Paratus Futurum
Strategic Gaming
Priming the U.S. Coast Guard for the Future

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**About This Report**

This report documents the development and results of *Paratus Futurum*, a strategic game developed as part of the U.S. Coast Guard’s strategic foresight initiative, Project Evergreen. The game, which serves as both an educational and an analytic tool for the service, leverages exemplar global scenarios and key topic areas that the Coast Guard could encounter in the coming decades to create an engaging, educational, and analytic game that has been played by diverse groups of stakeholders, including senior leaders. The objectives were to help Coast Guard personnel experience and think through the trade space of missions, investments, and resources across the globe through 2040 and beyond; stress-test the Commandant’s strategy; and provide senior leadership with insights and considerations for implementing and executing that strategy to prepare the Coast Guard for the future. With this report, we aim to assist Coast Guard leaders in making important trade-space decisions about potential strategic challenges and opportunities the service could face in the future by explaining *Paratus Futurum* and sharing our findings. These findings can help the service think through how its strategies can be implemented, what global trends and events might challenge them in the future, and how future leaders of the service might be more prepared to make strategic-level trade-offs. Furthermore, stakeholders outside the Coast Guard, such as Congress, the U.S. Department of Homeland Security (DHS), the U.S. Department of Defense, and the U.S. public, can also benefit from an improved understanding of the Coast Guard’s activities, impacts, and decisionmaking in addressing strategic challenges and opportunities. Additionally, a research brief, published separately, summarizes the key findings of this analysis.¹

This research was sponsored by the U.S. Coast Guard Office of Emerging Policy and conducted in the Infrastructure, Immigration, and Security Operations Program of the RAND Homeland Security Research Division, which operates the Homeland Security Operational Analysis Center (HSOAC).

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¹ RAND Corporation, “*Paratus Futurum* Strategic Game Primes the U.S. Coast Guard for the Future.”
also works with and supports other federal, state, local, tribal, and public- and private-sector organizations that make up the homeland security enterprise. HSOAC’s research is undertaken by mutual consent with DHS and organized as a set of discrete tasks. This report presents the results of research and analysis conducted under task orders 70Z02318FM7P03200, “Evergreen V,” and 70Z02322FDCOX0001, “Evergreen VI.” The results presented in this report do not necessarily reflect official DHS opinion or policy.

For more information on the RAND Homeland Security Research Division, see www.rand.org/hsrd. For more information on this publication, see www.rand.org/t/RRA2992-2.

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We thank our additional members of Team Evergreen, Scott Savitz and Katherine Anania, as well as two of our Coast Guard fellows, Clay McKinney and Joan Snaith. Without the success of Evergreen, this game would never have happened. We thank our cadre of qualitative information collection specialists: Elliott Grant, Christopher Ferris, Peggy Wilcox, Jordan Logue, and Annette Prieto.

We appreciate the expertise of Abby Doll, who served as development reviewer for the game itself, offering critical insights and feedback as we were designing Paratus Futurum. Our peer reviewers, Dan Abel and Katherine Tiongson, offered valuable suggestions and insights, which have served to improve the quality of this report.

We thank our supporters and collaborators in the sponsor’s office. Those who understood the potential of a strategic Coast Guard game helped develop an appetite for it among leadership and unflaggingly supported it through the game’s development. And those who heard the positive feedback from the first games saw the potential and worked tirelessly to enable us to continue to run the game and expand the service reach and impact. Finally, we are grateful for all the participants, who took a full day out of their busy schedules and showed up with open minds, ready to be collegial, collaborative, and creative.
Summary

The U.S. Coast Guard (USCG) needs insights into the challenges and trends it could face in the future and long-term plans to prepare for them. To address these needs, the USCG established Project Evergreen, a long-standing strategic foresight initiative that assesses potential challenges and future trends that could alter demand for USCG missions and its capacity to execute them.

The goal of Project Evergreen is to anticipate and prepare the USCG for a variety of future changes and challenges so that the service can be agile in its response and is well positioned to capitalize on opportunities if they arise. In past years, Evergreen gathered USCG personnel for workshops that used scenarios depicting future worlds to examine trends and drivers of change and had participants develop strategies to proactively respond to those scenarios. More recently, Evergreen began using a new strategic game—Paratus Futurum (Latin for “ready for the future”)—that was developed specifically for the initiative to work through the scenarios. Compared with the workshops, the game is more engaging, the consequences of players’ decisions are more vivid, and the game’s outcomes are more robust.

The scenarios depicting future worlds that are used in strategic foresight exercises position USCG leaders to integrate into their nearer-term decisionmaking any slow-burning issues and problems that might emerge only down the road. By weighing the long view of changes in the operating environment alongside existing or nearer-term demands, the USCG can gain greater awareness of potential blind spots in current strategies and plans. Being ready for the spectrum of challenges that the future might bring requires leaders to be mindful of how change will affect the USCG in the short and long terms.

Gaming is viewed as a useful methodology that supports decisionmaking processes in areas in which traditional methods are insufficient, particularly when the problem space is uncertain. It brings together a wide array of perspectives from different stakeholders who are affected by an issue and allows participants to experience the complexities of the problem space, enabling insights into ways of solving or adapting to the problem.

This project explored how the USCG can leverage gaming as part of its strategic foresight effort to think through and be more prepared for an uncertain future. Additionally, it allowed the Commandant of the USCG to see the variety of ways in which her 2022 service strategy could be implemented and to receive insights and feedback on it from the workforce.¹

Approach

RAND researchers designed an analytic game in which players explore the strategic dilemmas facing the USCG in the future. Players make distinct choices about mission priorities

¹ USCG, Strategy.
and investments and experience the consequences of their choices in a safe-to-fail environment. The game focuses on how the USCG can fulfill its roles and missions over a 20-plus-year time horizon filled with uncertainty and under constrained resources. It also considers how decisions might be viewed and evaluated by the USCG’s core constituencies: its own workforce, the U.S. public, Congress, the U.S. Department of Homeland Security, the U.S. Department of Defense, and other U.S. executive branch entities.

Key Findings

- Players indicated that it was difficult to exit the short-term planning-cycle mindset and think purposefully about the long-term direction of the USCG. The players acknowledged that the game design required them to do so by considering a “generational planning cycle” for the USCG.
- The players’ discussions and selections highlighted how the service is often pulled in multiple directions by different stakeholders whose priorities and demands conflict with one another. As part of the Department of Homeland Security, the USCG is called to be primarily a homeland-focused entity. At the same time, the other military services call on the USCG to meet the demand signals of the National Defense Strategy, which frequently mean a more global demand for presence. A core element of the game is to help players think about what the USCG could—and maybe should—look like in the future. This includes how the USCG should think about itself as a service, which entails setting a course for how to achieve this balance between the service’s identity and what the USCG should be in the future.
- When given the Commandant’s 2022 strategy, players selected a variety of implementation strategies, from homeland focused to globally focused. What is significant is that teams could arrive at very different decisions and still point back to parts of the vision and strategy documents as justification. Thus, the Commandant’s strategy was the source of many possible USCGs of the future that flowed from decisions on prioritization and where to take on risk. At the same time, players across games identified clear priorities for the USCG of the future. Missions that secure maritime trade, allow freedom of navigation, maintain international alliances, or provide direct support to people were consistently identified as no-fail missions.
- In early games, players followed the strategic vision that they were given, focusing their investments and resourcing on either global or domestic missions as directed, then expanding or contracting those missions across the globe as new plot twists were introduced. When teams immersed themselves in a scenario that departed from the current world, they expressed more willingness to override the taboo of accepting risk in high-

2 USCG, Strategy.
priority missions, such as search and rescue, if they focused on the demand signals for missions involved in that scenario.

- Teams said they saw the trade-offs between the future and the present most clearly when considering investments in future capabilities and assets. Players said they saw future investments as a means to buy down risk, buy flexibility or efficiencies, and implement their broader strategy. But doing so required taking on risk to mission in the present and developing the future force necessary to take advantage of these investments.

- Bringing diverse players and perspectives into the room proved valuable for USCG leadership analyzing the game—and for players because such discussions across specialties and geographic regions rarely take place. Junior and midcareer officers also said that the game framework gave them opportunities to see beyond the scope of their daily mission sets and to stop and think about the long-term strategy that the USCG has to implement.

**Recommendations**

- Set a strategic vision for the long term, beyond the tenure of a Commandant, and support it with specific near- and midterm strategic waypoints backed up by consistent leadership support and clear guidance. Be prepared to balance short- and medium-term risk to specific missions with the longer-term risk to strategy when faced with emergent demands.

- Include in high-level strategies and strategic intent documents more-explicit guidance to ensure that the entire service is moving in the same direction when trade-space decisions are implemented and prioritized. Explicitly state immediate priorities and resources while providing, as one participant put it, “explicit permission to stop doing the things that will have to be deprioritized.”

- Examine different concepts of the service moving forward and consider the assets and capabilities required to meet future demands, which might differ in level, location, and mission type from those of the past. To achieve this, explore those future concepts, then link them to the nearer-term decisions and investments so that procurement does not rely solely on projections based on the present and historical precedent but is informed by potential future needs, challenges, and capabilities that might have a significantly different look from today’s.

- To ensure mission success while leveraging new technologies and attracting and retaining a highly capable workforce, make investments in the USCG as an institution. The USCG’s ability to adapt and change is a historical advantage, but be careful to balance focus on missions and investments with a focus on people.

- Continue to use gaming to explore difficult policy questions from multiple angles. *Paratus Futurum* demonstrates that analysts can derive strategic insights by bringing various stakeholders and communities of interest to the table in a safe-to-fail environment.
to explore strategies for addressing complex problem sets. *Paratus Futurum* also provides a flexible framework by which the USCG can examine trade-offs and risks surrounding wicked problems.
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Introduction

Since the late 1990s, through its long-standing Project Evergreen strategic foresight initiative, the U.S. Coast Guard (USCG) has endeavored to forecast and prepare for the trials and triumphs it might encounter in the future. In 2021, the USCG added a new approach to this effort: gaming.

Through Project Evergreen, the USCG assesses potential challenges and future trends that could alter demand for USCG missions and the service’s capacity to execute them, which helps senior officials develop comprehensive long-term plans.1 The USCG Office of Emerging Policy (DCO-X) has organized scores of Evergreen workshops over the years with both USCG personnel and subject-matter experts to explore different scenarios portraying what the executive branch, Congress, and the public might expect from the service decades into the future and how the service might respond. Now, gaming has elevated these efforts.

Created specifically for Evergreen, the game *Paratus Futurum* (Latin for “ready for the future”) is designed to help players learn about the strategic choices that the USCG faces, think through those choices, and experience the consequences of their choices in a safe-to-fail environment. The game has been played by senior leaders and by midlevel personnel who will be the leaders of tomorrow. Participants expressed agreement that gaming clarified the stakes and trade-offs involved in almost every future move the USCG might make.

This report summarizes our analysis and findings from the first two years of running *Paratus Futurum*.

Background

What Are Serious Games?

The games with which most people are familiar are designed for amusement, but the focus here is on so-called serious games or policy games used for educational, training, or analytic purposes. Although the definition of *game* varies across practitioners and audiences, games generally involve a specified problem, managed by a set of participants, who work within a

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1 Davenport et al., *USCG Project Evergreen V*. 
structure to make decisions, the outcomes of which are governed by the game’s rules. Historically, gaming as a methodology has often been focused on wargames and military combat, but the methodology is now used in a wide variety of defense, policy, and nongovernmental spaces to explore a much more expansive set of topics.

Policy games are intended to support decisionmaking processes when traditional methods either are insufficient or must be supplemented because of the complexity of the problem set. For this project, gaming provides certain advantages and serves multiple purposes. It brings together a wide array of perspectives from different stakeholders who are affected by an issue. This is especially useful when an uncertain problem space must be better framed to develop ways of solving or adapting to the challenge. In addition, wargames allow participants to experience the complexities of a particular problem set that is outside their day-to-day responsibilities.

The USCG is no stranger to gaming. Project Evergreen itself has used scenario-based workshops for decades. The Homeland Security Operational Analysis Center (HSOAC) report *How Can the Coast Guard Use Gaming?* points out that USCG districts regularly perform tabletop exercises and structured brainstorming activities to help develop plans and practice them with other organizations. U.S. Department of Defense (DoD) and U.S. Naval War College games have had USCG participants since gaming became popular in DoD.

Despite this experience, the USCG has not widely utilized gaming as an analytic or educational tool. In developing *Paratus Futurum*, many discussions focused on how this sort of analytic game could be useful and how it would be different from the workshops and tabletop exercises with which leadership was more familiar. Unlike workshops, gaming as a methodology generates not just decision points but also consequences that result from teams’ choices as adjudicated by a set of more or less formal rules. Teams learning the consequences of their decisions—and living with those consequences—helps drive a game toward analytic outcomes that are more robust than in scenario-based workshops.

**Evergreen Overview and Strategic Foresight**

Project Evergreen was established in 2003 to “infuse the Service with strategic intent.” This scenario-based strategic foresight planning process has been used in various forms since its

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3 Perla, *Peter Perla’s The Art of Wargaming*, p. 158.

4 Tingstad et al., *Developing New Future Scenarios for the U.S. Coast Guard’s Evergreen Strategic Foresight Program*.

5 Tingstad, Wong, and Savitz, *How Can the Coast Guard Use Gaming?*

6 One prominent example is described in Hoyt and Winner, “A Cooperative Strategy for 21st Century Seapower.”

7 Davenport et al., *USCG Project Evergreen V*, p. 1.
inception as Project Long View in 1996. Evergreen runs on a four-year cycle aligned with the change in USCG Commandant and is currently in its sixth cycle.

What Is Strategic Foresight?
Strategic foresight is a process that offers a decisionmaker a new perspective by testing explicit assumptions to bring about a new understanding that will inform organizational preparations for the future. Rather than focusing on specific plans for a specific future, strategic foresight looks at the opportunities, challenges, and possibilities across a variety of plausible futures.

As a methodology, strategic foresight is used to anticipate and prepare for future changes and challenges. It involves examining current trends and drivers of change, identifying potential future scenarios, and developing strategies to proactively respond to those scenarios. Strategic foresight is a way to shift from a reactive to a proactive approach to decisionmaking and planning. It helps organizations and individuals anticipate and prepare for future uncertainties and become more resilient in the face of change. Strategic foresight is a valuable tool for policymakers, businesses, and individuals who want to stay ahead of the curve and be prepared for whatever the future might hold.

In the USCG, the scenarios depicting future worlds help USCG leaders integrate into their nearer-term decisionmaking any slow-burning issues and problems that might emerge only down the road. By weighing the long view of changes in the operating environment alongside current or nearer-term demands, the USCG gains awareness of potential blind spots in current strategies and plans highlighted in broader strategic foresight efforts. Being ready for the spectrum of challenges that the future might bring requires leaders to be mindful of how change will affect the USCG in the short and long terms.

