



THE SOUTH PACIFIC INFLUENCE CHALLENGE: SAGE DRAGON GAME REPORT

By Shane Billsborough

TABLE OF CONTENTS

Executive Summary..... 3

Introduction 6

Strategic Context..... 6

Game Overview..... 12

 Objectives 12

 Methodology and Design..... 12

Key Insights 14

 Data Points 14

Geostrategic Insights..... 15

Questions for Further Research 19

About the Author..... 20

Endnotes 20



Executive Summary

Nearly a century after the last world war brought conflict to the Pacific, Pacific Island countries (PICs) are once again crucial terrain in a strategic competition. This time the competition is between the People's Republic of China on one side and the United States and Australia on the other, with nations like Papua New Guinea, Vanuatu, the Solomon Islands, and Kiribati finding themselves courted by all. Similar to Japan in the 1940s, China may be attempting to establish a forward defense perimeter by drawing a new “island chain” that complicates U.S. force flow into the area, isolating and threatening Australia. The United States and its allies in turn look to the PICs for their own positioning and unfettered access to the western Pacific.

The PICs are geographically critical to military operational design for all three nations' militaries: the People's Liberation Army (PLA), the U.S. Joint Force, and the Australian Defence Force. The island nations' geography—which spans approximately 15 percent of the earth's surface—lies athwart sea lines of communication, including undersea internet cables and transportation between the United States and Australia, making the region a prime zone of competitive friction.

The region's strategic significance also extends well beyond the military dimension of the U.S.-China competition, with economics and supply chains key areas of focus. For example, by some estimates, the total contained cobalt—a key mineral resource used for making batteries, touchscreens, and other sophisticated electronics—in the seabed under Kiribati is more than three times the amount in the global terrestrial reserve base. The economic benefits PICs could gain by leveraging sale of or preferential access to these resources have the potential to reshape diplomatic and economic power balances among these countries.

U.S. and allied decision-makers must contend with a pronounced knowledge gap surrounding the local effectiveness of alternative national security instruments and how they might be perceived by diverse island nations' populations. In November 2022, The MITRE Corporation hosted



a two-day strategic-level wargame titled SAGE DRAGON to shed light on these overlapping challenges and explore the U.S.-China competition among the PICs more generally. To properly scope this simulation and achieve its overall analytical goal, the design and analysis team set out to explore the following three questions:

1

What diplomatic, informational, military, and economic tools are available to the United States and China to influence PICs?

2

To what extent are subsets of these tools more effective than others at swaying PICs toward the United States and its allies? Conversely, are there tools to avoid in recognition of possible national or regional blowback?

3

How might China respond to increased U.S. engagement with PICs? How might PICs respond to increased attention from both powers?

Wargames are powerful tools for building understanding of unfamiliar intellectual terrain shaped by human decision-making, but they are not reproducible scientific experiments. The term “wargame” is not only widely used in the national security community but is also used in diverse public policy and business fields to educate participants and explore competitive problems. Single wargames such as SAGE DRAGON, and even wargame series, are not reliably predictive, nor are they intended to be. Instead, wargames are best employed as evidence-driven first cuts at complex problems that surface issues and insights worthy of further scrutiny. In keeping with these ideas, the points outlined below represent useful starting points for future gaming, analysis, and policy consideration rather than the permanent conclusions of SAGE DRAGON’s organizers.

Findings from the wargame include the following:

1 There is growing demand for low-cost, high-frequency competitive intelligence data and analytics for the Pacific Island region.

Historically, the United States and its competitors have relied on diplomats and intelligence operatives to build situational awareness in important competitive geographies. These human sensors, supplemented by technical intelligence gathering, are scarce and often expensive resources. Much of the demand could be met by better integrating (“blending”) open-source data with classified intelligence gathering and analysis.

2 Of the four island nations explored, China’s elevated interest in Kiribati and the Solomon Islands likely is due to these PICs’ specific geostrategic positions and elevated economic vulnerability.

Kiribati has a potentially valuable exclusive economic zone, while its location between U.S. territories in the western Pacific and Hawaii makes it a useful location from which to threaten U.S. notions of strategic depth. China would earn a significant strategic win if it were able to secure critical rare earth minerals in the seabed and maintain a monopoly by denying access to competitors. For the Solomon Islands, position is the key driver: with military access to the Coral Sea and the central Pacific, China could both threaten Australian bases and present U.S. forces in Guam with a new threat vector. Moreover, it should be noted that Kiribati and the Solomon Islands are perhaps more vulnerable to promises of financial assistance from any quarter.

3 China appears to hold advantage in elite influence, while the United States could compensate with stronger civil society ties.

One of China's most salient advantages in the competition is its ability to identify and woo both public influencers and elites in PIC governments, whether via licit or illicit means. U.S. policymakers, in contrast, are more likely to emphasize direct dialogue with PIC civil societies through public diplomacy, including directly exposing Beijing's corrupting influence whenever possible. U.S. and allied perspectives on good governance, anti-corruption, and democratic values are important drivers of this asymmetry. While Australia, New Zealand, and the United States have been longstanding security partners, PIC political and business leaders often perceive Chinese economic and security assistance as a more convenient "no strings attached" alternative.

4 Pacific Island countries are vulnerable to low-cost influence and disinformation campaigns. The United States and allies like Australia must be prepared to respond, including via economically concrete and timely action.

Many of the PICs explored are vulnerable to Chinese disinformation campaigns owing to under-supported local news media ecosystems and resultant overreliance on social media for information flows. Blunting the effect of negative narratives about U.S. and Australian regional interests will require improved messaging from Western allies and the willingness and agility to rebut Chinese propaganda as soon as possible. In the long run, however, informational attacks along these lines are best defeated by changing economic reality on the ground with responsiveness to pressing local needs.

5 Efforts to offset Chinese financial largesse depend on rapid coordination between the United States and regional allies.

Pressing needs and a desire to reduce overreliance on historically shaky partners have led PIC leaders to make deals with Beijing despite wariness of the risks that Chinese loans and other financial offerings pose. As the United States, Australia, and other regional partners—such as Japan and India—endeavor to provide alternatives, they should prioritize projects offering rapid material results, especially preparations that will aid sudden humanitarian assistance and disaster relief missions. PICs increasingly require resiliency in the face of climate change and associated natural disasters, necessitating rapid response capabilities for humanitarian assistance.

