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UK Robotic Submarine Controlled From Australia

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The Royal Navy's new robotic submarine, XV-Excalibur, recently demonstrated its ability to operate remotely from Australia, providing a glimpse into the future of naval warfare. Developed as part of Project Cetus by Plymouth-based MSubs, the Extra-Large Uncrewed Underwater Vehicle (XLUUV) is designed to explore how large robotic submarines can augment the United Kingdom's fleet of nuclear attack submarines.

Unveiled in May 2025, XV-Excalibur serves as a test platform to investigate new applications for uncrewed submarines. It is capable of supporting missions in antisubmarine warfare, seabed operations, and intelligence, surveillance, and reconnaissance. Unlike traditional submarines, the vessel has no crew and lacks armaments, allowing its interior to be packed with advanced sensors, equipment, and payload modules tailored to specific missions. Despite its size, it is considered the most advanced uncrewed submarine currently operating in Europe.

In July 2025, XV-Excalibur participated in a test under the UK/US/Australia Maritime Big Play exercise, conducted as part of the biannual Exercise Talisman Sabre. This large-scale drill included 19 nations, such as Australia, Canada, France, Germany, India, Indonesia, Japan, the Netherlands, New Zealand, Norway, Papua New Guinea, the Philippines, the Republic of Korea, Singapore, Thailand, Tonga, the United Kingdom, and the United States. Brunei and Malaysia attended as observers.

The exercise demonstrated that the submarine could be commanded from a control center in Australia, nearly 10,000 miles (16,000 kilometers) from its operational location at HMNB Devonport in Plymouth, England. The ability to operate remotely marks a significant step in the Royal Navy's development of autonomous underwater vehicles and reflects a growing trend toward long-range uncrewed naval operations.

Project Cetus is part of the AUKUS Pillar II initiative, a treaty-based collaboration between the United States, the United Kingdom, and Australia. The program focuses on sharing submarine technology and supporting Australia in developing the capability to build and operate nuclear-powered AUKUS-class attack submarines.

"This exercise demonstrates how we are exploiting the learning from our experimentation, by applying it to the Royal Navy's growing arsenal of Uncrewed Underwater Vehicles; taking experimentation into the hands of the war fighter," said Captain Keith Taylor, RN, the UK Senior Responsible Owner for Maritime Big Play.

The XV-Excalibur represents a significant advancement in naval technology. By combining autonomous capabilities with sophisticated sensors and modular payloads, it highlights how robotic platforms are transforming traditional maritime operations. While still in its experimental phase, the project provides valuable insights into how uncrewed submarines may contribute to future anti-submarine strategies, intelligence gathering, and overall fleet enhancement.

As Project Cetus continues, XV-Excalibur will remain a key demonstration platform, exploring the possibilities of long-range remote operation, advanced mission-specific payloads, and integration with international naval exercises. The successful test underscores the growing importance of robotic systems in modern naval warfare and the strategic value of international collaboration in defense technology.