Restructuring Project Evergreen
During Evergreen V (2018–2022), DCO-X restructured the initiative, shifting from providing a single major report for the incoming Commandant to delivering a series of more-targeted reports based on a series of games with flag sponsors across the enterprise. The games followed the same pattern as Evergreen V workshops (nicknamed pinecones): Every event had a champion who extended the invitations to participants, provided welcoming remarks and guiding insights, and listened to outcomes, ideas, and insights shared by participants. After each event, a short summary of themes, trends, and ideas (called a quick look) was created for participants, champions, and any other interested USCG personnel. As shown in Figure 1.1, Paratus Futurum was created and initially run in the final year of Evergreen V and has evolved into an educational and analytic tool that the service has continued to utilize in Evergreen VI (2022–2026).

One of the USCG’s stated objectives is to gather participants’ opinions on the levels of impact that potential strategic objectives might have and their level of difficulty to implement. Additionally, there was interest to see whether playing Paratus Futurum changed participants’ minds about which strategic objectives were most valuable for the Commandant to
FIGURE 1.1
How Evergreen Operates

Evergreen works by tapping into the expertise of USCG personnel. The initiative operationalizes strategic foresight planning in this way.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Outputs</th>
<th>Desired outcome</th>
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<tbody>
<tr>
<td>Scenario development</td>
<td>Quick looks at key themes</td>
<td>Insights for senior leaders</td>
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</table>

DCO-X and RAND researchers create scenarios of global and regional changes that might occur in 15–25 years. Small groups of USCG personnel play out how these scenarios could interact with existing strategies and statutory missions and discuss near-term decisions the USCG could make to respond to or prevent negative events. After each game, researchers publish key themes from the discussions in quick looks for DCO-X to present to senior leaders. Together, these insights allow senior leaders to make informed decisions that prepare the USCG to fulfill its missions, ensure mission relevance, and develop the right workforce for the future.

FIGURE 1.1

To explore this, participants answered straightforward prioritization questions in a brief survey both before and after each game, and we then analyzed the responses for trends and themes.

Future Scenarios

As part of Evergreen V, we created four plausible but diverse future scenarios. The variations were tied to specific drivers of demand for USCG missions, as well as varying global trends. These scenarios formed the bases of the worlds and events with which Paratus Futurum is played, with each team facing a different future. The development methodology and further details of the scenarios themselves are described in Developing New Future Scenarios for the
Beyond the Horizon

- **Geopolitics:** The United States is in direct competition with China’s influence ushered in by the maritime aspects of China’s New Silk Road project. China has used investments to gain access to ports across the Asia Pacific, east Africa, and, most recently, the U.S. West Coast. China uses this move to justify its military vessels’ conduct of freedom-of-navigation patrols and antipiracy operations. The increase in maritime trade elicits a U.S. response that spreads naval assets thin. Analysts say that the Marine Transportation System is close to capacity.

- **Economy:** U.S. diplomatic bargaining power is somewhat hampered by the economic reality that the U.S. national debt to China is increasing, and the total government debt

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**TABLE 1.2**

<table>
<thead>
<tr>
<th>Beyond the Horizon</th>
<th>Rapid climate change</th>
<th>More-confrontational sea transit</th>
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<tr>
<td></td>
<td>Competition with an</td>
<td>U.S. economy in decline</td>
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<td></td>
<td>emboldened China</td>
<td>United States seeking to rebuild</td>
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<td>Pressures on fisheries</td>
<td>international partnerships</td>
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<th>Increasingly aggressive China in geopolitics and gray-zone activities</th>
<th>Advances in green energy and space helping sustain economic growth</th>
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<td>United States focusing on international partnerships</td>
<td>Politically and socially stable United States</td>
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<th>Diverging Paths</th>
<th>United States turning inward during stable economic prosperity</th>
<th>More-assertive China</th>
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<tbody>
<tr>
<td></td>
<td>China dominating the Arctic</td>
<td>Not fully materialized societal changes from a gig economy and new technology</td>
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<td>Fear of future climate effects</td>
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<th>Global effects of climate change and a new pandemic</th>
<th>Rebounding U.S. economy benefiting from advances in global technology</th>
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<tbody>
<tr>
<td></td>
<td>China strengthening partnerships in Central America</td>
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</table>

**NOTE:** Gray zone refers to “coercive actions that are shy of armed conflict but beyond normal diplomatic, economic, and other activities” (RAND Corporation, “A New Framework for Understanding and Countering China’s Gray Zone Tactics,” p. 1). These are summary statements for at least a 20-year time frame, but events and shorter-duration trends can run contrary to a broader trend (e.g., one can describe an economy as being prosperous over a couple of decades, but that economy could still see a shorter-lived downturn or recession).

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8 Tingstad et al., *Developing New Future Scenarios for the U.S. Coast Guard’s Evergreen Strategic Foresight Program.*
looms at record 120 percent of gross domestic product. Although China’s consumer market is expanding, it still depends on people in the United States to purchase its goods. This dependence prevents China from selling off U.S. treasuries. The proliferation of technologies has increased the rate and scale of maritime trade, and vessel traffic (increasingly autonomous) has doubled.

- **Climate**: Rising sea levels and increasing numbers, intensity, and frequency of hurricanes and storms are affecting USCG facilities and infrastructure. Some USCG facilities have moved inland; those that have yet to relocate cannot reliably perform duties at high tide. Several hurricanes in the Gulf of Mexico and along the eastern seaboard have caused billions of dollars in damage to USCG facilities and assets, many of which have yet to be repaired or replaced.

- **Technology**: Technology has changed how the USCG conducts security and law enforcement operations. Ports have replaced identification cards with advanced automation and biometrics and now use advanced surveillance systems to identify potentially malicious actors. These systems have successfully thwarted terrorist attacks and prevented criminal behavior. Surveys suggest that the public is embracing this type of surveillance activity.

- **Society**: The U.S. population is growing faster than it has in decades. Immigration reform has drawn young migrants with higher birth rates, and federally funded child care has resulted in a domestic baby boom. Because of a perceived national vulnerability and the pivot to technical skill–based jobs, young adults are expressing more interest in joining the military. The USCG is inundated with more applications than ever before.

**Steady Growth**

- **Geopolitics**: The United States has a strong presence abroad, and commitments to significant partnerships, such as the North Atlantic Treaty Organization (NATO), have allowed the United States to lead the world in a time of global stability. The United States has increased its focus on safety and sea-lane stewardship, and partnerships with several countries to share advanced space-based aid-to-navigation (ATON) technology have resulted in an all-time low in numbers of maritime accidents. The United States has also contributed to the preservation and regulation of global fish stocks in cooperation with countries all over the world.

- **Economy**: The United States is in a period of stable economic prosperity. The development of green technology and the hydrocarbon industry, along with a trend toward urbanization, has allowed the United States to improve the resilience for the energy grid. Efficiency and automation have allowed some small and midsize ports to downsize and rent space for other infrastructure.

- **Climate**: Predictions about more-frequent and stronger hurricanes and storms turn out to be wrong, and storm damage remains steady. However, ice melt in the Arctic has increased at an unprecedented rate, exposing new areas to oil drilling and making
Arctic sea routes easier to traverse. Arctic Council members have managed to cooperate to develop the trade route, setting guidelines for continuity of safety and stewardship. Funding for environmental response, search-and-rescue (SAR) capabilities, and ice operations increases to keep pace.

- **Technology:** Technology has made the shipping industry more efficient through electronic ATONs of U.S.-flagged vessels. But the digitization of this industry is not without complications. Cyberpiracy has allowed vulnerable systems to be hijacked and held for ransom until payments in digital currency are received. Cryptocurrency is now very popular for international trade, but the risk of hacking means that some U.S. companies rely on precious metals for trade, resulting in heavily armed vessels carrying these metals.

- **Society:** The nature of families is shifting significantly. Remote work has become increasingly acceptable, so family members are living closer to each other. This has extended family support systems and decreased divorce. The use of illegal drugs in the United States is unpopular and has been scaled back through effective campaigns. Counterdrug initiatives are still well funded because of the strong antidrug culture.

### Diverging Paths

- **Geopolitics:** The United States and Russia have limited presence abroad after shifting their focuses to more-domestic issues. In Russia’s absence, China has worked within international organizations, such as the International Maritime Organization, to assert influence and change norms from the inside. China is the now the dominant force of political and economic influence for the Arctic.

- **Economy:** The United States is in a period of stable economic prosperity, with huge gains on the West Coast created by the emergence of large conglomerates. Efficiency and automation have made manual-labor jobs increasingly rare. Through increased labor productivity, the national debt has come down significantly, resulting in the rapid growth of the U.S. gross domestic product.

- **Climate:** Climate abnormalities have caused unusual patterns in high- and low-pressure systems. Significant storms across the Midwest and in the Mississippi River basin have led to extensive flooding for the past several years. Flooding has also caused hazardous-material spills at major East Coast ports. Illegal fishing has been on the rise, both domestically and internationally.

- **Technology:** Technology has increased the efficiency of the shipping industry through the implementation of automation in major ports on the West Coast. Programs designed to manage storm response have been largely unsuccessful because of cyberattacks. Foreign agents have used the attacks to smuggle drugs and people in through disrupted U.S. ports. This criminal activity is not limited to foreign agents but also U.S. citizens termed *climate criminals* who have conducted large-scale break-ins and robberies in port facilities after storms.
• **Society:** Migrants are entering the United States—to get to Canada, where the climate is less erratic. As families disperse, fewer relatives are available to care for the elderly, causing a boom in caregiving jobs. Improved access to health care and universal basic income has given Americans more flexibility to work less traditional and less consistent jobs in the gig economy.

**Increasing Disorder**

• **Geopolitics:** The United States has left its role influencing global affairs. Russia has become the predominant force in the Arctic, where it controls all maritime traffic and has significant infrastructure to support its civilian and military operations. China has heavily invested in Mexico, causing Mexico to become a leader in various industries, including production of electric cars.

• **Economy:** U.S. prosperity is declining as the yuan replaces the dollar as the dominant global currency. China—the majority owner of U.S. debt—is threatening to sell U.S. treasuries if the United States interferes with its foreign policy. With no U.S. presence in the Arctic, China and Russia have established a joint venture operating autonomous shipping in the northern sea lanes despite safety concerns expressed by the International Maritime Organization. Immigration has plummeted during America’s economic downturn. Because of the limited defense budget, Congress has increasingly seen the USCG as a critical organization on multiple fronts and has fully funded its budget requests for the past five years.

• **Climate:** Sea levels are on the rise, more-frequent storms have caused significant damage, and infrastructure repair and recovery are badly needed in port complexes and military installations. Western states have more drought, causing water rationing, the collapse of California’s agriculture economy, and a mass exodus of California’s population.

• **Technology:** Collaboration between Japan and India has led to significant advances in battery technology, leading to a boom in the electric-car industry and even the electric shipping industry. Asian shipbuilding firms have capitalized on this emerging technology by creating electric cruise ships, ferries, cargo ships, fishing boats, and patrol boats. The U.S. military is even considering replacing smaller military vessels with electric platforms. However, criminal organizations are using autonomous drone boats to move goods and people.

• **Society:** Americans are eating more plant-based proteins instead of meat and fish. The eight-hour workday has shifted to smaller blocks of time and more freedom to work on demand and remotely. The traditional family unit is less common, and cohabitation is the norm. Riskier social behavior has resulted in an outbreak of drug-resistant human immunodeficiency virus (HIV), and illegal “miracle cures” from abroad are laced with harmful substances. This HIV outbreak has also made recruiting for the USCG and the armed forces generally challenging.
The Organization of This Report

The remainder of this report discusses the game’s design and methodology (Chapter 2); the results of the six iterations of the game played so far, including overarching observations about each game and the insights and results of each team (Chapter 3); the research team’s analysis and takeaways across all the games (Chapter 4); and a conclusion with insights for senior leadership and thoughts on the future of gaming in the USCG (Chapter 5). Technical appendixes provide the individual teams’ insights and results, by team and by game (Appendix A), and the results of the participant survey taken before and after each game to see whether the game changed minds (Appendix B).
CHAPTER 2

Design and Methodology

Paratus Futurum was designed to facilitate discussions about the USCG’s long-term institutional strategies and to require players to make distinct mission priority and investment choices to prepare for an uncertain future. The game provides a sandbox in which players can make trade-offs among a variety of mission profiles and investment options and experience the effects of their choices in different potential future scenarios. These game scenarios and events were drawn directly from USCG-developed analysis and concepts and refined through the first 3.5 years of Evergreen V.\(^1\) The game was designed such that participants gain a better understanding of how to think and talk about strategic options and are in a better position to participate in real-life strategy and investment development activities.

The game focuses at a strategic level on the USCG’s roles and missions, its available resources, and potential adjustments to those resources to the year 2040 and beyond. Players are assigned scenarios that portray an uncertain future in which climate change, technological advancements, the U.S. economy, and the global competition for power all shape demand for USCG missions. The game was designed to speak directly to the incoming Commandant and allow USCG leadership to understand and experience the trade-offs that must occur to meet USCG priorities and to articulate a vision to Congress, the executive branch, the U.S. Department of Homeland Security (DHS), and the USCG workforce. After the new Commandant arrived and released a service strategy, the game was then adapted to play the new strategy against the different futures to see the insights and findings of which senior leadership should be aware for implementation and execution of the strategy. However, the game was not meant to develop strategy or suggest what the USCG should do in the future. Instead, it is about learning how to better frame and explore those questions.

In this chapter, we describe how the game was developed to meet these goals. We discuss our choices for making USCG responsibilities tractable for game purposes, how the game is played, how the game varied between Evergreen V and Evergreen VI to meet changing needs, and the practical steps taken to execute the game over time.

\(^1\) Tingstad et al., Developing New Future Scenarios for the U.S. Coast Guard’s Evergreen Strategic Foresight Program.
Representing the Complexities of Coast Guard Operations

Coast Guard Resources

We first needed to determine how to incorporate the resources that the USCG had at its disposal. We determined that displaying the current outlay of USCG assets across geographic locations in detail would add a layer of complexity that would make the game unwieldy. Furthermore, focusing on material assets would minimize the role of personnel and institutional effort as USCG resources. Rather than represent personnel, current assets (e.g., cutters, ice breakers, fixed-wing aircraft, rotary-wing aircraft), budgets, and institutional effort individually, we chose to aggregate and abstract these individual elements into a single unit: the resource chip. Resource chips (referred to hereafter as just resources) are the tools that players use to take action during the game. In essence, a resource chip represents a basket of different inputs, including dollars, physical and operational assets, staff and leader focus and effort, and prioritization of USCG members’ operational and training time.

Coast Guard Mission Areas

We then needed to determine how best to incorporate the broad USCG mission set into the game. The USCG is responsible for several critical missions across the globe. Rather than examine the totality of USCG responsibilities in every region, we focused on a discrete number of missions and regions to avoid overwhelming the players.

The game divides USCG responsibilities into 13 mission areas. Our mission areas deviate slightly from the current conception of USCG missions for two reasons:

- First, the deviation allowed us to better capture what the missions might look like in the future.
- Second, the deviation avoided rigid adherence to the USCG’s current concepts so players would be inspired to think creatively about how the USCG can operate rather than how the USCG has operated.