Introduction

Following Japan's successful "First Stage Operations" in early 1942, the Imperial Japanese Army and Imperial Japanese Navy (IJN) shifted attention from offensive operations to establishing a "Long Term, Undefeatable Posture." Where the first stage resulted in the rapid conquest of resource-rich territory in the Philippines, Indonesia, and elsewhere in Southeast Asia, the second stage centered on creating an impregnable defensive perimeter to repel any U.S. counteroffensive.

Pushing the perimeter further into the Pacific to keep the United States on the defense and to delay American efforts to regroup was a key element of the IJN General Staff's thinking. It therefore advocated capturing and defending select Pacific Islands to disrupt sea lines of communication between North America and Australia. This move, IJN planners reasoned, would prevent Australia from becoming a springboard for future U.S. air and naval offensives. It would also commit the U.S. Navy and its battle fleet of surviving aircraft carriers to defending Australia, instead of using those carriers to project power against Japan itself.

Almost a century later, these islands are once again in consideration as crucial terrain in the strategic competition between the People's Republic of China (PRC) and the United States. Similar to Japan's strategy in World War II, China may be attempting to establish a forward defense perimeter by drawing a new "island chain" that isolates Australia and New Zealand from the wider South Pacific. This development comes as U.S. forces stationed along the First Island Chain (a virtual line drawn from Japan through the Philippines and curving inward as it reaches archipelagic Malaysia at the southern end of the

South China Sea) are increasingly under threat from People's Liberation Army (PLA) attack.

Australia looks ever more appealing for operational access and future basing. However, reflecting the U.S. experience in World War II, the ability to move forces to and operate from locations in Australia—and to keep them sustained—depends in large part on secure sea lines of communication near island states such as Kiribati, Papua New Guinea, the Solomon Islands, and Vanuatu. Having studied their history, PLA operational experts are likely cognizant of this vulnerability.

Strategic Context

In May 2022, as President Biden concluded a trip throughout Asia, China's Foreign Minister Wang Yi embarked on a 10-day diplomatic tour of the Pacific Islands. News soon broke that Wang had unveiled a comprehensive multilateral agreement supposedly designed to deepen Beijing's economic and security ties with as many as 10 Pacific Island countries (PICs).¹ On that measure, it appeared that China overplayed its hand and triggered a negative reaction from some of the targeted island governments, who were openly wary of Chinese advances.² Beijing presented the agreement publicly before introducing it to individual Pacific Island governments, which suggests another possible purpose: to discern which regional leaders—and factions within countries—would be more and less open to future Chinese outreach and negotiations.³ That is, despite the facade of a stalled proposal, China intends to push for agreement on its Common Development Vision and Five-Year Action Plan in the future as part of a broader regional influence campaign.⁴

This recent effort is indicative of how Beijing's longstanding strategic interest in PICs is growing more pronounced. Foreign Minister Wang's multilateral push came in the wake of the March 2021 leak of a secretive security pact between China and the Solomon Islands that thrust Beijing's ongoing engagement with Honiara into the strategic spotlight.⁵ The leaked draft document's vague language raised questions about China's intentions, and the signed agreement has not been made public to date.⁶ For instance, its text appeared to allow Beijing to deploy security personnel to the Solomon Islands to protect Chinese interests there. The agreement also referred to possible Chinese navy port visits "to carry out logistical replenishment."⁷ While Solomon Islands officials downplayed this language, against the backdrop of China's possible pursuit of a global basing architecture the deal is viewed by many regional experts as an opening salvo in a broader Chinese campaign to replace countries such as Australia as the economic and security partner of choice for Pacific Island countries.⁸

China's accelerating diplomatic activities in the region are not unanswered. In September 2022, the United States hosted the first ever U.S.-Pacific Island Country Summit in Washington, D.C. Twelve island states attended the meeting, during which the United States introduced its Pacific Partnership Strategy, which promised greater diplomatic presence through new embassies and envoys, new U.S. Agency for International Development missions, and funding for climate resilience and law enforcement capacity building.⁹ This strategy appears to be the first of a series of steps to reinvigorate long-dormant relationships between the United States and the select PICs.



Australia's relations with the Solomon Islands and other southwestern Pacific countries are more regular than U.S. engagement, but not always more effective than U.S. efforts to gain influence.¹⁰ Canberra's much publicized "Step-Up" policy—deepening economic and cultural ties with Pacific states while shoring up strategic relations to mitigate Chinese influence campaigns—and multiple tours of the Pacific by ministers are key efforts to bolster relations. Yet Beijing's security deal with Honiara and deepening economic partnerships with several PICs raise questions about the effectiveness of Canberra's drive to remain the security partner of choice in its immediate region.¹¹ For instance, under what circumstances might Honiara choose China over Australia as a security partner?

To what extent may the Solomon Islands adding China to its list of security partners threaten Australian interests? And why did the Solomon Islands seek another security partner if the Australian partnership was effective?

Australia is the region's largest aid donor but suffers from an image as a legacy colonizer in some countries and often struggles to account for PICs' human security concerns.¹² Despite this challenge, a 2017 Australian foreign policy white paper stated a goal to "integrate Pacific countries into the Australian and New Zealand economies and our security institutions."¹³ These efforts complement renewed U.S. attention in the region and spotlight the difficulty the allies face in trying to secure "partner of choice" selection amid lucrative Chinese promises to PICs.

Militarily, the PICs are geographically critical to operational design for the PLA, the U.S. Joint Force, and the Australian Defence Force. Their geography—which spans approximately 15 percent of the earth's surface—lies athwart sea lines of communication, including undersea internet cables and transportation between the United States and Australia, making the region a prime zone of competitive friction. For instance, a Chinese military presence in the region could threaten Royal Australian Air Force bases with strikes from DF-26 intermediate-range ballistic missiles, as Figures 1 and 2 show.¹⁴ Chinese bases located there, or on other nearby island countries, such as Papua New Guinea, could likewise impede U.S. force and logistics flows to Australia during a major conflict.



Figure 1. PLA placement of missile systems and other power projection assets in various Oceania island nations could challenge U.S. force flow and hold bases throughout Australia and Japan at risk.

