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Press release

# World first as UK hosts inaugural AUKUS AI and autonomy trial

The first AUKUS artificial intelligence (AI) and autonomy trial was held, with the aim of rapidly driving these technologies into responsible military use.

From: **Ministry of Defence (/government/organisations/ministry-of-defence)** and **Defence Science and Technology Laboratory (/government/organisations/defence-science-and-technology-laboratory)**

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[World first as UK hosts inaugural AUKUS AI and autonomy trial (https://youtu.be/3Codmq2PJwM)](https://youtu.be/3Codmq2PJwM)

The work saw the initial joint deployment of Australian, UK and US AI-enabled assets in a collaborative swarm to detect and track military targets in a representative environment in real time. Accelerating the development of these technologies will have a massive impact on coalition military capability.

The trial, organised by the UK's Defence Science and Technology Laboratory (Dstl), achieved world firsts, including the live retraining of models in flight and the interchange of AI models between AUKUS nations. The [AUKUS (https://www.gov.uk/government/publications/implementation-of-the-australia-united-kingdom-united-states-partnership-aukus-fact-sheet/fact-sheet-implementation-of-the-australia-united-kingdom-united-states-partnership-aukus)](https://www.gov.uk/government/publications/implementation-of-the-australia-united-kingdom-united-states-partnership-aukus-fact-sheet/fact-sheet-implementation-of-the-australia-united-kingdom-united-states-partnership-aukus) collaboration is looking to rapidly drive these technologies into military capabilities.

The AUKUS Advanced Capabilities Pillar, known as Pillar 2, is pursuing a trilateral programme of work on a range of leading-edge technologies and capabilities to promote security and stability in the Indo-Pacific region. Through Pillar 2, Australia, the UK, and the US have collaborated 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 the shared values of safe and responsible AI.

Autonomy and AI will transform the way Defence operates. The strategic environment is rapidly evolving, meaning we must adapt our technologies at pace if we are to maintain our operational advantage.

By sharing AI - and the underpinning data to enable it - with one another, Australia, UK, and US militaries can access the best AI, reduce duplication of effort, and ensure interoperability.

The event was attended by senior AUKUS Advanced Capabilities pillar leaders - General Rob Magowan (UK), Deputy Chief of the Defence Staff (Financial and Military Capability), Abraham (Abe) Denmark (US), Senior Advisor to the Secretary of Defense for AUKUS, and Hugh Jeffrey (AUS), Deputy Secretary Strategy, Policy, and Industry.

### UK Deputy Chief of Defence Staff, Military Capability, Lieutenant General Rob Magowan said:

" This trial demonstrates the military advantage of AUKUS advanced capabilities, as we work in coalition to identify, track and counter potential adversaries from a greater distance and with greater speed. Service personnel, scientists and engineers from our three nations combined to develop and share critical information to enhance commanders' decision making.

" Accelerating technological advances will deliver the operational advantages necessary to defeat current and future threats across the battlespace. We are committed to collaborating with partners to ensure that we achieve this while also promoting the responsible development and deployment of AI."

### US Senior Advisor to the Secretary of Defense for AUKUS, Abe Denmark said:

" We recognize the immense importance of this collaboration in strengthening our collective national security of our nations. The development and deployment of advanced artificial intelligence technologies have the potential to transform the way we approach defense and security challenges.

" This capability demonstration is truly a shared effort and is thus a critical step in our collective initiative to stay ahead of emerging threats. By pooling our expertise and resources through our AUKUS partnerships, we can ensure that our militaries are equipped with the latest and most effective tools to defend our nations and uphold the principles of freedom and democracy around the world."

**Australian Deputy Secretary, Strategy, Policy and Industry, Hugh Jeffrey said:**

" The AUKUS AI and Autonomy trial in Salisbury Plains demonstrated AI algorithms working in a mission-tailored adaptive capability. The AUKUS research and operator teams collaborated to develop, test and evaluate joint machine-learning models, and operate our different national platforms on the battlefield.

" I was impressed to see AI models rapidly updated at the tactical edge to incorporate new targets, which were immediately shared among the three partners to deliver decision advantage and meet changing mission requirements. This cooperation under AUKUS Pillar II will deliver a capability greater than any one country could achieve alone, and this really is the rationale for the AUKUS partnership at work."

More than 70 military and civilian defence personnel and industry contractors were involved in the exercise in April 2023. The trial utilised a variety of air and ground vehicles to test target identification capability, including: Blue Bear Ghost (UK) and Boeing/Insitu CT220 (AUS) uncrewed aerial vehicles (UAVs), Challenger 2 tank, Warrior armoured vehicle and Viking uncrewed ground vehicle (UGV), along with a commercially hired FV433 Abbot self-propelled gun and former Eastern Bloc BMP OT-90.

The trilateral teams collaborated to develop joint machine-learning (ML) models, apply test and evaluation processes, and fly on different national

UAVs. The ML models were quickly updated to include new targets and shared among the coalition and AI models retrained to meet changing mission requirements.

# Background

Organisations participating in the trial were:

- UK Defence Science and Technology Laboratory (Dstl)
- UK Defence Artificial Intelligence Centre (DAIC)
- US Air Force Research Laboratory (AFRL)
- US Army Combat Capabilities Development Command (DEVCOM) Ground Vehicle Systems Center (GVSC)
- US Office of The Under Secretary of Defense for Research and Engineering (OUSD R&E)
- Australia Defence Science and Technology Group (DSTG)
- Australian Army
- UK suppliers: Blue Bear and Frazer-Nash Consultancy
- Australia suppliers: Boeing and Insitu

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