The USCG offers two categorizations of its missions, shown in Table 2.1:

- First, the Homeland Security Act of 2002 codifies 11 USCG missions that are designated as either homeland security or non–homeland security missions.
- Second, the USCG groups these missions into six operational mission programs, although several of the 11 mission areas appear in more than one of the operational mission programs.

---

2 USCG, “Missions.”

We began with the 11 statutory missions. We made three alterations to the mission set based on the operational mission programs’ definitions. The statutory missions of ATON and ice operations were already under the MTSM operational program. We added waterway management and bridge operations to the larger MTSM program. In addition, defense readiness activities were included under the operational program of DO. In the game, we refer to the broader DO program instead of defense readiness because we expect the future USCG to be tasked with additional defense-related missions in support of DoD that go beyond readiness-related activities. Finally, we combined OLE and LMRs into the broader category of fishery enforcement (FE), which includes both domestic and international FE missions.

Two nonstatutory missions—emergency management and disaster response (EMDR) and international engagement (IE)—discussed in the USCG’s annual report were sufficiently relevant to be treated as mission areas within the game.\(^4\) We made EMDR a distinct mission under the maritime response operational program because climate change will likely make disasters more frequent in the future. The EMDR mission includes coordination with other government agencies, such as the Federal Emergency Management Agency, immediately before and after an emergency or disaster. We designated IE as a mission because, given the increasingly global reach of USCG activities, the USCG will likely be tasked with additional

\(^4\) Cyberspace operations and USCG intelligence missions, although also discussed in the report, were not treated as specific missions in the game but rather are aspects of other mission areas and spaces for investment.
higher-level IE tasks. This mission captures *persistent* relationship-building activities with partners that will affect political decisionmaking.

Table 2.2 captures the game’s deviations from the USCG’s mission areas. The official descriptions of the missions used throughout the game are shown in Table 2.3.

**Geographic Representation**

Next, we broke down the geographic space of USCG operations. We included the following regions in the game: continental United States (CONUS) Pacific; CONUS Atlantic; Europe; the Arctic; Latin America and the Caribbean; the Middle East and Africa; and the Indo-Pacific.\(^5\) Like with mission areas, these geographic areas did not correspond to the USCG’s current districts. Instead, we recognized the potential for an expansion of the USCG’s global reach, and we aggregated CONUS to the command area level.\(^6\)

<table>
<thead>
<tr>
<th>Table 2.2</th>
<th>Organization of Missions for Gameplay</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operational Mission Program</strong></td>
<td><strong>Statutory Mission</strong></td>
</tr>
<tr>
<td>Maritime law enforcement</td>
<td>DI Migrant interdiction OLE LMRs</td>
</tr>
<tr>
<td>Maritime response</td>
<td>SAR MEP (response)</td>
</tr>
<tr>
<td>Maritime prevention</td>
<td>PWCS (prevention) Marine safety MEP (prevention)</td>
</tr>
<tr>
<td>MTSM</td>
<td>ATONs Ice operations</td>
</tr>
<tr>
<td>Maritime security operations</td>
<td>PWCS (response)</td>
</tr>
<tr>
<td>DO</td>
<td>Defense readiness</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**NOTE:** HA/DR = humanitarian assistance and disaster relief.

\(^a\) This mission does not directly map to a statutory mission.

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\(^5\) Intentionally, our delineations of Pacific and Atlantic areas do not match up with USCG Pacific Area and USCG Atlantic Area. For this version of the game, the Antarctic was not a separate region. It will be added for future iterations of the game.

\(^6\) USCG, “Areas of Responsibility.”
### TABLE 2.3
Official Descriptions of Missions Used in the Game

<table>
<thead>
<tr>
<th>Mission</th>
<th>Description</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port, waterway, and coastal security (PWCS)</td>
<td>Prevent and disrupt terrorist attacks, sabotage, espionage, and subversive acts in the maritime domain and the Marine Transportation System.</td>
<td>This mission includes conducting Maritime Transportation Security Act–related inspections and preventing security breaches (Public Law 107-295, Maritime Transportation Security Act of 2002).</td>
</tr>
<tr>
<td>Drug interdiction (DI)</td>
<td>Defend against drug smugglers seeking to bring illegal substances into the United States.</td>
<td></td>
</tr>
<tr>
<td>Marine Transportation System management (MTSM)</td>
<td>Minimize disruptions to maritime commerce by assessing and mitigating risks to safe navigation and by providing waterway-restoration capabilities after extreme weather events, marine accidents, or terrorist incidents.</td>
<td>This mission includes ATON, ice operations, bridge administration, and waterway management.</td>
</tr>
<tr>
<td>Search and rescue (SAR)</td>
<td>Ward off the loss of life, personal injury, and property damage by helping boaters in distress.</td>
<td>This mission does not include SAR cases that are associated with significant emergency situations, such as natural disasters.</td>
</tr>
<tr>
<td>Fishery enforcement (FE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic</td>
<td>Provide effective and professional enforcement to advance national goals for the conservation, management, and recovery of LMRs, marine protected species, and national marine sanctuaries and monuments. Deter, detect, and interdict illegal foreign fishing vessel incursions into the U.S. exclusive economic zone.</td>
<td>This mission entails fishing regulations and fishery compliance and includes LMRs and OLE.</td>
</tr>
<tr>
<td>International</td>
<td>Enforce international agreements to suppress illegal, unreported, and unregulated (IUU) fishing activity in international waters.</td>
<td>This mission includes all FE missions performed with partners outside U.S. waters.</td>
</tr>
<tr>
<td>Marine safety</td>
<td>Prevent deaths, injuries, and property loss in the U.S. maritime domain.</td>
<td>This mission includes the development and enforcement of federal marine-safety regulations, certifications and credentials for mariners, vessel documentation, investigations of commercial marine casualties, compulsory inspections, and administration of the approval program for marine-safety equipment and materials.</td>
</tr>
</tbody>
</table>
Although the USCG performs a great number of missions around the globe, we focused on a limited set of missions per region to limit the complexity of the game. These choices indicate pressing missions in each region moving into the future. We determined these intersec-
tions of mission and region through the course of our research, including previous iterations of Evergreen, and validated them in the project’s initial workshop in December 2020. The regions did not have the same numbers of mission areas; we believe that this was a realistic choice because some regions require greater USCG attention today and should be expected to do so moving forward. Table 2.4 shows how the missions were distributed by region, and Figure 2.1 shows how the game board displays the missions by region.

Furthermore, we assigned any mission that involved the interdiction at sea of vessels or individuals crossing geographical borders to the geographic region of origin, even if the actual USCG activity involved U.S. waters. For example, the interdiction of migrants who travel to the United States from Latin America fell under the Latin America and Caribbean geographical region.

Although we recognize that the USCG can be called on to conduct any of these missions at any time, the service cannot be expected to conduct all missions all the time at a high level of expertise and readiness. Thus, teams must set priorities (see Figure 2.2). In the game, they can resource each mission area in each region at one of three levels of prioritization: risk, focus, and priority. Risk implies that no additional resources or training effort were dedicated

<table>
<thead>
<tr>
<th>Missions</th>
<th>CONUS Pacific</th>
<th>CONUS Atlantic</th>
<th>Arctic</th>
<th>Europe</th>
<th>Latin America and the Caribbean</th>
<th>Middle East and Africa</th>
<th>Indo-Pacific</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DI</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
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<tr>
<td>EMDR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
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<tr>
<td>FE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
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<tr>
<td>HA/DR</td>
<td></td>
<td></td>
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<td>x</td>
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<tr>
<td>IE</td>
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<td></td>
<td>x</td>
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<tr>
<td>MEP</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
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<tr>
<td>Migrant</td>
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<td>safety</td>
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<tr>
<td>Migrant</td>
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<td></td>
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<tr>
<td>interdiction</td>
<td></td>
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</tr>
<tr>
<td>MTSM</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PWCS</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAR</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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8 Davenport et al., USCG Project Evergreen V.
FIGURE 2.1
The Game Board Map

NOTE: The use of this Mercator-projection map allowed clearest placement of game elements on the board. The symbols beneath the mission names indicate where players should place chips to indicate what priority they are putting on those missions in those regions.
to that mission area, which increases the risk of failure to meet stakeholder expectations if a challenging event were to occur. Focus as the mission prioritization suggests that training and other planning resources were allocated to the mission area to minimize this risk. Priority indicates that significant additional resources, platforms, training, and planning were allocated to that mission in that region to ensure that the mission could be performed reliably to meet or surpass stakeholder expectations.

In the game, the prioritization levels correspond to how many resource chips teams expend on a mission in each region: No chips for the risk level, one chip for the focus level, and two chips for the priority level. To capture the difficulty of operating at distance, costs in the Arctic, Europe, the Indo-Pacific, and the Middle East and Africa regions require an additional resource chip for every level of mission prioritization. So, for example, to achieve a focus level of prioritization in those regions, players must devote two resource chips. This constraint can be removed with an investment in at-sea logistics or new facilities, as we explain in greater depth in the next section.

**Future Coast Guard Investments**

To capture the trade-off between the long term and the short term, we needed to allow players the opportunity to make limited investments that would, in future turns, reduce costs

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We assume that the USCG has established significant capabilities for operating in the Western Hemisphere and is thus prepared to operate in the Latin America and Caribbean region.
or improve performance in one or more mission areas or operational regions. Investment options were developed in concert with DCO-X as key areas for exploration in previous iterations of Evergreen. These investments have different costs, timelines, and benefits.

These investments were left broadly defined. This was done purposefully; the intent was to encourage players to discuss how the broader investment category, such as uncrewed systems (UxSs) and the capabilities they provide, could be applied to meet the game’s mission demands. For example, players often discussed the variety of UxSs, from small drones to large surface and subsurface vessels, and how they could serve to meet demands of managing a wide set of mission demands for a particular region depending on capabilities. The players were provided a general definition, but the intent was for the players to provide a vision of what these capabilities could look like and how they could support the future service, rather than for them to focus on a specific asset or platform technology.10

The first investment is in law enforcement detachments (LEDETs). LEDETs are specialized teams that deploy aboard U.S. or allied vessels in support of maritime law enforcement and interdiction missions. In recent years, arguments have been made to expand their use; however, expanding their authority might require institutional change from the USCG.11

The second investment is in foreign-area officers (FAOs).12 Recent USCG discourse has noted the importance of cultivating a force that has sufficient regional expertise, language skills, and understanding of international politics to serve as a liaison to partners overseas.13 At present, this skill set is underrepresented, and FAO responsibilities are performed in several offices.14 Thus, although their creation would provide clear benefits to the USCG, it would also require making FAO an attractive career path within the service. The costs of this institutional adaptation, as well as other adaptations necessary to make FAOs effective, are represented in the game by imposing a cost to USCG culture (CU).

Two additional investment options allow the USCG to expand its technological footprint:

- The first, more-minimal investment, is in UxSs. UxSs can be used to support many USCG mission sets, including SAR and DI. Because UxSs have such broad applicability to supplement or take the place of existing assets, they act as a force multiplier across

10 We recognize that, for many of the investments, the timelines from the decision to invest to the full fielding of the capability are artificially, and perhaps unrealistically, short. Given four-year game turns and the desire to allow players to see the impacts of investment decisions, this was deemed a necessary game artificiality—one that is not unusual in strategic-level wargames.

11 Ray, “Employ Coast Guard LEDets in the Indo-Pacific.”

12 The USCG does not currently have FAOs. This investment is meant to reflect an organization and streamlining of efforts that currently fall to defense attachés, USCG liaison officers, exchange officers, and similar under a single, coordinated umbrella of FAOs (potentially resembling FAOs in DoD).

13 Weilant et al., Improving the Effectiveness of U.S. Coast Guard International-Affairs Efforts; Wilkins and Moyseowicz, “Deckplate Diplomats.”

14 USCG, “Subject Matter Experts.”
mission sets in the region where they are used. However, UxSs require both a materi-

el investment and an institutional shift to recruit and train the personnel needed to
manage and deploy these systems.

- A more significant investment can be made in command, control, communications,
computers, cyber, intelligence, surveillance, and reconnaissance (C5ISR). The USCG,
like the military and the government writ large, requires significant dedication and
resourcing to keep up with the changing role of technology. To stay apace, the USCG
would need to make ongoing investments in technological infrastructure and institu-
tional knowledge. This would also require adapting the workforce to a new, technology-
forward method of completing its missions. As a result, this investment is extremely
costly and takes multiple turns in the game to truly take effect. However, it would allow
the USCG to operate as a more efficient force regardless of location and mission by, for
example, providing superior maritime domain awareness.

Players can also choose to make two investments that will increase the USCG’s ability to
operate overseas:

- The first is expeditionary logistics, which allow the USCG to operate overseas for longer
periods without requiring permanent basing.
- The second is a forward operating base (FOB), which allows the USCG to build, lease, or
share physical infrastructure for performing missions.

Although an enhanced logistical trail is flexible in that it can be devoted to different regions
at different times, an FOB builds institutional knowledge about the region and minimizes
any gaps in USCG presence. Both, however, require institutional change as the USCG pivots
from a CONUS-focused force to a more globally distributed force.

The adaptive force package (AFP) was designed directly in response to previous Evergreen
work.\footnote{Davenport et al., \textit{USCG Project Evergreen V.}} Players noted that the USCG was required to be able to pivot its assets and personnel
to any mission at a given time but that doing so stressed the service. They proposed develop-
ing a package of assets and personnel specifically designed to be deployed \textit{when the need arises} rather than have the service be forced to draw down resources and human capital to
meet this need with sufficient speed or be restricted to historical asset combinations, such as
a helicopter deployed on a cutter. This element of the game was refined several times to meet
player intent and now serves as a standing surge force that can quickly pivot in the event of a
significant crisis.

Facility modernization (FM) and operations and maintenance (O&M) are investments
in the ongoing upkeep of USCG infrastructure and assets. At any point in the game, play-
ers might be confronted with the possibility that USCG infrastructure and assets will break
down. Prevention, however, is cheaper than recovery. Investing in FM and O&M lowers both
the possibility of outright collapse and the scale of the costs required to recover when collapse occurs. Event cards can appear at any point in the game to drive discussions about the existing status of USCG infrastructure and assets, especially when players lose sight of this while focusing on the future.

Because each of these investments can cause institutional friction, players can also invest in the workforce directly by investing in USCG CU. This dimension captures how changes to USCG priorities made by the players could impose a need for the USCG to manage and pay for the change necessary to institutionalize and sustain the new initiatives (e.g., changes to recruiting, training, and more, as well as changing the service CU as needed in response to utilize the investment). In the game, we manifest this as paying for and sustaining CU. For example, a shift to missions that require longer time on station overseas might make recruiting more difficult by placing a greater burden on USCG families. Similarly, investing in new technologies will require curriculum and operational changes that need to be proliferated through the force. In the game, players might see direct benefits or costs from having a strong or weak institutional CU, respectively. CU is scored from −3 to 10, with 0 representing a neutral starting position. If investments occur that would push CU below −3, players are required to invest in CU to reduce institutional friction. The full range of investments, including their costs, timeline, definition, and effect, is shown in Table 2.5.