(Graphic created by MITRE; maps provided by INDOPACOM, "USINDOPACOM Area of Responsibility," accessed February 21, 2023, and Parliament of Australia, "100 Years of the Royal Australian Air Force," August 4, 2021)

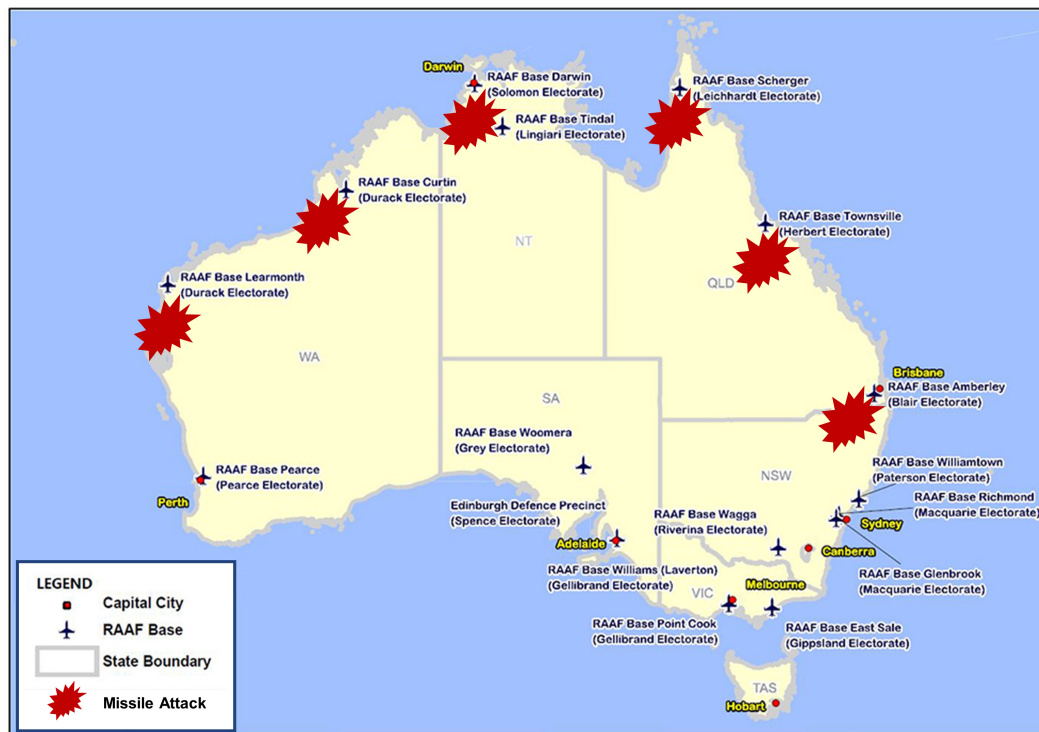


Figure 2. A Chinese military presence in the Solomon Islands could threaten Royal Australian Air Force bases with strikes from intermediate-range ballistic missiles.

These hypothetical developments are particularly concerning considering Chinese ballistic, cruise, and hypersonic missile threats to U.S. basing in Japan and Guam.¹⁵ Should either the Kadena or Anderson Air Force Bases fall under heavy attack, U.S. wide-body aircraft, for example, would have few safe locations available from which to operate if the missile threat also extended to Darwin in Australia's north. A similar scenario regarding U.S. naval power could unfold. Should China gain access to archipelagic or island territory further afield—such as in Kiribati, which straddles all four hemispheres and fills an expanse as large as the contiguous United States—its forces could wedge between U.S. territories in the western Pacific and target Pearl Harbor with relative ease. Exposure of either set of targets to PLA offensives would undermine U.S. operational plans and

threaten to upend its broader competitive strategy. Player choices and outcomes recounted later in this report suggest these possibilities are not as remote as they seem.

The region's strategic significance also extends well beyond the military dimension of the U.S.-China competition. In addition to rich fisheries, PICs claim seabed deposits of key mineral resources used for making batteries, touchscreens, and other sophisticated electronics. For example, concentrations of copper, cobalt, manganese, and rare earth elements found in polymetallic nodules are scattered across the Clarion-Clipperton Zone, the portion of the central Pacific seabed near Kiribati.¹⁶ The deep-sea mining industry is developing technology to harvest these nodules under the regulatory authority of the International

Seabed Authority (ISA), with exploration covering roughly 400,000 square kilometers of seabed.¹⁷ The economic potential of these nodules could be significant, particularly for aid-dependent countries that struggle to create sustainable economic markets. The ISA estimates the total contained cobalt in the zone is 44,000 kilotons, more than three times the amount in the global terrestrial reserve base (13,000 kilotons). Analysts project the global demand for cobalt may increase 10- to 20-fold by 2050 as its use in electric vehicles and clean energy applications multiplies.¹⁸ Other critical minerals found on the seabed in this region have similar demand outlooks. The economic benefits PICs can gain by leveraging sale of or preferential access to these resources have the potential to reshape diplomatic and economic power balances among the PICs.

A final variable worth noting is the paradoxical strategic vulnerability and countervailing resistance of Pacific Island nations to foreign influence. The tension between PICs' openness to stronger economic ties with China and concerns surrounding sovereignty and alienation of the United States and its allies is a defining feature of the region's competitive landscape. While some countries, such as Papua New Guinea and Fiji, possess large populations and extensive natural resources, others face comparatively bleak prospects with high vulnerability to natural disasters, sea-level rise and territorial erosion, economic dislocation, and public health crises.¹⁹ Many analysts expect states facing such varied, intractable, and mounting problems to be especially vulnerable to foreign influence campaigns. However, many PICs are also wary of leaning too far in favor of any one external actor or becoming entangled in the strategic competition between

Western allies and China. This sentiment was captured last summer by Federated States of Micronesia President David Panuelo's vocal opposition to China's multilateral plans, calling them "the single-most game-changing agreement in the Pacific of any in our lifetimes." He warned that, if adopted, China's proposals would draw the region "very close into Beijing's orbit, intrinsically tying the whole of our economies and societies to [China]." Panuelo added, "Chinese control over our communications infrastructure, our ocean territory and the resources within them ... aside from impacts on our sovereignty ... increases the chances of China getting into conflict with Australia, Japan, the United States and New Zealand."²⁰

Pacific Island states emphasize and cherish their independent status, and a specter of colonialism undergirds U.S. influence. As former University of Guam President Robert Underwood notes,

“Even in the midst of this discussion in which the U.S. may be favored, the Americans come in for severe criticism ... the role of these large nations is framed in conversations about ‘neocolonialism’ and the desire to ‘decolonize’ and enter into a ‘postcolonial’ era. Almost everyone concedes that neocolonialism exists in a variety of forms. It comes in direct influence through ministries of foreign affairs, influence peddling through assistance programs, and indirect influence through trade and economic relations.”²¹

Regional leaders by-and-large see the rising great power competition as a distraction from what they define as the region's primary security issues,

though they are not opposed to taking advantage of the competition to secure more aid or favorable trade terms. For example, when asked about the China-U.S. rivalry last year, Fiji's Permanent Representative to the UN, Ambassador Satyendra Prasad, responded, "In the geopolitical contest between U.S. and China, climate change is winning ... [but] Pacific peoples and their governments would welcome an enduring partnership."²²

The political economy of the South Pacific combined with its long-established military significance are reasons enough to compete there with vigor. However, the United States has long treated the region as a strategic backwater, in marked contrast to Beijing's longstanding focus on local relationship building. Consequently, the United States and Australia find themselves playing catch-up as they race to counter Chinese influence in the region.

