On September 15, 2021, Australian Prime Minister Scott Morrison, British Prime Minister Boris Johnson, and U.S. President Joe Biden announced the creation of an enhanced trilateral security partnership among Australia, the United Kingdom, and the United States. In this partnership, known as AUKUS (Australia–United Kingdom–United States), the three governments committed to improving coordination in technology, science, industry, and national security to promote a safer and more secure Indo-Pacific region.

The cornerstone of the AUKUS announcement is the delivery of a nuclear-powered submarine fleet for Australia by 2039. Other cooperative technology areas mentioned in the joint statement are cyber capabilities, artificial intelligence, quantum technologies, and additional undersea capabilities. Many other national security technologies, capabilities, and activities (including advanced munitions and intelligence collection systems) could eventually be candidates for projects under the AUKUS banner.

The RAND Corporation is ready to assist the parties by providing evidence-based analysis and recommendations for maximising the potential of the AUKUS partnership. RAND is well positioned to provide this support. RAND has offices in each of the three AUKUS countries. It has technical experience working as a trusted adviser to all three governments across many defence efforts, including the shipbuilding sector. It has conducted extensive analysis on many subjects deeply relevant to AUKUS issues, such as barriers to collaborating with highly capable countries, the impact of emerging technologies on defence and security, the character of alliance and partnership dynamics, and the larger geostrategic environment in the Indo-Pacific region. RAND has a track record of assessing methods to make international cooperation more effective.

To maximise its ability to support this emerging partnership, RAND has established the Alliance Initiative to coordinate and facilitate efforts among the RAND entities supporting these three governments. This will allow unprecedented analytical collaboration among RAND’s global components, sharing of information on the three governments’ priorities, and an integrated engagement of senior officials from all AUKUS participants. In this initiative, RAND will pursue analytical support vehicles in many forms. Some will be traditional, yearlong (or even multiyear) projects involving extensive technical analysis. Others are likely to consist of shorter-term, smaller, and more-intensive analysis to support a policy and implementation process that is moving rapidly.
RAND WORK TO DATE: SUPPORTING TRILATERAL SECURITY COOPERATION

Over the past decade, RAND has built a strong record of analytical support for the three AUKUS countries that specifically deals with the security and technology components identified as building blocks of the AUKUS partnership. Examples of that work include the following:

- In **Australia**, RAND Australia is partnering with RAND’s National Security Research Division to develop a sovereign guided-weapons enterprise, an effort to improve the country’s self-reliance and supply chain resilience in the defence sector. RAND has also supported the nuclear-powered submarine task force in understanding regulatory options and is preparing to support the task force with other analyses associated with future submarines. New initiatives are being developed in undersea surveillance and shipbuilding studies.

- In the **United Kingdom**, RAND Europe and RAND Australia have partnered to analyse robotic and autonomous systems (RAS) in the maritime context, providing evidence from UK models for the Australian RAS strategy. RAND Europe has also worked with RAND Australia on developing modelling and simulation (M&S), extracting lessons from the UK approach to M&S, and exploring how these might be incorporated into the Australian strategy. RAND Europe is currently developing other initiatives examining the concept of technology advantage and how this might be achieved with a variety of allies.

- In the **United States**, RAND’s National Security Research Division has undertaken projects on many AUKUS-related issues (as have RAND’s other U.S. research divisions). RAND researchers have conducted projects on various aspects of undersea technologies and operations, and they have extensive experience in the AUKUS areas of cyber, artificial intelligence, and quantum technology. RAND experts also have assessed alliance management, which has been a long-running thread in RAND’s historical and recent analysis.
REALISING THE POTENTIAL OF AUKUS: POSSIBLE FUTURE RESEARCH AVENUES

The foundational program in the AUKUS initiative is the Australian nuclear-powered submarine program. This immensely complex undertaking will unfold over many years and would benefit from analytical support on a wide variety of critical technical and operational issues. Beyond that core program, public statements by Australian, UK, and U.S. officials have highlighted other areas of potential technological and defence production cooperation within AUKUS. These other areas, referred to as Advanced Capabilities, include:

- quantum technologies and their implications for encryption, secure communication, and other applications
- artificial intelligence broadly defined, including algorithmically informed decision processes for operations
- cybersecurity, potentially including defensive cyber resilience measures and capabilities to mitigate others’ cyber capabilities
- undersea capabilities, for both operations and detection.