In early iterations of the game, both players and the design team noted that, because investments, once purchased, could be utilized with no further cost, the game could become unbalanced in later turns. As a result, in later rounds of the game (beginning in Paratus Futurum Evergreen VI, game 2), players were confronted with recapitalization cards that directed investments to reduce institutional friction.

<table>
<thead>
<tr>
<th>Investment</th>
<th>Cost, in Chips</th>
<th>Timeline</th>
<th>Explanation</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Law enforcement detachments (LEDETs)</td>
<td>1</td>
<td>Available next turn</td>
<td>Moves additional USCG personnel into LEDETs that operate on USN ships or on other-than-USCG platforms</td>
<td>Each DI and migrant interdiction mission in the specified geographic area receives a +1 on its roll. CU score decreases by 1.</td>
</tr>
<tr>
<td>Foreign-area officers (FAOs)</td>
<td>1</td>
<td>Available next turn</td>
<td>Moves additional USCG personnel into FAO roles, mostly operating overseas</td>
<td>Each FE and IE mission in the specified geographic area receives a +1 on its roll. CU score decreases by 1.</td>
</tr>
</tbody>
</table>

16 Players can both avoid infrastructure collapse and limit the damage (and therefore the costs) of recovery.

17 This highlights the need for an active and trained live facilitation team.
### Table 2.5—Continued

<table>
<thead>
<tr>
<th>Investment</th>
<th>Cost, in Chips</th>
<th>Timeline</th>
<th>Explanation</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncrewed systems (UxSs)</td>
<td>2</td>
<td>Available next turn.</td>
<td>Adds enough uncrewed air or sea systems and associated hardware, training, and mission resources to augment a single geographic area</td>
<td>Every mission in the specified geographic area receives a +1 on its roll. The decision about where the systems are added can be changed each turn. CU score decreases by 1.</td>
</tr>
<tr>
<td>Adaptive force package (AFP)</td>
<td>2</td>
<td>Available next turn.</td>
<td>Develops a force package that can more flexibly perform different USCG responsibilities across mission areas</td>
<td>In one region per turn, players can increase their mission level from risk to focus or from focus to priority after viewing an event card. The package must be placed in a specific region. The decision about where the AFP is stationed can be changed each turn. CU score decreases by 1.</td>
</tr>
<tr>
<td>Expeditionary logistics capacity (ELC)</td>
<td>3</td>
<td>Available next turn.</td>
<td>Represents additional support being leveraged from the federal government, the Defense Logistics Agency, or allies, allowing USCG platforms to extend on-station time</td>
<td>Resource costs in the Arctic, the Indo-Pacific, Europe, and the Middle East and Africa no longer require an additional resource token for each level of prioritization. The decision about where the ELC is placed can be changed each turn. CU score decreases by 1.</td>
</tr>
</tbody>
</table>
### Table 2.5—Continued

<table>
<thead>
<tr>
<th>Investment</th>
<th>Cost, in Chips</th>
<th>Timeline</th>
<th>Explanation</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward operating base (FOB)</td>
<td>3</td>
<td>Available next turn</td>
<td>Provides new physical infrastructure contracted or leased to be devoted to USCG missions</td>
<td>Resource costs in the Arctic, the Indo-Pacific, Europe, and the Middle East and Africa no longer require an additional resource token for each level of prioritization. Every specified geographic area receives a +1 on its roll. The base cannot be moved once placed. CU score decreases by 1.</td>
</tr>
<tr>
<td>Command, control, communications, computers, cyber, intelligence, surveillance, and reconnaissance (C5ISR)</td>
<td>6 (3 per turn for two turns)</td>
<td>Available for the next two turns</td>
<td>Players begin with C5ISR at current levels and can improve player capabilities to include advanced cyber capabilities.</td>
<td>Each team in every geographic area receives on its roll the number of missions in that region +1. Up to two additional mission packages for unmanned systems can be purchased to arrive when each C5ISR update does (or later). CU score decreases by 1 on the first turn.</td>
</tr>
<tr>
<td>Facility modernization (FM)</td>
<td>1</td>
<td>Takes effect this turn</td>
<td>Maintains and modernizes facilities and capital assets</td>
<td>It reduces chances of large, unexpected facility repair costs in this turn.</td>
</tr>
<tr>
<td>Operations and maintenance (O&amp;M)</td>
<td>1</td>
<td>Takes effect this turn</td>
<td>Funds the O&amp;M of current USCG assets and equipment</td>
<td>O&amp;M reduces the chances of large, unexpected asset repair costs in this turn.</td>
</tr>
<tr>
<td>Culture (CU)</td>
<td>1</td>
<td>Takes effect this turn</td>
<td>Represents institutional investments in how all USCG functions are being conducted. Investments include both physical resources and leader effort and focus.</td>
<td>CU score increases by 1 for each token invested.</td>
</tr>
</tbody>
</table>

**NOTE:** USN = U.S. Navy.

*LEDETs are also an implicit investment when resourcing DO missions.*
them to choose between reinvestment (of one resource chip) or losing the effectiveness of their investments. For career fields, teams had to choose between updating training and losing their investments. For physical assets, teams had to choose between modernizing their assets and facing a 40-percent chance of asset failure.

How Team Performance Was Evaluated

Next, we had to determine how best to evaluate and convey the results of players’ actions. Because the goal of the game is to facilitate discussions about alternative long-term institutional strategies for the USCG, we chose to measure players’ success in terms of long-term institutional progress. Players are judged not only on their ability to perform the key USCG missions we have identified but also on how mission success or failure affects the USCG’s institutional position in the eyes of its stakeholders. The key stakeholders for the USCG are congressional opinion (CO), public opinion (PO), and executive branch opinion (EB), the last of which includes DHS, DoD, and other government actors. Each measure is scored from –10 to 10, with 0 representing a neutral starting position.

We assessed that different USCG stakeholders would be responsive to outcomes in certain mission areas. As a result, each mission corresponds to a certain stakeholder for which scores are accrued. Although we note this fact to the players, we do not specify which USCG missions are of interest to which stakeholders or the extent to which they affect stakeholder views of the USCG. Furthermore, each stakeholder has priority missions (those of greatest concern) in specific geographic areas. Our logic for pairing our stakeholders and missions is shown in Table 2.6. Stakeholder priorities are indicated in the same table.

Mission Scoring

We assumed that mission success was ultimately determined by stakeholder reaction, which can affect the future of the service. Mission success is thus scored across the measures of CO, PO, and EB. The actual result of player actions is one of four mission ratings: poor, mediocre, acceptable, or good. Each mission has a distribution of scores for the relevant stakeholder built on their likeliest outcomes. We developed four categories of mission outcome distributions, based on analysis of the likelihood of mission success and stakeholder behavior. As discussed above, scores are a combination of the baseline scores and the stakeholder priority scores.

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18 We use Evergreen V and Evergreen VI to distinguish between the first and second years of Paratus Futurum. We use game 1, game 2, etc., for the series of games in Evergreen V and Evergreen VI—generally four iterations each involving four teams. We also number the scenarios that each team played (i.e., a team played scenario 1 in game 2 of Evergreen V). Finally, each turn represents a four-year period and is referred to as turn 1, turn 2, etc.

19 These assessments were created and validated through expertise on the project team, as well as with other RAND subject-matter experts, and during development discussions and tests with USCG personnel.
### TABLE 2.6
Logic for Pairing Stakeholders and Missions

<table>
<thead>
<tr>
<th>Mission</th>
<th>Stakeholder</th>
<th>Executive Branch</th>
</tr>
</thead>
<tbody>
<tr>
<td>DI</td>
<td>Congress</td>
<td>Applies to the U.S. Department of Justice</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>DO</td>
<td>Congress</td>
<td>Affects and pertains directly to DoD and the U.S. Department of State—two important executive branch entities—and to the broad national security directives of the executive, including the National Defense Strategy&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>EMDR</td>
<td>Congress</td>
<td>Affects and pertains directly to DoD and the U.S. Department of State—two important executive branch entities—and to the broad national security directives of the executive, including the National Defense Strategy&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>FE</td>
<td>Congress</td>
<td>Applies to the U.S. Department of Commerce</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>HA/DR</td>
<td>Congress</td>
<td>Affects and pertains directly to DoD and the U.S. Department of State—two important executive branch entities—and to the broad national security directives of the executive, including the National Defense Strategy</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>IE</td>
<td>Congress</td>
<td>Affects and pertains directly to DoD and the U.S. Department of State—two important executive branch entities—and to the broad national security directives of the executive, including the National Defense Strategy</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>Marine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEP</td>
<td>Congress</td>
<td>Affects and pertains directly to DoD and the U.S. Department of State—two important executive branch entities—and to the broad national security directives of the executive, including the National Defense Strategy</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> National Defense Strategy

<sup>b</sup> Magnified

<table>
<thead>
<tr>
<th>Mission</th>
<th>Stakeholder</th>
<th>Executive Branch</th>
</tr>
</thead>
<tbody>
<tr>
<td>DI</td>
<td>Congress</td>
<td>Applies to the U.S. Department of Justice</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>DO</td>
<td>Congress</td>
<td>Affects and pertains directly to DoD and the U.S. Department of State—two important executive branch entities—and to the broad national security directives of the executive, including the National Defense Strategy&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>EMDR</td>
<td>Congress</td>
<td>Affects and pertains directly to DoD and the U.S. Department of State—two important executive branch entities—and to the broad national security directives of the executive, including the National Defense Strategy&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>FE</td>
<td>Congress</td>
<td>Applies to the U.S. Department of Commerce</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>HA/DR</td>
<td>Congress</td>
<td>Affects and pertains directly to DoD and the U.S. Department of State—two important executive branch entities—and to the broad national security directives of the executive, including the National Defense Strategy</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>IE</td>
<td>Congress</td>
<td>Affects and pertains directly to DoD and the U.S. Department of State—two important executive branch entities—and to the broad national security directives of the executive, including the National Defense Strategy</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
<tr>
<td>Marine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEP</td>
<td>Congress</td>
<td>Affects and pertains directly to DoD and the U.S. Department of State—two important executive branch entities—and to the broad national security directives of the executive, including the National Defense Strategy</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td></td>
</tr>
</tbody>
</table>
Missions with a Distribution Weighted Toward Negative Outcomes

Because these missions often result in poor outcomes due to their inherent challenges, the USCG is likely to be penalized unless it has significant success. For these missions, scores at the poor and mediocre levels are negative, acceptable are neutral, and scores at the good level are positive. The missions in this category are EMDR and migrant interdiction, and Table 2.7 shows how they are scored.

**TABLE 2.7  
Negative-Outcome Missions**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Baseline Score</th>
<th>Stakeholder Priority Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>−2</td>
<td>−3</td>
</tr>
<tr>
<td>Mediocre</td>
<td>−1</td>
<td>−2</td>
</tr>
<tr>
<td>Acceptable</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>Good</td>
<td>+2</td>
<td>+3</td>
</tr>
</tbody>
</table>

NOTE: NC = no change.

**Table 2.6—Continued**

<table>
<thead>
<tr>
<th>Mission</th>
<th>Stakeholder</th>
<th>Congress</th>
<th>Public</th>
<th>Executive Branch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Migrant interdiction</td>
<td></td>
<td>Pertains to a topic that is heavily politicized for U.S. political parties</td>
<td>Pertains to a topic that is heavily politicized within the greater population</td>
<td>Applies to entities within the USCG and DHS, including U.S. Customs and Border Protection</td>
</tr>
<tr>
<td>MTSM</td>
<td></td>
<td>Matters to Congress because that body will be responsive to any effects on the national economy or the local economies of members’ states or districts</td>
<td></td>
<td>Applies to the U.S. Department of Commerce</td>
</tr>
<tr>
<td>PWCS</td>
<td></td>
<td>Matters to Congress because that body is also heavily involved in U.S. national security policy</td>
<td></td>
<td>Applies to entities within the USCG and DHS, including U.S. Customs and Border Protection</td>
</tr>
<tr>
<td>SAR</td>
<td></td>
<td>Is likely to involve direct interaction between the USCG and the public and result in a risk to individual life and property</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a This mission is a priority for this stakeholder in the Indo-Pacific region.
b This mission is a priority for this stakeholder in the Atlantic and Pacific regions.
c This mission is a priority for this stakeholder in Latin America and the Caribbean.
Missions with a Distribution Weighted Toward Neutral Outcomes
These are the everyday USCG missions that are less likely to be seen as dramatic successes or failures. For these missions, scores at the poor level are negative, mediocre and acceptable are neutral, and good are positive. The missions are

- FE (CONUS and outside CONUS [OCONUS])
- HA/DR
- IE
- marine safety
- MEP
- MTSM
- PWCS (OCONUS).

Table 2.8 shows how they are scored.

Missions with a Distribution Weighted Toward Positive Outcomes
These missions are less likely to be visible unless they are successes. For these missions, scores at the poor level are negative, mediocre are neutral, and acceptable and good are positive. The missions are SAR and DI, and Table 2.9 shows how they are scored.

Missions with a Distribution Weighted Toward Extremes
These missions are likely to be noticed both for significant successes and significant failures. For these missions, scores at the poor level are extremely negative, mediocre and accept-

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Baseline Score</th>
<th>Stakeholder Priority Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>-2</td>
<td>-3</td>
</tr>
<tr>
<td>Mediocre</td>
<td>NC</td>
<td>-1</td>
</tr>
<tr>
<td>Acceptable</td>
<td>NC</td>
<td>+1</td>
</tr>
<tr>
<td>Good</td>
<td>+2</td>
<td>+3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Baseline Score</th>
<th>Stakeholder Priority Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>-2</td>
<td>-3</td>
</tr>
<tr>
<td>Mediocre</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>Acceptable</td>
<td>+1</td>
<td>+2</td>
</tr>
<tr>
<td>Good</td>
<td>+2</td>
<td>+3</td>
</tr>
</tbody>
</table>
able have less significant effects, and good are extremely positive. The missions are PWCS (CONUS) and DO, and Table 2.10 shows how they are scored.

**Scenarios**

Next, to determine the challenges players would face in the game, we drew on the four previously developed Evergreen scenarios. From these scenarios, we extracted seven trends: climate change, an assertive China, pandemic, technological advancement, U.S. economic decline, U.S. economic stability, and cooperation in the global commons. Players are informed of these trends in the beginning of the game.