Compounding the challenge of strategic tardiness, U.S. and allied decision-makers must contend with a pronounced knowledge gap surrounding the

local effectiveness of various alternative national security instruments—ranging from diplomatic and informational approaches to military and economic alternatives—and how they might be perceived by diverse island nations' populations.

Observing these diverse facets of U.S.-China Pacific rivalry in the South Pacific, in July 2022 MITRE began identifying and integrating the tools and infrastructure necessary to conduct structured explorations of its dynamics and associated courses of action. This process included identifying key internal and external stakeholders from the United States that could provide the functional and regional expertise necessary to credibly dissect its various dimensions in the broader context of long-term strategic competition.

Four months later, this effort bore fruit. In November 2022, The MITRE Corporation hosted a two-day strategic-level wargame titled SAGE DRAGON to shed light on these overlapping challenges and explore the U.S.-China competition. SAGE DRAGON's fundamental intent was to help close the intellectual gulf implied by this discrepancy in strategic attention, using the wargaming methodology to explore alternative means of shaping PICs' perceptions of the United States and China while increasing the broader national security community's awareness of regional concerns. Secondly, SAGE DRAGON's findings identified data sets and analytics senior U.S. decision-makers might benefit from as they navigate other functional and geographic components of the U.S.-China competition.

This report highlights the exercise's objectives and methodology before laying out key insights and offering additional analytical threads for analysts and policymakers studying this highly dynamic Indo-Pacific sub-competition.



Blue Team's multi-disciplinary representatives from MITRE and ASPI discuss U.S. and Australian levers available to partner with and influence Pacific Island nations.

Game Overview

Objectives

SAGE DRAGON's central objective was to begin filling in the intellectual white space surrounding PICs' significance in the U.S.-China strategic competition. To properly scope the wargame and achieve its overall analytical goal, the design and analysis team set out to explore the following three questions:

1

What diplomatic, informational, military, and economic tools are available to the United States and China to influence PICs?²³

2

To what extent are subsets of these tools more effective than others at swaying PICs toward the United States and its allies? Conversely, are there tools to avoid in recognition of possible national or regional blowback?

3

How might China respond to increased U.S. engagement with PICs? How might PICs respond to increased attention from both powers?

Methodology and Design

Wargames excel at exploring problems driven by human decision-making for which data and validated quantitative models are often scarce. Unlike scientific experiments, well-designed wargames do not provide final answers or validation for specific solutions. Instead, they break new ground by generating innovative hypotheses for examination by other analytical approaches. According to acclaimed wargame designer and analyst Peter Perla,

“A wargame is a model involving people making decisions in a synthetic environment of competition or conflict, in which they see the effects of their decisions on that environment and then get to react to those changes.”²⁴

MITRE designed SAGE DRAGON to shed light on how the United States and its allies might more effectively compete for influence among the PICs' leadership and populations. In order to design a game that allowed for targeted data collection and quality player interaction, the game focused on four countries: Kiribati, Papua New Guinea, the Solomon Islands, and Vanuatu. These four nations

were chosen based on their demographic and economic diversity coupled with relative openness to dealmaking that might affect their strategic alignment. While exploring a larger subset of PICs could have offered certain analytic advantages, the design team ultimately chose to constrain the number of PICs represented to speed play, streamline game management, and insulate players from overwhelming complexity.

The game pitted multi-disciplinary teams representing U.S. and Australian (Blue Team) and Chinese (Red Team) policymakers against one another in a competition for preponderant influence on each of the four islands. Blue Team participants included MITRE intelligence professionals, economists, defense analysts, and a regional analyst from the Australian Strategic Policy Institute's Washington, D.C., office (ASPI-DC). The Red Team comprised similar functional and regional expertise built around a cadre of MITRE China experts with decades of collective experience studying Chinese decision-making and an ASPI-DC regional analyst. Finally, a White Cell composed of MITRE and ASPI-DC senior analysts, facilitators, software engineers, and rapporteurs managed the flow of play and data capture and adjudicated game moves to ensure plausibility.

SAGE DRAGON charged players with devising and employing diplomatic, informational, military, and economic (DIME) levers of national power to draw the four island states into their respective geopolitical orbits. Game objectives also incentivized players to counter efforts by the opposing team. To measure progress toward these goals, the game included a zero-sum system of “influence points” representing relative sway over each island’s political elite, public opinion, and other factors. Abstract “effort” points representing budgetary and political capital forced tradeoffs across DIME elements, time, and geography while discouraging indiscriminate or overwhelming numbers of actions. These simple constraints coupled with tailored injects channeled players toward managing a series of unfolding dilemmas while maintaining space for player-driven narratives to develop.

To represent the national power levers in gameplay, SAGE DRAGON used a card-based strategic wargaming system capable of both synchronous

and asynchronous distributed play. The system allowed the teams to interact with each other and the game world by generating and playing action cards representing the various levers. For example, Red Team players might draft a security card targeting Vanuatu that offers training and equipment for its police force. As part of the card generation process, they might argue that local security forces suffered from a lack of both, as articulated by local officials, and that addressing this demand signal would improve bilateral ties.

During SAGE DRAGON, the White Cell tracked and logged these digital action cards—including their targets, cost, assessed effects, and supporting reasoning—for quantitative and qualitative post-game analysis, which greatly eased data capture. Finally, the software integrated card creation, White Cell card editing/approval interfaces, card queuing, and an electronic gameboard with a dynamic influence map (see Figure 3) and matrix-style adjudication capabilities.

