AUKUS nations to access the best resilient AI and autonomy:

- improving interoperability
- streamlining efforts
- benefiting from each other’s science and technology expertise

[TORVICE AI trial \(https://www.youtube.com/watch?v=9IS1H3jjWkY\)](https://www.youtube.com/watch?v=9IS1H3jjWkY)

[AUKUS \(https://www.gov.uk/government/publications/implementation-of-the-australia-united-kingdom-united-states-partnership-aucus-fact-sheet/fact-sheet-implementation-of-the-australia-united-kingdom-united-states-partnership-aucus\)](https://www.gov.uk/government/publications/implementation-of-the-australia-united-kingdom-united-states-partnership-aucus-fact-sheet/fact-sheet-implementation-of-the-australia-united-kingdom-united-states-partnership-aucus) is a landmark defence and security partnership between Australia, the UK, and the US that supports security and stability in the Indo-Pacific and around the world.

Our work to deepen cooperation on a range of cutting-edge military technologies, known as AUKUS Pillar 2, will help deliver enhanced military edge for us and our allies, making sure we have the capabilities needed to defend against rapidly evolving threats. Through Pillar 2, our countries are collaborating to accelerate collective understanding of AI and autonomy technologies, and how to rapidly field robust, trustworthy AI and autonomy in complex operations while adhering to international law and ensuring the safe and responsible use of AI.

[Find out more about Dstl’s AI success with AUKUS \(https://www.gov.uk/government/news/dstl-ai-success-with-aucus\)](https://www.gov.uk/government/news/dstl-ai-success-with-aucus)

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