These trends are listed in Table 2.11. Certain trend cards, once played, remain in place for all subsequent turns. For example, if a trend card states that the effects of climate change are

---

**TABLE 2.10**

*Extreme-Outcome Missions*

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Baseline Score</th>
<th>Stakeholder Priority Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>−3</td>
<td>−3</td>
</tr>
<tr>
<td>Mediocre</td>
<td>−1</td>
<td>−2</td>
</tr>
<tr>
<td>Acceptable</td>
<td>+1</td>
<td>+2</td>
</tr>
<tr>
<td>Good</td>
<td>+3</td>
<td>+3</td>
</tr>
</tbody>
</table>

**TABLE 2.11**

*Worldwide Trends*

<table>
<thead>
<tr>
<th>Trend</th>
<th>Associated Event Descriptor</th>
<th>Persistent or Transient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate change</td>
<td>Hurricanes, hazardous-material spills, extreme weather, IUU fishing, increased migration</td>
<td>Persistent</td>
</tr>
<tr>
<td>Technological</td>
<td>Drug smuggling, accidents involving uncrewed vehicles, ransomware attacks</td>
<td>Persistent</td>
</tr>
<tr>
<td>advancement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assertive China</td>
<td>China’s maritime militia, ally icebreaker assistance, antipiracy protection, oil cleanup and response</td>
<td>Transient</td>
</tr>
<tr>
<td>Global commons</td>
<td>IUU transit, FE in the Middle East, ATON cyberattacks, Russia–NATO competition</td>
<td>Transient</td>
</tr>
<tr>
<td>Pandemic</td>
<td>Surge in piracy, denial-of-service attacks</td>
<td>Transient</td>
</tr>
<tr>
<td>U.S. economy</td>
<td>IUU fishing, autonomous shipping vessels, vessel dumping</td>
<td>Transient</td>
</tr>
<tr>
<td>U.S. economic stability</td>
<td>Increased maritime traffic, shipping vessels damaged by ice, illegal dumping, domestic terrorism</td>
<td>Transient</td>
</tr>
</tbody>
</table>

---

20 Tingstad et al., *Developing New Future Scenarios for the U.S. Coast Guard’s Evergreen Strategic Foresight Program.*
increasing, this condition persists throughout later turns. Other cards, such as those representing the U.S. economy or adversaries’ foreign policies, do not persist past the current turn unless they are shown to players again in an indications and warnings (I&W) stage of the game.

For each game, we build a world for the players first through scripting a set of trends for players to encounter. Each world reflects one of the four Evergreen scenarios and the trends that are present in that scenario. An example of each team’s scenario from one run of Paratus Futurum is shown in Table 2.12.

For scenario 1 (Beyond the Horizon), at the outset of the game, the effects of climate change are felt even sooner and more dramatically than expected because the global community’s failure to enact sustainability goals in a fractured strategic environment. This is, in part, driven by increased competition between the United States and China. Because of these and other pressures, the United States enters a period of economic decline, and China becomes even more emboldened. A domestic manufacturing push supports a significant technological boom that helps curb the economic decline. The United States begins to expand its role outward, rebuilding its network of partnerships that was strained in its economic decline.

For scenario 2 (Steady Growth), the effects of climate change are not yet significantly affecting the global community at the start of the game. The major point of contention for the United States continues to be an increasingly aggressive China pursuing geopolitical goals on the economic and political fronts and using gray-zone activities to extend its reach and influence—and constrain U.S. reach and influence. Despite this, technological advancement, especially in the areas of green energy and space-based aids, and relative domestic political and social stability are keeping the U.S. economy on course. The United States continues to concentrate on global partnerships, including pursuing maritime safety and global fishery management as focus areas.

For scenario 3 (Diverging Paths), at the outset of the game, U.S. economic decline is prompting China to become even more assertive. The U.S. response has been to turn inward, creating even more opportunities for China abroad. Although there are not yet significant effects from climate change, those impacts are clearly on the horizon, and this, too, is pushing the United States toward domestic concerns. The shift toward a gig economy is starting to create changes in the U.S. social structure, but the longer-term economic impacts are still unknown. Similarly, the push for new technologies has not yet fully paid off, and early implementation has begun to introduce some risks and vulnerabilities into U.S. systems, even as those new technologies portend possible large-scale future payoffs.

For scenario 4 (Increasing Disorder), the outset of the game poses two significant global hazards: rapidly escalating effects of climate change and the onset of a global pandemic reminiscent of coronavirus disease 2019 (COVID-19). Although the world is better equipped to deal with the pandemic because of experience, the new pandemic still leads to an economic decline that greatly affects the United States. On the other hand, it also reduces competition because, after years of building influence and strengthening its economy through focusing on partnerships with Mexico, China must now turn inward to deal with its own growing
Domestic disorder. Domestic development projects and enhanced global cooperation help the U.S. economy rebound from its previous substantial decline. The United States once again becomes a global leader, buoyed by an activist population. This revitalized economic growth results in significant advances in global technologies, with both positive and negative externalities.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Turn</th>
<th>Climate Change</th>
<th>Technology Advancement</th>
<th>Assertive China</th>
<th>Economic Decline</th>
<th>Economic Stability</th>
<th>Pandemic</th>
<th>Global Commons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Beyond the Horizon</td>
<td>1</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
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<td>x</td>
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<td>x</td>
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<td></td>
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<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>2: Steady Growth</td>
<td>1</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
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<td>x</td>
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<td>x</td>
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<td>x</td>
<td></td>
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<td>x</td>
<td></td>
</tr>
<tr>
<td>3: Divergent Paths</td>
<td>1</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
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<td>x</td>
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<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>4: Increasing Disorder</td>
<td>1</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
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<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** x = The trend was applied during that turn. The colors in the chart are for visual organization and are consistently applied to the same trend category for event cards. For example, green event cards are related to climate change, and orange ones indicate technological advancement.
For each trend, we developed several specific event cards drawn from the narratives used in prior Evergreen scenarios. Some cards depict events that could occur under multiple Evergreen scenarios, while others are drawn from just one scenario. Similarly, some events are taken directly from the Evergreen scenarios, while others are extensions of the scenarios. The number of event cards corresponding to each scenario is listed in Table 2.13. Although the scenarios are not represented equally in the event card deck, each scenario is represented in a significant fashion.21

Each event card captures geopolitical shifts that challenge USCG resources and the prioritization of different mission types. Each event card demonstrates how a key area of USCG concern has become more prominent in the four years each turn represents, and it presents a specific event of note within that broader trend. For example, a broader trend might include an increased number of large storms, while the specific event might be a category 6 hurricane that makes landfall between New Orleans and Mobile.22 Each card also depicts an event resolution matrix, which determines how the player’s level of success in responding to an event is reflected in the scores on which players are judged.

For each of the aforementioned narratives, we also script the individual events that players will encounter. We present the events that occurred for team 1 from the aforementioned run of the game, listing the mission–region intersections of each event card in Table 2.14, and an example event card in Figure 2.3.

Each game followed a similar structure in which we developed a narrative of how the game would proceed according to the given Evergreen scenario. Across games, we varied the trends that were in play in each round while remaining consistent with that scenario. However, even if two iterations contained the same trends, the trends would manifest themselves differently in each game by incorporating a different set of event cards.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Event Cards</th>
<th>Percentage of Event Cards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Beyond the Horizon</td>
<td>15</td>
<td>44</td>
</tr>
<tr>
<td>2: Steady Growth</td>
<td>17</td>
<td>50</td>
</tr>
<tr>
<td>3: Diverging Paths</td>
<td>15</td>
<td>44</td>
</tr>
<tr>
<td>4: Increasing Disorder</td>
<td>13</td>
<td>38</td>
</tr>
</tbody>
</table>

NOTE: The percentages can overlap. For instance, some or all of the 15 cards that pertain to scenario 1 might also pertain to another scenario.

21 Furthermore, many other plausible scenarios can be developed that do not reflect the Evergreen scenarios while still using the existing deck of event cards.

22 Category 6 is not a typo. For the purposes of the game, we state that the Saffir–Simpson scale has been extended for additional categories. For a summary of some of the thinking behind this extension to the scale, see Masters, “Hurricane Dorian Was Worthy of a Category 6 Rating.”
In addition to the event cards, the game includes domestic-condition cards. Rather than challenging the prioritization of different USCG missions, domestic-condition cards challenge the prioritization of different USCG missions.

23 In this report, we use *domestic condition*, *domestic event*, and *domestic trend* to describe the cards. Some cards present specific events; others present trends.
lenge players’ ability to manage the different USCG equities. These cards indicate whether
the players have sufficient institutional clout to maintain control over the entirety of their
resources in light of stakeholder priorities and cultural changes.

There are two types of domestic-condition cards:

- The first is tied directly to the general trend cards played at the beginning of the turn.
  These cards serve as a direct referendum on how well the players dealt with the interna-
tional trends they faced.
- The second reflects social or political changes in the United States that are independent
  of the trends players faced in the previous turn.

Domestic-condition cards (an example is shown in Figure 2.4) may increase or constrain
resources for players based on their current scores for CO, PO, EB, and USCG CU. Each
domestic-condition card contains two elements:

- The first is the key domestic trend. For example, one trend is a shift in the United States
toward a gig economy.
- The second element is the how players’ scores in the four scoring areas will affect their
  resources and freedom of action for the next turn. For example, if PO is not sufficiently
  high, players will lose a resource chip because of difficulties in recruiting. In general,
  more-positive scores will result in additional resources or freedom of action; more-
negative scores will reduce resources or constrain or compel certain actions in the fol-
lowing turn. Resource tokens that are lost because of budget cuts can be regained later
only as the result of an additional domestic-condition card or if otherwise indicated.

The White Cell

Paratus Futurum uses a white cell to direct the gameplay and to collect data from the games.
Typically, the cell consists of a game leader, an assistant game leader, and at least one scribe.
Other members can be added as needed (e.g., an additional scribe or a Delphi method analyst,
described below). Sometimes, the RAND team performs the white-cell roles (referred to as we
or facilitators as an in-game term). The white cell crafts the specific mix of event cards that
are played during each game iteration, based on the guidance developed for game purposes.
The white cell familiarizes players with the rules, helps them understand how to play, and
presents the cards and assists in their adjudication. Finally, the white cell is responsible for
ensuring that the administration and conduct of the game flow smoothly and in accordance

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Equities refers to the various things that the USCG has to balance, such as PO, investment in assets,
CO, the ability to meet mission requirements in certain regions, requests from DoD, and relationships and
requests through DHS components.
The white cell can also arbitrate when rules are unclear or when players raise challenges to the gameplay or design.

Importantly, the white cell also prompts discussion as needed among the players, including asking for clarification on goals and strategy and explanations of their thought processes. The white cell may also adjust cards on the fly to facilitate certain discussions. However, this function requires a facilitator who is well trained and who has a deep understanding of the game and is therefore confident in how to best direct players to have fundamental discussions.

The Gameplay Process

Having described the major elements of the game, we now discuss its structure. In the game, players are asked to think at the strategic level. We ask players to consider strategic choices in both the short and long terms and to think about what the future USCG looks like. To aid in this thinking, players at the outset of the game develop an implementation plan, pursuant to broader strategic guidance they receive, that assesses what the USCG should be and do in 2040 and beyond. Evergreen V and Evergreen VI games sought to explore different strategic goals and thus featured different strategic guidance.

25 This ensures that data can be made available (audible) for all white-cell members (and players).
Evergreen V

In Evergreen V, the purpose was to understand how the USCG can prepare for a future that might be quite different from today. Players were given four-page, newspaper-style summaries of the Evergreen scenarios that highlighted the major trends in the world in 2040 to immerse them in the world in which they would soon be living. As a result, players had significantly more information about the future than they would have in reality. Players were directed to “live in their scenario world” because we wanted them to not only think through the trade space but also understand what choices they would make to prepare the future USCG for the challenges and opportunities it would face in the players’ assigned future scenario.26

Players were then given strategic visions that had been developed in the prior concept 2040 Evergreen workshop specifically to tackle these futures.27 The strategic visions were developed according to the following guidelines: Each strategic vision was composed of five bullet points. To allow players to more easily enact the trade-offs envisioned by the concept, each strategic vision contained at least one area of geographic emphasis and one that was not seen as a focus, at least one mission that players were directed to emphasize and one that was not seen as a focus, and at least one investment that players would be expected to acquire. The strategic visions are reproduced below.

Concept 1, Scenario 1: Beyond the Horizon

- The USCG should prioritize DoD interoperability while pushing to become more central to the national security discussion to remain relevant in the era of strategic competition and competitive budgets.
- The top USCG priorities will be CONUS and the Indo-Pacific but with additional focus on Latin America and the Caribbean. Missions in the Middle East and Africa and Europe will be deemphasized.
- The USCG needs to shift resources toward applying its specific strengths to work alongside DoD and the whole of government, taking advantage of the USCG’s broad authority, particularly through the expansion of LEDETs.
- The USCG might need to shift some resources away from counterterrorism and the marine-safety and stewardship missions.
- The USCG will use technology to enhance efficiency and approach “USCG as a service” (akin to “software as a service”) to achieve this.

26 For this report, trade space refers to a bounded area that considers the range of possible values (inherent or applied) for any number of attributes and characteristics, the relationships between them, and impacts on potential (design, decision, operational) outcomes. For additional information on these disciplinary frameworks, see Smead, A Descriptive Guide to Conducting Trade Space Analysis.

27 Davenport et al., USCG Project Evergreen V.
Concept 2, Scenario 2: Steady Growth

- The USCG will consist of more deployable teams (force packages) in lieu of geographically based entities to allow it to be in critical locations faster. Lift and support for globally surged or deployed forces are a must.
- The Arctic is an exception to this. The USCG must be prepared to address continuous, all-mission Arctic operations.
- With increases in global FE responsibilities, increased assets near Guam or DoD facilities in Japan can help position assets closer to the theater of interest.
- The USCG will focus on foreign relationship-building, including more bilateral and multilateral agreements and FAOs.
- The USCG will shift toward an away-focused culture, drawing resources away from CONUS.

Concept 3, Scenario 3: Divergent Paths

- The USCG will give the United States a decisive advantage in global strategic competition by enabling commerce and bringing adaptive solutions to emergency events at home and abroad.
- Port security is a major concern. The USCG will create a centralized cyber workforce with cyber teams embedded in major ports and uncrewed autonomous systems as a subordinate unit.
- Coastal cutters and aircraft will be used to respond to environmental disasters and manage pollution response.
- The USCG will need to draw down missions of ATON, ice patrol, and the search side of SAR.
- Significant resources will be devoted to the Indo-Pacific, but the USCG will also need to devote resources to Africa moving forward.

Concept 4, Scenario 4: Increasing Disorder

- For 2040’s global USCG operations, integration with DoD operations around the globe is critical.
- Operational effectiveness will be increased by leveraging technology (such as UxSs and advanced intelligence, surveillance, and reconnaissance) and data fluency to inform organizational decisionmaking and by making transformational changes in how the USCG conducts legacy missions.
- The USCG will shift to an oversight role for some current missions (such as ATON and disaster response) and operations that provide the opportunity for delegation or privatization.
- The USCG will use a heavy European and Arctic presence to combat Russia’s influence. Partnerships should be leveraged to exert maritime influence in the Indo-Pacific to attempt to push back on reduced U.S. maritime border buffer. Coverage in Latin America and the Caribbean will have to be decreased as a result.
• The USCG will build a culturally fluent corps of officers and enlisted members to work with partners around the world and ensure that FAOs have a viable career path.

Players were tasked with operationalizing these strategic visions. The design team judged the level of information given by each concept as striking the appropriate balance between enough detail and room for interpretation for players to capture the intent of the concept while still being able to create a unique realization for each game.

**Evergreen VI**

In Evergreen VI, the RAND team was tasked with using *Paratus Futurum* to assist in the evaluation of the Commandant’s service strategy, released in 2022.28 This task had three components:

• First, the game was designed to explore how the Commandant’s strategy would perform across a variety of worlds given the breadth of uncertainty about the future. This was not intended to serve as a referendum on the Commandant’s strategy under a given set of conditions but to highlight key trade-offs and their consequences across a variety of futures.