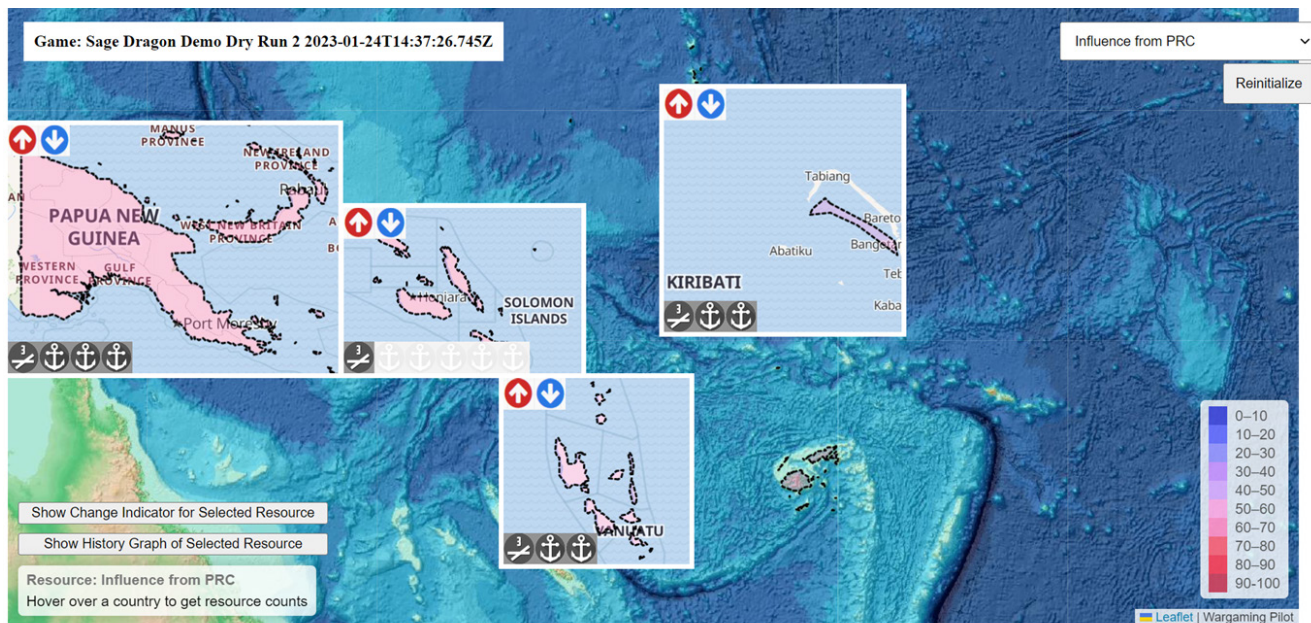


Figure 3. Dynamic map used during gameplay. As cards were played and adjudicated, the maps would change shades, either red if the PRC was considered more influential or blue if the United States made gains in a particular nation.

As for the gameplay, SAGE DRAGON consisted of four turns, each representing six months of real-world time. Each turn was further subdivided into planning, execution, and adjudication phases. During the planning phase, teams assessed their strategic position and set priorities for the turn. They also devised a series of lever cards for approval by the White Cell and use in the next phase.

During the execution phase, each team assembled a completed package of levers and delivered that package to the White Cell for adjudication. The White Cell then automatically adjudicated most levers, with a subset of played levers from each side selected for matrix-style “pros and cons” mediation. This allowed the adjudicators to more fully characterize each team’s intent and overall impact on a given island nation, or the region as a whole, while also allowing for a level of informed debate between the teams.²⁵ SAGE DRAGON’s hybrid design—card based and matrix—armed the White Cell and players with tools to stimulate, capture, and analyze a range of insights in the region. In doing so, it offered both quantitative and qualitative data points from which to extract richer insights.

Pros and Cons Matrix Adjudication

The exercise applied a “pros and cons” technique, which is one of several approaches to matrix-style adjudication. This technique tasks the initiating side with generating three “pros,” or arguments in favor of its action succeeding with specified effects. The other side then offers three “cons,” or arguments against success. After the initiating side responds to the cons, the game facilitators modify a base probability for success founded on their assessment of the arguments and rebuttals. The initiating team then rolls one or more dice to determine an outcome before moving to the next engagement or game world event. Adjudication using this technique often surfaces a steady stream of useful debates and insights surrounding contentious issues without bogging down the game.

Key Insights

Data Points

From a quantitative perspective, the Red and Blue teams played a total of 32 levers over the course of the two-day wargame. The following high-level trends were observed:

- The Red Team heavily favored economic inducements, which accounted for half of its executed levers, while splitting most of its remaining actions between diplomatic and informational initiatives.
- By contrast, the Blue Team divided its efforts almost equally between diplomatic, informational, and economic approaches to influence building.
- Military levers, including joint training and exercises, were by far the least favored tool of both teams and accounted for only 5 percent of each side’s total actions.
- In terms of geographic distribution of effort at the individual country level (vice those efforts of a more regional nature), Kiribati and the Solomon Islands were the preferred targets for both the Red and Blue teams.

The White Cell analysts found a subset of levers with the greatest potential to swing individual or multiple islands toward a competitor, as measured in net influence points awarded. These levers, identified in collaboration with regional and functional experts distributed across the teams, included:

Blue Team (United States and Australia)

- Establishing joint U.S.-Australian embassy to several PICs, with equal cost-sharing between the two countries
- Ratifying a regional climate security pact, with an understanding that the United States would leverage its influence in the United Nations and other international organizations to steer climate resiliency funds toward PICs
- Providing safeguards to PICs on Chinese-sponsored projects by offering U.S. technical and operational support on targeted projects in addition to vetted financiers and technical financial safeguards
- Advocating for and integrating like-minded PICs into an Indo-Pacific Free Trade Network or providing other forms of preferential economic treatment in the form of market access or investment arrangements
- Investing in new or improved infrastructure such as sea walls, levies, and desalination plants to combat the effects of sea-level rise, natural disasters, and ecological degradation

Red Team (PRC)

- Establishing a seabed mining partnership with Kiribati in which China's state-owned enterprise MinMetals pays an upfront negotiated price for a 10-year lease on the PIC-reserved area in the Clarion-Clipperton Zone in exchange for exclusive Chinese mining rights²⁶
- Executing a focused propaganda campaign targeting both PIC electorates and political/

economic elites, specifically highlighting a historic pattern of Blue Team indifference toward the region and a track record of broken promises demonstrated in part through a lack of permanent diplomatic representation in PICs

- Funding numerous educational opportunities, including local leadership training institutes and fully funded scholarships to Chinese universities for government officials
- Deploying nuclear-powered electricity generation and desalination barges to vulnerable islands as an appeal to enhance economic and climate resiliency for those countries
- Offering People's Liberation Army Navy training, equipment, and even joint patrols to counter illegal fishing operations

Geostrategic Insights

Several key observations emerged during the event and in post-game interviews. The findings include:

1 There is growing demand for low-cost, high-frequency competitive intelligence data and analytics for the Pacific Island region.