RAND has completed extensive work in each of these areas and has other efforts underway as well. In the area of artificial intelligence, RAND performed the congressionally mandated review of U.S. Department of Defense artificial intelligence capabilities, examining specific component elements of the larger field; RAND also assessed the U.S.-China competition in this area. RAND has conducted dozens of cybersecurity studies, including several specifically oriented towards alliance coordination. Finally, RAND’s work on undersea technologies and operations goes back decades and most recently has focused on undersea detection.

In pursuing those areas of cooperation, the three core members of AUKUS must overcome significant structural barriers to combined activities. On the U.S. side, these include extensive regulations associated with Foreign Military Sales and the International Traffic in Arms Regulations regime, as well as a host of narrower and more issue-specific barriers to cooperation. RAND U.S. has a major study underway on the challenge of such barriers; this and other findings from RAND’s other security cooperation work can inform potential policy changes to enhance the impact of AUKUS over time.

Beyond those technical areas, AUKUS raises broader issues of international relations and national security strategy that call for rigorous analysis. These could include the following issues:

- better defining the overarching concept governing AUKUS’s role in the three partners’ national security planning, including a clear articulation of the partners’ ambitions for more-integrated defence planning, research, procurement, and operations, and a more specific sense of what the partnership is—and what it is not
- understanding and mapping out which of the three partners might be best positioned to lead specific areas of research and development (i.e., strategic burdensharing)
- identifying the characteristics that make targeted security partnerships most effective and successful over the long run
- exploring opportunities to involve countries beyond the three core AUKUS members in issue-specific cooperative ventures, such as defence codevelopment or coproduction, that use AUKUS as a catalyst to engage more and more-diverse partners
- determining the ways in which the AUKUS partnership can best align with and support other alliances, institutions, and processes devoted to Indo-Pacific security.

These strategic issues ultimately bear on the central goal of the AUKUS partnership: how to use this partnership mechanism to produce strategic advantage. Some approaches may prove far more effective than others, and an analytical approach to the partnership will help inform those judgments. RAND is also conducting research into the general concept of strategic advantage and the nature of strategic competition, and this analysis will help place the design of AUKUS into a larger analytical and policy context.
THE ROLE OF THE ALLIANCE INITIATIVE

RAND is already well established in supporting all three governments participating in AUKUS. RAND will continue that work and pursue new analytical efforts specifically aligned to the needs of the new partnership, using several forms of analytic support.

As in all its areas of research, RAND’s work on AUKUS will support research-informed publications beyond RAND reports, such as articles in newspapers, magazines, and scholarly journals. In this way, RAND’s research agenda will allow its scholars to contribute to the public dialogue on the AUKUS partnership while supporting the policy discussions among the three governments.

As in RAND’s other work, a wider research portfolio on issues pertinent to AUKUS will provide an important subsidiary benefit for all three governments. This wider research portfolio helps RAND fill critical gaps in current thinking and analysis; it also allows RAND to prompt questions and answers that fall between the cracks of sponsor interests and to look farther ahead than other research institutions can. These efforts can promote the success of the AUKUS initiative by anticipating problems and opportunities that are not yet the focus of the policy process.

The AUKUS partnership holds the potential to achieve many important objectives: dramatically enhancing Australia’s undersea capabilities, encouraging tighter security and technology coordination among the partners, and serving as a catalyst and precedent for broader arrangements throughout the Indo-Pacific. As a new and ambitious venture, however, it raises many questions that will need to be answered through in-depth analysis. With such analysis, the AUKUS partnership has the potential to become a cornerstone of regional security. RAND looks forward to helping make that possible.

THE CORNERSTONE OF AUKUS IS THE DELIVERY OF A NUCLEAR-POWERED SUBMARINE FLEET FOR AUSTRALIA BY 2039. OTHER COOPERATIVE TECHNOLOGY AREAS MENTIONED IN THE JOINT STATEMENT ARE CYBER CAPABILITIES, ARTIFICIAL INTELLIGENCE, QUANTUM TECHNOLOGIES, AND ADDITIONAL UNDERSEA CAPABILITIES.

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