• Second, the game was to help address a significant gap between the guidance of a high-level, long-term–focused strategy and the details of its implementation. Rather than creating a concept based on the Commandant’s strategy and the Commandant’s intent,29 we challenged players to explore how they interpreted the Commandant’s guidance and how to best implement it.

• Third, the intent of this exercise was to have players consider the possibility of a Commandant’s intent and USCG strategy that were intended for the long term, rather than designed to meet more-immediate challenges and align with cycles of leadership and budgeting.

To consider how to test the Commandant’s strategy, we drew on two documents: the Commandant’s intent and the USCG strategy from October 2022. In reviewing these documents, we were concerned that they contained too much depth and breadth to apply directly to the game and might make it difficult for players to converge on decisions. As a result, we distilled these documents to focus player attention on key elements, as decided by the Evergreen team in coordination with DCO-X (see Box 2.1).

As mentioned above, in Evergreen VI iterations, players are charged with creating an implementation plan for the Commandant’s strategy. The implementation plan spells out regions of concern, no-fail missions, and priority investments for the short and long terms.

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28 USCG, *Strategy*.


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BOX 2.1

A Distillation of Commandant’s Service Strategy Documents

In the first year of Evergreen VI, Paratus Futurum was tasked with assisting in the evaluation of the Commandant’s service strategy released in 2022. Before the game, participants were given a reference document for the Commandant’s strategy that distilled two key strategic documents—the Commandant’s intent and the USCG strategy from October 2022—into their key elements, as decided by the Evergreen team in coordination with DCO-X. The text below captures this distillation:

We will redesign our operational planning, doctrine, and concepts of operations (CONOPSs) to deliberately and efficiently allocate and employ USCG resources across global and domestic missions.

We support national interests by saving lives, preventing terrorism, securing our maritime borders, promoting the rule of law, protecting natural resources, and enhancing cyber and critical infrastructure security, all in concert with other DHS components.

As the only branch of the armed forces within DHS, we bridge the gap between the law enforcement focus of DHS, the diplomacy of the Department of State, and the defense capabilities of DoD. Within the Joint Force, we provide a full spectrum of engagement in the gray zone as nation-states and transnational criminal organizations generate increased uncertainty and complexity in the maritime domain.

The USCG also plays a central role in strengthening maritime governance around the world, building on international engagements to bolster other countries’ inherent capabilities to police their own waters and support cooperative operations. We will operate forward globally, in a collaborative manner with federal and international partners, to advance U.S. sovereign interests, provide presence, and support the international rules-based order.

Delivering improvements for our USCG workforce is my top priority, so our service can meet the challenges of tomorrow and ensure the enduring prosperity of the United States. We will transform our total workforce by modernizing how we recruit, hire, develop, train, and support our people and their families.

We must compete with the evolving capabilities of our adversaries, embracing organizational and process changes to make the most of new technologies and, as necessary, identifying and closing gaps in our authority. In alignment with updated service doctrine, we will adopt new and innovative employment and force-packaging models for our full suite of assets, capabilities, and authority.

We will seek opportunities to use data and technology as force multipliers by increasing the employment of uncrewed systems, emerging communication technologies, space-based systems, data analytics, artificial intelligence, and machine learning solutions.

USCG facilities and infrastructure are becoming progressively vulnerable to extreme floods, fires, wind, and rising sea level. Planning and investments in assets and infrastructure need to account for resilience and long-term maintenance and sustainment needs.
The implementation plan also describes where the USCG will be willing to take on risk given projections for the future and resource constraints. The players were asked to provide the following information:

Looking to the future, the USCG will most heavily need to focus its attention on \{region 1\} and \{region 2\}. This will require taking on greater risk in \{region 3\}.

As the USCG moves toward the future, \{mission 1\} will remain a no-fail mission. Given the Commandant’s vision of the USCG and the uncertain future, \{mission 2\} will need to be much more heavily resourced. \{Mission 3\} will need to be deemphasized based on our best projections for the future and our resource constraints.

To meet the challenges of the future described by the Commandant and in the projected future scenarios, investments must be made to sustain or improve \{investments 1 and 2\} in the early years. As time goes on, it will be critical to develop capacity in \{investments 3 and 4\}. Although \{investments 5 and 6\} would be nice to have, they remain lower on the list of USCG priorities.

In practice, players are given individual time to make choices on these elements before discussing them with their teammates and selecting their areas of prioritization and deprioritization, whether by consensus or by plurality. Players are not forced to adhere to these prioritizations as the game progresses, but, if they do not, they must explain why they are not doing so and examine how deviating from their strategy might undermine their long-term objectives. This recalls the charge given to players: “Strategic thinking is thinking about how you are thinking while you are thinking.” The game demonstrates how efforts undertaken to achieve this implementation plan could be challenged by future events. An important takeaway from the game is to see whether players feel that they can meet their strategic goal in light of the events that they are confronting.

**In-Game Decisionmaking**

Once these implementation plans are developed, players use them to guide in-game decision-making. The game is played in turns, each representing a four-year period, starting in 2025.\(^{30}\) In each turn, the players, representing the USCG’s senior leaders, determine how to prioritize critical USCG missions across operational regions and future investments based on their implementation plan during the next four years. Each team starts with 23 resource chips on

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\(^{30}\) This time frame mirrors some common U.S. governmental cycles, including the four-year term of the USCG Commandant, whom the game is intended to inform. The intent was for the game to begin in the players’ future so that they could avoid being anchored in the present. If *Paratus Futurum* is to be played in subsequent years, the start date can and should be adjusted to retain this separation between the real year and the game start year.
turn 1. As noted, players both allocate mission prioritization and make investments out of this same pool of resources, thus highlighting a trade-off between mission success in the immediate term and investments that might make the USCG more efficient or capable in the long term.

In preparation for their decisions on mission priorities, investments, and resource options, players are given I&Ws that identify the array of key trends that will occur during the four years of the turn and that could result in specific requirements for USCG incident response.

At the outset of the game, players encounter a game board on which no resources are assigned. That is, they are not constrained by the current USCG devotion of resources by mission or region. Players repeatedly noted that, if they started with a board that represented today and had to focus on changing it, it would be an entirely different game that perhaps would lead to very different outcomes. We believed, and players expressed agreement, that that is likely—that this would have led to greater inertia, with players being unwilling to change current USCG resourcing and prioritization. In that sense, the game offered them more freedom than they have in reality, as games often do, to allow players to explore a world in which the USCG is capable of significantly altering its current structure.

During their turn, players allocate resource chips by placing them in the various mission priority boxes, with each box being capable of accepting zero, one, or two chips, depending on mission levels of risk, focus, and priority. (Because overseas regions have higher costs, the numbers would be, at start, between zero and four chips.) Players were encouraged to physically place their chips on mission–region pairs and investments as they discussed alternative strategic ideas, then move the chips to examine different priorities and strategies. Like with the implementation plan, players discuss how best to prioritize using the resources they have at hand until consensus or broad agreement is reached.

Players are not required to achieve a regional balance in mission prioritization. They can devote as many tokens as desired (if available) to any region or mission across multiple regions. However, once the board is formally set in turn 1, players can move mission prioritization only up or down one level each turn. That is, missions can move from focus to risk or priority, but they cannot move from risk to priority (or vice versa). As a result, players must

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31 Early testing of the game helped us arrive at 23 as being sufficient to allow strategic exploration without being so large a budget that the players could do everything or so small that they could do nothing. The number at start could conceivably be marginally higher or lower, and the number actually available each turn does vary (in some cases, by a large amount) depending on gameplay.

32 In the first year of Evergreen VI, during the 2029–2032 turn, players received the mock newspaper page from the scenario that they were playing. In Evergreen V, the players had already been immersed in their respective scenarios. Decisions about when, or how much, to inform players about the scenario should be changeable and driven by the learning objectives of the game.

33 To assist in this process, facilitators may open the game by placing resource chips on their key missions, key regions, and key investments to represent the group’s choices in discussions while noting that players are free to move away from this initial outlay as they confront what it would mean for their larger strategies.
consider at the very beginning of the game the regional balance they would like to achieve by 2040.

After making their decisions, the players are confronted with two to four worldwide events. Each event is adjudicated based on both the turn’s allocations for missions and priorities and a set of probabilistic outcomes that can be influenced by a variety of factors. For each event card, players can achieve four levels of success—poor, mediocre, acceptable, or good—determined jointly by the resources applied to the mission and a die roll using a ten-sided die, as shown in Table 2.15.

Players may attempt to change the possible outcome of an event in three ways:

- First, they may attempt to convince the white cell that, based on some technological or operational logic, one or more of the possible outcomes should be changed or one or more of the probabilities of an outcome should be adjusted. This dialogue is similar to that found in matrix games. Logic accepted by the white cell is applied to the current event card and, where applicable, to subsequent event cards. For example, players cannot argue for an operational or investment effect on one card, and then argue that

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**TABLE 2.15**

<table>
<thead>
<tr>
<th>Mission Success</th>
<th>Priority</th>
<th>Focus</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Die Roll (After Modifications)</td>
<td>Priority</td>
<td>Focus</td>
<td>Risk</td>
</tr>
<tr>
<td>0</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
</tr>
<tr>
<td>1</td>
<td>Mediocre</td>
<td>Poor</td>
<td>Poor</td>
</tr>
<tr>
<td>2</td>
<td>Mediocre</td>
<td>Mediocre</td>
<td>Poor</td>
</tr>
<tr>
<td>3</td>
<td>Acceptable</td>
<td>Mediocre</td>
<td>Poor</td>
</tr>
<tr>
<td>4</td>
<td>Acceptable</td>
<td>Mediocre</td>
<td>Mediocre</td>
</tr>
<tr>
<td>5</td>
<td>Acceptable</td>
<td>Acceptable</td>
<td>Mediocre</td>
</tr>
<tr>
<td>6</td>
<td>Good</td>
<td>Acceptable</td>
<td>Mediocre</td>
</tr>
<tr>
<td>7</td>
<td>Good</td>
<td>Acceptable</td>
<td>Acceptable</td>
</tr>
<tr>
<td>8</td>
<td>Good</td>
<td>Good</td>
<td>Acceptable</td>
</tr>
<tr>
<td>9</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
</tr>
</tbody>
</table>

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34 Matrix games have been described as games that

exist in a space between conventional rules-based wargames and role-playing games. Rather than have complex rules to cover all the possible actions players can undertake matrix games tend to be very light on rules and instead allow players to make structured arguments as to what actions are undertaken and what results occur. The players, guided by an umpire as to what is plausible or probable, collectively built a narrative. Since players can make arguments as to why another player’s proposed course of action will, or will not, succeed the game has elements of both cooperation and competition. (Taylor, “Toward Serious Matrix Games”)

42
that effect would go in a different direction on a later card unless some explicit reason can be given for the two different outcomes.

- Second, players may choose to “surge” assets. To surge assets, players must draw on future resource tokens because assets that are assigned to support tasks outside their original tasking will not be able to achieve the necessary readiness level in the following turn. Each mission in the geographic area receives a +1 on their roll but a −1 on their CU score to represent the toll the surge takes on the USCG’s workforce.
- Third, players may use an AFP, if one is stationed in the region and was not previously used within the current turn, to increase their mission priority by one level (from risk to focus or from focus to priority).

Translating the Game’s Outcomes
The facilitators use a narrative to translate the game outcomes into a realistic scenario that the USCG might face. This element of the game allows the players to contextualize the game mechanics into the daily functions of the USCG. We provide a few examples of previous narratives in this section.

Example 1
When a card (shown in Figure 2.5) tests more than one mission, such as a ship in the Arctic requesting icebreaker assistance testing IE and MTSM in the Arctic, there are a few different narrative options:

- If the players receive positive outcomes (acceptable or good) for both missions, the accompanying narrative might be that the USCG was the first responder and served as a lead coordinator to help the ship quickly and effectively, garnering the favor of Congress and the President (CO and EB increase).
- If the IE roll is negative (mediocre or poor) while the MTSM roll is positive, the story could be that the foreign partner was forced to take the lead on coordination of response, but the USCG did an excellent job assisting the ship. As a result, Congress and the President have mixed views of the USCG (CO moves up and EB moves down, as indicated on the card).
- If the roles were reversed and IE was positive while MTSM was negative, the narrative could be that the USCG served as a lead in coordination with international partners but did not carry its weight in the execution of assistance. As a result, Congress and the President have mixed views of the USCG (CO moves down and EB moves up, as indicated on the card).
- If both rolls were poor, the narrative could be that the USCG response was late, allowing China to beat the USCG to both coordination and execution of response to the ship requesting assistance. As a result, the USCG loses favor with Congress and the President (CO and EB both move down).
Example 2

Another event that could occur is an oil spill, which challenges MEP. The event card is shown in Figure 2.6.

- If the roll results in a good outcome, the facilitators may provide a narrative in which the public is watching the USCG response closely via television and social media and is impressed with how quickly the USCG responded, including some touching scenes of the USCG saving wildlife, which boosts public view of the USCG and results in people calling their local representatives (CO and PO increase).
- If the roll is in the acceptable or mediocre range, the public could take this as being just what the USCG does (PO moves slightly up or down, as determined by the outcome written on the card, the die roll, and the investments made by players).
- If the roll is negative, the facilitator may weave a narrative in which the USCG was unable to respond quickly and effectively, which the media latched onto and spreads to the wider public, causing the public to lose trust in the USCG and to decrease the funding allocated to the USCG (CO and PO both decrease).

Players then confront one or more domestic-trend cards. Facilitators weave the results of these cards into a narrative for the players to explain the world unfolding around them.
One domestic-trend card (shown in Figure 2.7) describes a decline in physical fitness in the United States and tentative new recruits struggling to meet the physical fitness requirements of the USCG. This card uses the players’ CU and CO scores:

- If the team maintains high CU, the USCG has poured time and attention into its people through CU investment, and the new recruits would be more easily integrated and prove to be value-added (the team gains one resource chip, indicating new, talented personnel).
- If the team maintains neutral CU, the USCG does not receive additional resources to help integrate new recruits but is able to manage integration with some degree of success with the funds they have (no resources are lost or gained).
- If the team maintains high CO but negative CU, the USCG must dedicate some resources to integrating new recruits, which proves more difficult than expected, and Congress does not help mitigate the costs (the team loses one resource chip).
- If the team has negative CU and CO, they lose more resources because they must channel even more time and energy to integrating new recruits, given their different lifestyles and fitness levels, and Congress is unwilling to allocate additional funding to assist (the team loses two resource chips).

The narratives are also open for discussion with the players to gain insights into what a possible success or failure looks like within each mission area. Across games, these narratives have varied based on the context of the team’s discussions and the facilitator. For future itera-
tions of the game, we plan to create a formalized framework of potential narratives for the existing event cards.