Historically, the United States and its competitors have relied on diplomats and intelligence operatives to build situational awareness in important competitive geographies. These human sensors, supplemented by technical intelligence gathering, are scarce resources that often depend on expensive infrastructure to perform their missions. While the Blue Team made important investments in building some of this infrastructure in select PICs over the course of the game, players assumed results would manifest slowly as

Further Exploration via Wargames

Individual wargames or wargame series could be designed with the specific purpose of anticipating and assessing unmet data and analytics demands U.S. and allied policymakers face in ongoing or prospective geographic sub-competitions. Insights from these games could in turn inform technology requirements and investments toward preemptively closing these gaps.

permanent diplomatic presences were established and networks developed. This latency left the Blue Team hungry for timely data to inform its decision-making at a finer-grained level. Viewed through the lens of the Red Team's actions throughout the game, several types of data and associated analytic products may improve the United States' ability to compete at a reasonable cost, including:

- Tailored social media sentiment analysis and disinformation detection on diverse topics and platforms
- High-frequency data on local economic dynamics
- Local elite financial network surveillance to detect corruption
- Political and economic network analysis
- Environmental monitoring and predictive modeling
- Indications and warning of adversary contract bids or investment negotiations

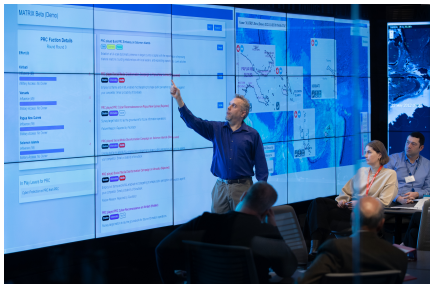
Many of these demand signals could be met, at least in part, by open-source data or a blend of open-source and classified information. These non-traditional data sources and blends combined with commercially available analytics capabilities could enable competitive strategy development, execution, and steady-state environmental scanning in the Pacific Islands and elsewhere.

2 Of the four islands explored, China's elevated interest in Kiribati and the Solomon Islands likely is due to these PICs' specific geostrategic positions and elevated economic vulnerability.

For much of the game, the Red Team focused on swaying Kiribati and the Solomon Islands into its sphere of influence at the expense of larger and wealthier countries such as Papua New Guinea. During planning deliberations, the Red Team concluded that Kiribati's strategic geography made it a target too attractive to ignore for three reasons. First, Kiribati has a massive and potentially valuable exclusive economic zone owing to its far-flung archipelagic terrain. Second, its proximity to U.S. territories in the western Pacific and Hawaii makes it a useful location from which to threaten U.S. notions of strategic depth across the North Pacific. Third, securing critical rare earth minerals in the Clarion-Clipperton Zone to maintain China's monopoly by denying access to competitors would be a significant strategic win. Further, the Red Team believed from the outset of the exercise that Kiribati was more inclined toward Beijing than other PICs.

The Red Team's secondary interest in the Solomon Islands was similarly rooted in its geographic position. With military access to the Coral Sea and the central Pacific, China could both threaten Australian bases and present U.S. forces in Guam with a new threat vector.

The first several turns of gameplay saw the Red Team fight hard to build its influence in Kiribati while expressing growing frustration that the Blue Team continued to prevent the country from trending too far into Beijing's orbit by developing its own initiatives. In the final turn, following heated arguments with the local government and the United States over Chinese corruption and attempted extortion of Kiribatian political leaders in the aftermath of a major natural disaster, China turned the full weight of its statecraft toward establishing military access in the Solomon Islands.



A MITRE facilitator demonstrates the card-based software used during SAGE DRAGON wargame event. The exercises were conducted over two days at MITRE's McLean, Virginia campus.

As a result, the Red Team brought the Solomon Islands to the brink of acceding to a military access arrangement by the end of the game.

Analysts on the White Cell noted inflexibility in the Red Team's deliberations and overall strategy compared with the Blue Team's less geographically disciplined approach. Once the Red Team's leadership articulated geographic priorities and supporting reasoning, the team showed little interest in tactical opportunities to influence other possible targets, such as Papua New Guinea, that fell outside its initial strategic framework despite repeated indications this gain could be accomplished with relative ease. In contrast, the Blue Team showed far more enthusiasm for sweeping multilateral initiatives and nimble retargeting, avoiding narrow focus on any one country until the Red Team's efforts necessitated a reaction to avoid a total loss of blue influence.

3 China appears to hold advantage in elite influence, while the United States could compensate with stronger civil society ties.

Both teams assessed that one of China's most salient advantages in the competition was its ability to identify and woo both public influencers and elites in PIC governments. Whether in the form of licit inducements or illicit kickbacks, the Red Team consistently paired its political and economic instruments with incentives to increase their efficacy. For instance, a major economic package for Kiribati conceived during the penultimate turn included targeted bribes for senior Kiribatan

financial and local urban planning officials to prioritize approval for Chinese projects. Actual or threatened covert electoral interference for or against incumbents depending on their inclinations was another activity of choice, particularly as the Red Team lost momentum on Kiribati. By contrast, the United States was unable to respond in kind due to the U.S. Foreign Corrupt Practices Act and related norms against basic subversive tactics.

This led the Blue Team to emphasize direct dialogue with PIC civil societies through public diplomacy, including directly exposing Beijing's corrupting influence whenever possible. An alternative influence model approach was necessary to counter the elite perception that Chinese inducements came without values-based preconditions. In one instance, Blue Team human intelligence assets uncovered a covert Chinese operation providing corrupt officials with extravagant expense accounts and travel to Shanghai and Macao for lavish parties and (unbeknownst to them) collection of kompromat.²⁷ When the Red Team attempted to use this material to quietly extract concessions from a local government, the Blue Team exposed the scheme. The targeted head of state, who was not directly implicated in the scandal, ousted members of his own cabinet rather than acquiesce to Chinese demands, leaving Beijing embarrassed and politically isolated. The game also surfaced other less extreme examples of successful Blue Team manipulation of global public opinion overriding Red Team elite influence.

4 Pacific Island countries are vulnerable to low-cost influence and disinformation campaigns. The United States and allies like Australia must be prepared to respond, including via economically concrete and timely action.

Regional experts on both teams highlighted that most PICs are vulnerable to Chinese disinformation campaigns owing to weak local news media ecosystems and resultant overreliance on social media for information flows. Taking advantage of this vulnerability, the Red Team mounted repeated multi-platform information campaigns to undermine public and elite perceptions of U.S. reliability and strategic intentions. According to players, one of the most potent arguments in Beijing's arsenal is that the United States and its allies such as Australia excel at sweeping multilateral pronouncements but deliver few concrete results for the island populations. By contrast, rank-and-file citizens of PICs often perceive China's focused, bilateral engagements as actual investments, community projects, and public benefits. This difference and other negative narratives surrounding U.S. and Australian interests in the region require improved messaging from Western allies and near-real-time rebuttal to blunt their effects.

However, it is worth noting that this is not fundamentally a perception problem. Disinformation of this variety is a symptom of an objective and enduring problem impacting U.S. and Australian engagement with PICs. These nations have real, and increasingly acute, needs to support the health, prosperity, and security of their citizens, who too often perceive Western aid as slow to come, poorly targeted, and unreliable.²⁸ This set of perspectives should prompt urgent introspection on how the United States and its allies might gain more timely understanding of the actual anxieties driving local decision-making and translate that understanding into action.

5 Efforts to offset Chinese financial largesse depend on rapid coordination between the United States and regional allies.

During the game, island governments remained wary of the risks posed by Red Team loans and other offers but noted a lack of timely alternatives and solutions to the pressing needs of PIC populations. Over time, the Blue Team endeavored to provide alternatives but consistently expressed concern with the difficulties of cost-sharing between allies and the technical means of executing such agreements. This dynamic suggests the United States and Australia, along with Japan and other regional partners interested in slowing or reversing China's South Pacific advance, should consider moving quickly to formalize consultative arrangements for financing competitive infrastructure ahead of emerging opportunities. Above all, regional experts suggested prioritizing projects offering friendly local politicians material results they could point to as successes and evidence of U.S. support. Long-term projects with nebulous outcomes have far less effect.

This need for rapid response capability underscores the importance of preparation for sudden humanitarian assistance and disaster relief missions—PICs face a barrage of both slow-moving and rapidly developing natural disasters. Increasing competition between the United States and China made PIC governments progressively more cautious of explicitly choosing sides as the game progressed. Still, events in the final turn suggested that failing to offer timely relief after large-scale humanitarian crises could result in either the United States or China decisively losing influence in a teetering island country. Prepositioning relief supplies and formulating forward-deployed multi-national relief forces could mitigate the risk of nonresponse to a sudden natural disaster.

Questions for Further Research

Wargames do not in and of themselves provide definitive answers but instead point toward more and better questions or issues of interest. Further analysis of SAGE DRAGON's lessons, via additional wargames or other analytical approaches, can add insight.

SAGE DRAGON revealed the following geopolitical research questions, the answers to which could advance future U.S. and Australian initiatives:

- What alternative cost-sharing arrangements and specific decision-making structures—such as the Partners in the Blue Pacific initiative—might better coordinate and accelerate U.S. and allied investments throughout the South Pacific?²⁹ What are the advantages and disadvantages of each?
- Japan is a leading U.S. ally with substantial economic and financial capacity to support strategic competition throughout the Indo-Pacific region. How might Japanese diplomatic, informational, military, and economic resources be combined with those of the United States, Australia, and other regional partners to sharpen their collective capacity to build strong relationships in key geographies?
- How might the United States, Australia, and other regional allies collaborate to neutralize Chinese influence over PIC political and economic elites through deeper civil society ties?
- What tailored packages of inducements are most likely to sway elite and popular opinion in Kiribati and the Solomon Islands specifically?

Further analysis of forward-looking sentiment and policy data and analytics questions could also improve U.S. and allied decision-makers' ability to implement and assess courses of action identified by exploring the questions above. Answers to the following questions could be helpful in this regard:

- What specific data sources would be most useful to enable detection, analysis, and response capabilities along the lines described in several of the insights? If these data sources do not exist, how might they be built?
- What varieties of analytics might process these data streams to provide competitive indications and warning of Chinese activities or otherwise inform design of U.S. and allied initiatives? Are any commercially available? If not, how might these gaps be filled?
- How might these data sources and analytics support competitive effectiveness assessment by tracking the long-term effects of specific diplomatic, informational, military, or economic initiatives over time?

About the Author

Shane Bilsborough is a principal analyst at MITRE. Prior to joining MITRE, Shane supported the Office of Net Assessment from 2014 to 2019 as a strategic analyst. His work includes wargaming conflict scenarios and identifying new analytical questions of interest to the Department of Defense. Shane continues to advise senior leaders on long-term strategic competitions, novel operational concepts, warfare trends, and emerging technologies.

With contributions by Mark Seip.

Edited by Adam Hebert and Mary Bruzzese.

For questions about this report, please contact strategic.competitor@mitre.org.

Endnotes

¹ Kirsty Needham, “China Seeks Pacific Islands Policing, Security Cooperation - Document,” Reuters, May 25, 2022, sec. Asia Pacific, <https://www.reuters.com/world/asia-pacific/exclusive-china-seeks-pacific-islands-policing-security-cooperation-document-2022-05-25/>.

² “China and Pacific Islands Unable to Reach Consensus on Security Pact,” CNBC, May 30, 2022, <https://www.cnbc.com/2022/05/30/china-and-pacific-islands-unable-to-reach-consensus-on-security-pact.html>.

³ “«Le but de la Chine est de bouter les Etats-Unis hors du Pacifique»,” Le Monde.fr, June 3, 2022, https://www.lemonde.fr/international/article/2022/06/03/le-but-de-la-chine-est-de-bouter-les-etats-unis-hors-du-pacifique_6128852_3210.html.

⁴ “Foreign Ministry Spokesperson Zhao Lijian’s Regular Press Conference on May 30, 2022,” Embassy of the People’s Republic of China in the United States of America, May 30, 2022, http://us.china-embassy.gov.cn/eng/fyrth/202205/t20220530_10694714.htm.