At the end of each turn, players are informed of any trends that will persist into the next turn. Before the next turn begins, players also receive any benefits resulting from their investments. The white cell makes players aware of any changes in resources or constraints in priorities that were a result of a move in the just-completed turn. After all events are adjudicated, the turn ends. The next turn begins with teams once again adjusting their investments and mission priorities up or down one level. The game concludes at the end of three to five turns.35

Player Guidance and Team Design

It is common in serious games that players are asked to represent a specific office, organization, or country. In military games, it is common for players to show up in uniform and incorporate rank-related protocols for deference and interactions. Some games seek to group players into teams based on their areas of expertise. Paratus Futurum specifically and purposefully breaks with these restraints. This is a design decision intended to give players a

35 The ambiguity on the number of turns to be played is intentional and serves dual purposes: (1) to allow flexibility in the length of play balanced with the fruitfulness of the discussions and (2) to obscure the end of the game so that players do not make allocations based on it being the last turn so any negative impacts would not be realized before the game concludes.
broader experience and to elicit differing perspectives and more thorough conversation than might have occurred in a more formal or rank-based setup.

Players for each game were invited from a variety of units, offices, specialties, and ranks. They are all asked to arrive in civilian clothes (no uniforms) and address each other by first names. Because the USCG is relatively small and highly interconnected, participants typically know who everyone is, so they are instructed to “leave rank at the door.” When invited, players are asked to be collegial, collaborative, and creative. We ask them to work together, build on each other’s ideas, and incorporate the full breadth of perspectives as they work through the game together. Regardless of their ranks or specialties outside the game, players are asked to play as if they are senior leadership challenged with making the best possible strategic choices for the service. The instruction to be creative is then reinforced as they are challenged to be bold in their choices and depart from current USCG practices and traditions to envision the service of the future.

Practical Considerations for Game Design

Our game design was influenced by a host of practical elements outside our analytic goals. The primary external factors shaping our design choices were the venue where the game would be played, the numbers of participants, and the time available for gameplay.

To address the realities of a COVID-19 environment, the game was designed to be played both virtually and in person. As a result, we took an iterative design process. We first developed the game, conceptually, as a board game. We next developed a game space and game board using the Mural platform that would mirror the play of an in-person game.36 Last, we created physical copies of each component in the game for the in-person version. At each step, we used the results of previous iterations, sponsor requests, and player feedback to update the game.

The availability of players was always a concern, particularly when incorporating flag and general officers. As a result, we designed the game to be completable in one day. However, we also designed it for repeated play such that players could play the game across multiple days with unique experiences. We did this by including a significant and expandable variety of trends and events that can challenge the USCG in different ways.

The sponsor still sought to incorporate a large number of players into the game. This was based mainly on feedback from senior leaders who, having played it, wanted others to gain the same insights and experience, and hoped to convey the array of thoughts and ideas to a broader cross-section of the USCG’s leaders. To ensure that all players would remain engaged during gameplay, we also needed to keep the number of players on each team low. As a result, we ran two virtual and two in-person games in parallel for two days for a total of four games and four teams. Each team was led by two cofacilitators supported by one or two qualitative

36 Mural, homepage.
information collection specialists who captured the discussions, decisions, and turn-by-turn actions throughout the game.

Players’ Perspectives on Potential Strategic Initiatives

Based on the corpus of Evergreen V, DCO-X distilled a list of strategic objectives that they wanted players to rate on level of impact and difficulty to implement to gather input for senior leadership to consider. We decided that asking players to fill out a survey instrument both before and after playing the game might offer additional insights.

We designed the survey using the modified Delphi method. We used this method to build consensus among a group of expert participants through a series of iterative surveys with one or more rounds of feedback and discussion in between. The method notes areas of disagreement, as well as topics or questions around which consensus can be achieved.

In the Delphi analysis for Evergreen V, participants were asked to rate 16 strategic initiatives along two axes:

- difficulty to implement
- impact on the USCG if implemented.

Players were asked to rate each initiative on a scale of 1 to 9, with lower numbers representing lower levels of effort and impact. Players could provide additional thoughts or insights in free-text fields.

The strategic objectives rated during Evergreen V were as shown in Table 2.16. For Evergreen VI, the questions were streamlined and focused on the Commandant’s 2022 strategic initiatives. The resulting objectives are shown in Table 2.17.

In keeping with the Delphi approach of using multiple surveys, players anonymously completed a survey before and after the game, either online or on paper, that gave them two basic rank-order tasks:

- Rank the Commandant’s strategic initiatives by potential impact, with 1 being the most and 7 being the least.
- Rank the Commandant’s strategic initiatives by implementation difficulty, with 1 being the most difficult and 7 being the least difficult.

37 RAND researchers developed the Delphi method in the 1950s for operations research, and it became popular for forecasting studies. The Delphi method was modified in the 1980s by a collaboration between RAND and the University of California, Los Angeles (Fitch et al., The RAND/UCLA Appropriateness Method User’s Manual).

38 Dalkey, The Delphi Method.
### TABLE 2.16
Strategic Objectives Rated During Evergreen V

<table>
<thead>
<tr>
<th>Objective&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Objective Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Increase recruitment and retention of underrepresented minorities and women to achieve a USCG workforce that reflects the population it serves.</td>
</tr>
<tr>
<td>2</td>
<td>Create a flexible talent management system that assigns positions based on skill rather than rank. The system will leverage the entire available workforce across active-duty, civilian, reserve, and auxiliary personnel and permit easier movement across categories.</td>
</tr>
<tr>
<td>3</td>
<td>Provide personnel opportunities for skill-stacking (i.e., building multiple specialties) over their careers.</td>
</tr>
<tr>
<td>4</td>
<td>Provide greater flexibility for entering and reentering the service, especially for high-demand skill sets.</td>
</tr>
<tr>
<td>5</td>
<td>Reduce the frequency of relocation and provide more opportunities for part-time telework, where appropriate, to make the USCG a more attractive employer.</td>
</tr>
<tr>
<td>6</td>
<td>Develop and retain a workforce that has the partnering, interpersonal, and linguistic skills, as well as the cultural expertise, for the OCONUS regions where the USCG operates.</td>
</tr>
<tr>
<td>7</td>
<td>Retain personnel with in-demand technology, linguistic, and cultural skills by creating opportunities for advancement, providing specialized training, and offering incentives.</td>
</tr>
<tr>
<td>8</td>
<td>Emphasize the value of taking calculated organizational risks to enhance agility in the face of uncertainty similar to the service’s operational risk models. Align the service’s operational and organizational cultures to value measured risk-taking by implementing funded and prioritized integration campaigns for new ideas and capabilities.</td>
</tr>
<tr>
<td>9</td>
<td>Foster greater critical thinking and interpersonal skills through mentorship, training, and incentives that enable personnel to build partnerships and make complex decisions with incomplete information more effectively.</td>
</tr>
<tr>
<td>10</td>
<td>Rapidly grow the service to respond to increased demand signals for USCG services around the globe due to environmental changes, growing threats from bad actors, population growth in coastal areas, and increased support of DoD combatant commanders around the world.</td>
</tr>
<tr>
<td>11</td>
<td>Assume a deliberate leadership role in modernizing the MTS’s technology, workforce, and governance to prevent a systematic failure and reflect the service’s critical role in economic and national security.</td>
</tr>
<tr>
<td>12</td>
<td>Prioritize and devote additional resources to IT infrastructure to ensure that it is continually upgraded, maintained, and secured to support operational and programmatic decisionmaking.</td>
</tr>
<tr>
<td>13</td>
<td>Provide servicewide training for all personnel for the operation of modern IT, data management, and cybersecurity.</td>
</tr>
<tr>
<td>14</td>
<td>Increase the use of emerging technologies, such as UxSs and three-dimensional printing to increase effectiveness and efficiency.</td>
</tr>
<tr>
<td>15</td>
<td>Integrate available sources of data from diverse and distributed sensors, and leverage data analytics to improve planning and decisionmaking.</td>
</tr>
<tr>
<td>16</td>
<td>Advocate and commit resources to create the capacity to conduct additional operations overseas while attempting to maintain responsibility for CONUS missions through efficiencies but accepting a higher level of risk for CONUS missions.</td>
</tr>
</tbody>
</table>

<sup>a</sup> The numbering of strategic objectives does not represent any kind of ranking. We numbered them to refer to them later, when we discuss the results of the modified Delphi analysis.
Using the modified Delphi approach, game facilitators presented participants with the pregame survey results approximately midway through each game. Participants were shown ranking totals (sum of all rankings for a particular strategic objective per question across all participants), average rankings, and standard deviations. They were also shown selected (anonymized) comments and, for approximately 10 to 15 minutes in each game, were allowed to discuss the results and why they answered the way they did. They could also factor this input into discussions and decisions throughout the rest of the game. After the game’s conclusion, participants were surveyed again using an identical instrument.

In the next chapter, we describe the results of the game’s iterations to date.

### TABLE 2.17
**Strategic Objectives Rated During Evergreen VI**

<table>
<thead>
<tr>
<th>Objective Number$^a$</th>
<th>Objective Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Plan and invest in assets and infrastructure needed to account for resilience and long-term maintenance and sustainment needs.</td>
</tr>
<tr>
<td>2</td>
<td>Support national interests by saving lives, preventing terrorism, securing U.S. maritime borders, promoting the rule of law, protecting natural resources, and enhancing cybersecurity and critical infrastructure security.</td>
</tr>
<tr>
<td>3</td>
<td>Provide a full spectrum of engagement in the gray zone as nation-states and transnational criminal organizations generate increased uncertainty and complexity.</td>
</tr>
<tr>
<td>4</td>
<td>Redesign force-packing and CONOPSSs to deliberately and efficiently allocate and employ USCG resources across global and domestic missions.</td>
</tr>
<tr>
<td>5</td>
<td>Deliver improvements to the USCG workforce, and transform the total workforce by modernizing how it recruits, hires, develops, trains, and supports personnel and their families.</td>
</tr>
<tr>
<td>6</td>
<td>Play a central role in strengthening maritime governance around the world, building on international engagements to bolster other countries’ inherent capabilities to police their own waters and support cooperative operations.</td>
</tr>
<tr>
<td>7</td>
<td>Seek opportunities to use data and technology as a force multiplier by increasing the employment of UxSs, emerging communication technologies, space-based systems, data analytics, artificial intelligence, and machine learning solutions.</td>
</tr>
</tbody>
</table>

$^a$ The numbering of strategic objectives does not represent any kind of ranking. We numbered them to refer to them later, when we discuss the results of the modified Delphi analysis.
CHAPTER 3

Games and Results

This chapter summarizes the significant takeaways and overarching observations from each game. As mentioned earlier, we distinguish between games that were conducted in Evergreen V and Evergreen VI. In both phases, we held several game sessions. Each game session, denoted as game 1, game 2, etc., consisted of four iterations of Paratus Futurum involving four teams of players. We distinguish among these iterations by using the scenario that each team played—for example, a team played scenario 1 in game 2 of Evergreen V. Within games, each turn is referred to as turn 1, turn 2, and so on.

Evergreen V, Game 1

Evergreen V, game 1, championed by the DCO-X office chief, was conducted virtually on January 11 and 12, 2022, with about 30 mid- to senior-level USCG and civilian personnel, representing headquarters (HQ) functions, USCG Atlantic Area (LANTAREA), and USCG Pacific Area (PACAREA).

Overarching Observations

Teams relied heavily on interpreting all sources of demand signals to guide resource allocation. Player decisionmaking hinged on the scenario, their operationalization of the strategic vision they were given, and additional information provided in I&Ws. These guidance documents provided the mission demand signals that were used to prioritize resource allocation. At the outset, teams relied heavily on the Evergreen scenarios to chart the likely course of the future, and most teams immediately started by making investments that would contribute to longer-term objectives. Most teams began with a discussion of which modernization investments would allow them to effectively meet the needs of their given scenarios in the future and which investments would provide efficiencies or greater flexibility. They then discussed what was essential for the strategy or scenario, followed by a discussion of how to allocate any remaining resources, often focused on enduring CONUS missions.

1 Details about gameplay for each team and for each game can be found in Appendix A.
The introduction of updated I&Ws led to lively discussion and debates about how to balance more-immediate needs while ensuring longer-term objectives. Teams frequently examined where the most-recent intelligence conflicted with the goals of the strategic vision. However, no team decided to update its strategic vision after discussing the I&Ws. As gameplay progressed, players often would revisit the scenario and strategic vision to take stock of where resources were allocated, to remind themselves of these longer-term objectives, and to ensure that recent trends would not necessarily disrupt progress toward these objectives.

**A strong focus on the demand signals associated with a scenario’s strategic vision can override the taboo of accepting risk in certain missions, such as SAR, and the need to continue to prioritize them.** At the same time, homeland missions were considered enduring. All teams acknowledged that failure to execute homeland missions would have deep political consequences for stakeholder opinions regardless of scenario. In contrast, overseas missions have additional resource costs, including culture and risk to stakeholder opinions, for priorities that can wax and wane with geopolitical events and executive branch priorities. Early in the game, teams were willing to take on some calculated risk for CONUS missions despite their importance, but, as intelligence brief trends affected the MTS or as climate-related issues increased the threat of a severe storm, for example, more resources came back to CONUS. At the end of turn 4, each team had allocated significant resources to CONUS.

Discussions about facility investments were sometimes catalyzed by an intelligence brief, such as increasing vulnerabilities to storms or improving quality of life to help recruiting and retention. But most often, investments were made because a player felt that investment was overdue or was a priority for Congress. At the end of the game, some players recognized that decision trade-offs would have been a lot more challenging if they had not made early investments.

**Understanding the USCG’s role for a given mission in a region and the advantages the service provides were also inputs into resource allocation.** Because missions can be performed in many ways, there often was debate on exactly how missions might be operationalized to meet demand signals and what would constitute acceptable mission performance. Discussions also centered on allocating resources to missions and investments in ways that advantageously used the service’s leadership, law enforcement, or technical capabilities in addition to its assets while leveraging the capabilities of partners and allies to efficiently use resources to meet the mission needs. For example, players suggested that DoD had more capacity for HA/DR or that Arctic SAR could be performed by partners with USCG support.

Understanding or articulating the marginal improvement in mission was also debated. What might be the USCG’s specific level of involvement or engagement in the mission, and how is this contribution measured or assessed? For example, there were discussions about how the USCG might increase its involvement in DO to either supplement or complement DoD efforts. Another example centered on how to measure the contribution of increased USCG resources allocated to counterterrorism or marine-safety missions. Players said that “stretching the rubber band” or expanding USCG roles across missions and regions had both short- and long-term costs.
From a learning perspective, these discussions demonstrated that gaming creates an environment for substantive discussions about the USCG, its institutional strategy, and the kinds of strategic trades that it must evaluate.

Investment strategies for new capabilities were motivated largely by the efficiencies they generate, allowing the USCG to resource additional missions at a higher priority in the future. Strategies were also motivated to satisfy the perceived needs of key stakeholders, such as Congress and the executive branch (both of which must support new technology and facilities), although teams varied in the amount of emphasis they placed on stakeholder interests. Because understanding how new capabilities might be used creatively to increase mission performance was not central to the game, teams minimally discussed this; instead, they focused on how these capabilities could be leveraged to free up resources to address other priorities. For example, investing in UxSs and C5ISR was motivated by the desire to either free up traditional assets that are difficult to sustain in remote locations or leverage the capabilities that such assets provide to gain efficiencies that free up traditional resources for other priorities. Similarly, discussions about at-sea logistics investments often focused on the benefit that cutting costs for overseas operations had for resource availability rather than on performance gains from enabling more-independent or longer-duration operations. There was a reluctance to fully commit limited resources by prioritizing missions to a high level unless there were strong, enduring signals that these investments would result in efficiencies or technologies that would reduce mission risk.