⁵ Michael E. Miller, “China’s Growing Reach Is Transforming a Pacific Island Chain,” Washington Post, August 11, 2022, <https://www.washingtonpost.com/world/2022/08/11/solomon-islands-china-australia-pacific/>.

⁶ Tarcisius Kabutaulaka, “China-Solomon Islands Security Agreement and Competition for Influence in Oceania,” Georgetown Journal of International Affairs (blog), December 2, 2022, <https://gija.georgetown.edu/2022/12/02/china-solomon-islands-security-agreement-and-competition-for-influence-in-oceania/>.

⁷ Judith Cefkin, “U.S. Steps Up Diplomacy in Pacific Amid Solomon Islands-China Pact,” United States Institute of Peace, May 4, 2022, <https://www.usip.org/publications/2022/05/us-steps-diplomacy-pacific-amid-solomon-islands-china-pact>.

⁸ Cristina L. Garafola, Stephen Watts, and Kristin J. Leuschner, China’s Global Basing Ambitions: Defense Implications for the United States (RAND Corporation, December 8, 2022), https://www.rand.org/pubs/research_reports/RRA1496-1.html.

⁹ “FACT SHEET: President Biden Unveils First-Ever Pacific Partnership Strategy,” The White House, September 29, 2022, <https://www.whitehouse.gov/briefing-room/statements-releases/2022/09/29/fact-sheet-president-biden-unveils-first-ever-pacific-partnership-strategy/>.

¹⁰ Lucy Albiston and Blake Johnson, “Flashy Donations Don’t Pave the Way to Being Solomon Islands’ Partner of Choice,” The Strategist, November 21, 2022, <https://www.aspistrategist.org.au/flashy-donations-dont-pave-the-way-to-being-solomon-islands-partner-of-choice/>.

¹¹ The Townsville Peace Agreement signed in 2000 established Australia as the security partner of choice for the Solomon Islands. See: “Townsville Peace Agreement,” UN Peacemaker, accessed March 10, 2023, <https://peacemaker.un.org/solomonislands-townsville-agreement2000>.

¹² “Bilateral and Regional Partnerships in the Pacific,” Australian Government, Foreign Policy White Paper, November 9, 2017, <https://www.dfat.gov.au/sites/default/files/minisite/static/4ca0813c-585e-4fe1-86eb-de665e65001a/fpwhitepaper/foreign-policy-white-paper/chapter-seven-shared-agenda-security-and-prosperity/bilateral-and.html>.

¹³ Anna Powles and Joanne Wallis, “It’s Time to Talk to, Not at, the Pacific,” The Strategist, March 28, 2022, <https://www.aspistrategist.org.au/its-time-to-talk-to-not-at-the-pacific/>.

¹⁴ “DF-26,” Missile Threat, accessed March 10, 2023, <https://missilethreat.csis.org/missile/dong-feng-26-df-26/>.

¹⁵ “Missiles of China,” Missile Threat, accessed March 10, 2023, <https://missilethreat.csis.org/country/china/>.

¹⁶ “DeepCCZ: Deep-Sea Mining Interests in the Clarion-Clipperton Zone,” NOAA Office of Ocean Exploration and Research, National Oceanic and Atmospheric Administration US Department of Commerce, accessed March 13, 2023, <https://oceanexplorer.noaa.gov/explorations/18ccz/background/mining/mining.html>.

¹⁷ “International Seabed Authority,” accessed March 10, 2023, <https://www.isa.org.jm/>.

¹⁸ Alexander Cunningham, “Assessing the Feasibility of Deep-Seabed Mining of Polymetallic Nodules in the Area of Seabed and Ocean Floor beyond the Limits of National Jurisdiction, as a Method of Alleviating Supply-Side Issues for Cobalt to US Markets,” Mineral Economics, October 20, 2022, <https://doi.org/10.1007/s13563-022-00348-w>.

¹⁹ “Report to Congress on the Pacific Islands,” USNI News (blog), August 18, 2022, <https://news.usni.org/2022/08/18/report-to-congress-on-the-pacific-islands>.

²⁰ Jennifer Staats, “Four Takeaways from China’s Tour of the Pacific Islands,” United States Institute of Peace, June 9, 2022, <https://www.usip.org/publications/2022/06/four-takeaways-chinas-tour-pacific-islands>.

²¹ Robert Underwood, “In the Midst of Neocolonialism,” Pacific Island Times, February 3, 2023, <https://www.pacificislandtimes.com/post/in-the-midst-of-neocolonialismwhat-are-the-threats-to-pacific-solidarity>.

²² “Building a Blue Pacific Agenda for the Twenty-First Century,” Center for Strategic & International Studies, June 23, 2022, <https://www.csis.org/analysis/building-blue-pacific-agenda-twenty-first-century>.

²³ For the purposes of this analysis, “informational” tools included those activities supporting either public diplomacy or private messaging to key influencer groups, including national leadership itself.

²⁴ Peter Perla, “Wargaming and the Cycle of Research and Learning,” *Scandinavian Journal of Military Studies*, Volume 5, no. 1 (September 19, 2022): 197–208, <https://doi.org/10.31374/sjms.124>.

²⁵ John Curry and Tim Price Mbe, *Matrix Games for Modern Wargaming Developments in Professional and Educational Wargames Innovations in Wargaming Volume 2*, First Edition (Keynsham, Bristol, UK: lulu.com, 2014).

²⁶ Regional experts assessed this action would prove extremely attractive to Kiribati despite expected blowback from other PICs over sovereignty concerns. The lever in question failed to sway Kiribati decisively into the Red Team’s sphere of influence due to an unlucky die roll.

²⁷ “Kompromat” (of Russian origin) is compromising information used to blackmail or extort an individual.

²⁸ For more on this, read “Pacific Perspectives on the World,” Whitlam Institute, February 17, 2020, <https://www.whitlam.org/publications/2020/2/13/pacific-perspectives-on-the-world>.

²⁹ For more on the Partners in the Blue Pacific initiative, read “FACT SHEET: President Biden Unveils First-Ever Pacific Partnership Strategy,” The White House, September 29, 2022, <https://www.whitehouse.gov/briefing-room/statements-releases/2022/09/29/fact-sheet-president-biden-unveils-first-ever-pacific-partnership-strategy/>.

MITRE’s mission-driven teams are dedicated to solving problems for a safer world. Through our public-private partnerships and federally funded R&D centers, we work across government and in partnership with industry to tackle challenges to the safety, stability, and well-being of our nation.