Cultural considerations will be a concern as the USCG’s focus and talent needs evolve. Throughout the game, participants expressed concern about USCG CU as they made investments in technology or international capabilities that prioritized the “away game.” There was also some discussion about the need to redefine what it means to be a USCG service member in the future as demand for traditional skills wanes and new skill sets become more prominent. Players expressed concern about anticipating how these changes might influence the organization’s identity and CU. Some teams actively monitored the USCG’s institutional status and invested to buy down risk. Others expressed that this was an important but secondary consideration. Yet for all, CU and institutional adaptation were expressed as key concerns.

What is good for the game is good for USCG planning and investment processes. A couple of key points became evident during gameplay:

- The first is that revisiting the scenario and vision is essential for determining resource trades for short-term demands and longer-term objectives (i.e., ensuring that the USCG has the capabilities it needs in the future while moderating cultural churn). Occasionally, teams also needed to assess whether current events might have shifted long-term objectives and to develop a narrative as why this might or might not be true.
- The second key point is that it is acceptable to take calculated risk in some mission areas to free up resources for investments or shift the CU to achieve long-term objectives. The structure of the game allowed teams to explore and understand where calculated risk
was acceptable. The events introduced in each turn stimulated discussion of strategy and missions from the scenario, but teams did not focus on the ultimate outcome; in several instances, players acknowledged being happy with the risk they took, even with a bad outcome.

**Evergreen V, Game 2**

Evergreen V, game 2, championed by the Deputy Commandant for Mission Support, was conducted in the RAND Arlington, Virginia, office on March 30 and April 1, 2022, with more than 25 senior USCG leaders identified by the vice admiral as some of the “best and the boldest thinkers.” The Deputy Commandant offered, “This is a low-risk environment, with the potential for high gains. So be bold.”

**Overarching Observations**

In response to USCG leadership’s charge to “be bold,” several teams relied on the service’s existing, positive progress to sustain operations, and their dominant strategy for the first round of gameplay was to invest in new capabilities. Notably, C5ISR capabilities were uniformly identified as the most important investment (which is consistent with the results of a parallel survey of strategic objectives, described in Chapter 4), despite the resources and lead time required to realize the capability. Early investments were described as enabling the USCG to remain successful despite an uncertain future and to gain efficiencies that could be reinvested in future rounds. Careful consideration and prioritization were given to investing in capabilities that efficiently extended the USCG’s presence while maintaining flexibility to adapt to changing conditions.

The teams’ early investment strategies nearly universally accepted some level of short-term risk in traditional missions—and often in CU—to pay for future capabilities, but players pivoted back to domestic missions as gameplay progressed. Teams expressed a desire to meet future mission demand through investments in efficient or flexible assets, such as expeditionary logistics, AFPs, and UxSs. The specific focus of these investments varied by scenario and team. Although some teams invested in desired capabilities without seeming to consider where they might be deployed, others invested mindfully of specific regions and mission needs identified in the scenario and intelligence brief. Although all teams acknowledged the cultural costs of these investments, not all devoted resources to mitigate them.

Before investments or resources were committed to a region, partner and ally capabilities were considered. Furthermore, teams generally expressed reluctance to commit to fixed assets, such as a permanent FOB, despite maintaining a long-term presence in a region after several rounds of gameplay.

Each team acknowledged the importance of investing in O&M and facilities and were apparently unwilling to take risk over several consecutive rounds of play. At the same time, these investments were not always made in the first round and frequently took a back
Games and Results

seat to capability investments. Often, the catalyst for these investments was an intelligence brief that specified domestic workforce trends that would make it harder for the USCG to recruit and retain members if the quality of life was poor or that identified threats to facilities caused by storms or other natural hazards.

**The concept of an AFP emerged as a key approach for covering a wide variety of missions.** The concept shifts the focus from platforms and their activity level to mission performance by bringing together capabilities and assets in a flexible manner for such operations as emergency management and IE. AFPs were used by all teams as a last line of defense against unpredictable or varied mission needs and were deployed both domestically and abroad. Participants repeatedly offered the multimission role of USCG organizations and platforms as a risk mitigation strategy and, perhaps not surprisingly, gravitated toward investments that enabled multimission response (such as AFPs and UxSs) over the more-targeted investments of FAOs and LEDETs. Multiple players said that this shifted their thinking from assets and days to capabilities and goals.

**Ensuring mission success in the future while leveraging the fourth industrial revolution and attracting and retaining a highly capable workforce will require investments in the USCG as an institution.** The game explicitly recognizes that, to accommodate new technologies and ways of performing missions, USCG leadership must commit resources and attention to adjusting training curricula and requirements, promotion and career pathways, deployment practices, and other organizational processes that make up part of USCG CU. Players expressed general awareness of the importance of balancing investments in new capabilities with CU. Some teams said that they were very concerned about overextending CU and recognized that, although the workforce often embraces change, the rate of change needs to be actively managed. Teams varied in their expressed tolerance of cultural risk with mixed results during gameplay, but all acknowledged that change takes substantial time and resources and cannot be avoided for too long.

**Teams generally spread resources to cover mission demand signals contained in I&Ws and relied on surge capability as insurance against plausible surprises.** Players chose not to fully resource missions throughout the game, instead favoring an allocation of resources that minimized risk. When confronted with a challenge, teams said, they generally weighed the likelihood of mission success against the consequence of inadequate response. Deploying an AFP was the preferred surge method because it avoided tapping into future resources (although players noted that the service’s natural inclination was to surge regardless of resource trades). However, on several occasions, teams considered using surge options to gain

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2 The World Economic Forum has characterized the fourth industrial revolution as a “fusion of technologies that is blurring the lines between the physical, digital, and biological spheres” (Schwab, “The Fourth Industrial Revolution”). Example technologies include artificial intelligence, robotics, the internet of things, autonomous vehicles, three-dimensional printing, biotechnology, and quantum computing. For more information on the fourth industrial revolution, see Schwab, “The Fourth Industrial Revolution.”
favor with stakeholders in the hopes that having such esteem would improve resourcing in the future.

The SAR mission was most often the bill-payer for elevating the priority of other missions. However, participants had lively discussions about the SAR mission’s importance to the USCG identity; to public awareness and opinion of the service; to its role as an enabler for the capabilities and capacities needed for contingencies, such as hurricane response; and to its influence over training, aircraft configuration, and stationing.

Domestic missions are enduring and fundamental to the USCG, and this was reflected in resourcing decisions. Participants expressed that the USCG’s purpose was saving lives, helping people, and facilitating safe and prosperous maritime trade in support of the economy. They noted that these missions were what distinguished the USCG and allowed it to satisfy the expectations of stakeholders, such as the executive branch, Congress, and the public. This branding defines and drives recruiting and retention and capability development. As a result, resource allocation considered the asymmetric risks of performing poorly in these missions. Demand for capabilities overseas waxes and wanes with geopolitical developments and changing national priorities, necessitating an adaptable force when resources are limited. Participants also said that they sought to prioritize missions that used the service’s specialized capabilities abroad for roles that added value to DoD or complemented the perceived capabilities of partners or allies. After several rounds of gameplay, teams tended to shift resources back to domestic missions regardless of scenario, relying on their agile investments to respond abroad as needed.

Participants noted that, although the principal USCG mission set might not change, the ways in which missions are accomplished might be different. For example, new opportunities to leverage new technologies, such as UxSs, or service providers from the private sector could change the service’s activities. Furthermore, although USCG operations facilitate trade while maintaining safety, other mechanisms historically have been used for these purposes, such as funding grants or developing industry standards.

Evergreen V: Modified Delphi Findings

Using our modified Delphi method, player responses from each game were evaluated as individual panels and as a large single panel to reveal any commonalities. Several common themes in participant responses emerged, such as each panel consistently indicating both prior to and after completing the game that the most-impactful strategic objectives revolved around technology, such as IT infrastructure upgrades and data integration. The combined panel results revealed that several personnel and human relation (HR) objectives were also highly impactful, including creating a flexible talent management system, taking organizational risk, and developing a workforce for OCONUS regions. The game participants also consistently commented that funding and resources and cultural inertia were the greatest barriers to implementation of any strategic objectives. Both panels indicated that some of the
most-difficult objectives to implement were creating a flexible talent management system, integrating data sources, and rapidly growing the service.

To help visualize which strategic objectives might be most appropriate for leadership to investigate for implementation, each strategic objective’s median ratings of difficulty to implement were plotted against the median ratings of impact of implementation. The resulting plot was divided into four areas based on the difficulty and impact scales the participants used as part of the survey to rate each objective: limited (low) impact and hard (high) effort (difficulty), positive (high) impact and hard effort, positive impact and reasonable (medium) effort, and limited impact and reasonable effort.

All ratings of the combined panel are shown in Figure 3.1. Strategic objectives related to technology ranked as having the highest positive impact, with results all within the high-impact areas of the plot (dots in the orange shape toward the right), including one objective being rated as a 9 on the nine-point impact scale. Personnel and HR strategic objectives were also all rated within the high-impact areas of the plot (dots within the green shape in the middle), but several were rated as slightly less positive and slightly more difficult than the majority of the technology-related objectives (dots within the blue shape toward the upper left side of the graph). USCG operations-related strategic objectives were rated as having the lowest positive impact while also being some of the most difficult to implement.

The strategic objective on the far right of the graph (indicating highest level of difficulty) is objective 12: “Prioritize and devote additional resources to IT infrastructure to ensure

**FIGURE 3.1**

*Combined Impact and Difficulty Ratings*

![Graph showing combined impact and difficulty ratings with different areas for different levels of difficulty and impact, labeled as USCG operations, Personnel and HR, and Technology.](image-url)

NOTE: The number beside each dot indicates the strategic objective as numbered in Table 2.16 in Chapter 2. This figure illustrates general groupings by topic area of the strategic objectives and where they tended to fall on the high–low range for both impact and difficulty-to-implement scales. For more specifics and statistics, see Appendix B.
it is continually upgraded, maintained, and secured to support operational and programmatic decisionmaking.” It also had the highest consensus of any strategic objective for both impact of implementation and difficulty to implement, indicating a high level of agreement among participants. Several comments in the surveys echoed what teams had discussed in terms of setting priorities and making trade-space decisions during the game. The comments included the following:

- IT infrastructure is the most important physical capability to our future success. It’s what will unleash the full potential of our people, our cutters, our aircraft.
- This is not an optional item. It must be done and [should receive] whatever investments are needed . . . but significant resources are required, meaning trade-offs.
- This is important for our future security but difficult due to lack of resources to stay competitive and ready.

The strategic objective rated as having the least positive impact by the combined panel and both individual panels was (lowest impact) objective 16: “Advocate and commit resources to create the capacity to conduct additional operations overseas while attempting to maintain responsibility for CONUS missions through efficiencies but accepting a higher level of risk for CONUS missions.”

Discussion of this strategic objective was pessimistic overall about a willingness to accept risk to CONUS mission sets. The participants also said that a lack of available resources to support additional OCONUS operations would increase difficulty of implementation. The participants commented that available resources should be used for current missions more effectively. Comments included the following:

- The game showed us the shocks that could affect CONUS if we focused all of our efforts OCONUS. We’ll need more resources if we want to maintain our effectiveness CONUS while projecting force into OCONUS regions.
- We know that DoD will take everything we can give them. Being careful to balance our COMCO [combatant command] support with other statutory missions is going to be very challenging.
- As we grow, our resources must also grow. If we are going to reduce domestic obligations, we need to reduce requirements (contract or shift to other agencies/resource providers).

Consistently across all panels, the following strategic objectives were rated as the most difficult to implement:

- (difficult) objective 2: “Create a flexible talent management system that assigns positions based on skills and not rank.” The talent management system will leverage the entire available workforce across active-duty, civilian, reserve, and auxiliary personnel and permit easier movement across categories.
• (difficult) objective 10: “Rapidly grow the service to respond to increased demand signals for USCG services across the globe due to environmental changes, growing threats from bad actors, population growth in coastal areas, and increased support of DoD combatant commanders around the world.”
• (difficult) objective 15: “Integrate available sources of data from diverse and distributed sensors, and leverage data analytics to improve planning and decisionmaking.”

Comments submitted about these strategic objectives cited cultural inertia as a major limiting factor for implementing new talent management systems and integrating data. Limited resources remained a common theme in the comments, like with other objectives, and retaining members able to manage data was expressed as a concern. The comments included the following:

- It would significantly challenge the mindset of a historically (230-plus-year) rank-based military organization.
- In order to make this kind of change, you have to change service culture entirely.
- We currently don’t have the funding, training capacity, personnel support, or policies to support rapid expansion. In order to support this type of change, you would have to leverage resources that are already strained.
- We need to change our culture to one that understands the value of supporting decisionmaking with data.
- Excessive funding to do it right and sustain it. Fusion of data is key. Must avoid collecting data just to collect data.

The combined panel rated several strategic objectives as mildly difficult to implement but rated as the least difficult to implement (neither difficult nor easy) objective 13: “Provide servicewide training for all personnel for operation of modern IT, data management, and cybersecurity.”

Comments related to this strategic objective included the following:

- Notable learning curve, but not insurmountable.
- If we have the modern systems, getting the users trained shouldn’t be too hard.
- This would be extremely valuable. The biggest constraint would initially be time, followed by possible retention issue as more people acquired externally marketable skills.

The highest positive impact and least difficult-to-implement personnel and HR strategic objective when all scores were combined was objective 6: “Develop and retain a workforce that has the partnering, interpersonal, and linguistic skills, as well as the cultural expertise
for the OCONUS regions where the USCG operates.” Common themes in the comments from all participants included the following:

- The USCG of the future will require these skills as we deploy more internationally.
- Will require a major cultural pivot to buy-in and support the global narrative.
- . . . retaining these skill sets will be more and more difficult.

Figures 3.2 and 3.3 show the results of the participants’ ratings provided for games 1 and 2. Groupings of strategic objectives across all three panels remained consistent and followed common themes. Strategic objectives related to technology consistently ranked as having the most-positive impact, and personnel and HR strategic objectives were consistently the next most-impactful group of objectives. Changes to USCG operations were consistently the least impactful objectives. Levels of difficulty of implementation all trended above a normal level of effort, with only a single objective being rated as neither hard nor easy.

Of the 37 original respondents, 12 who participated in the games were able to take the survey a second time to help us fully understand the game’s impact on participant ratings. These players remarked that “seeing the whole board” through the events of the game made them think about some of the strategic objectives differently. For those 12 participants, we

**FIGURE 3.2**
Impact and Difficulty Ratings for Game 1

![Impact and Difficulty Ratings for Game 1](image)

NOTE: These figures illustrate general groupings by topic area of the strategic objectives and where they tended to fall on the high-low range for both impact and difficulty-to-implement scales. For more specifics and statistics, see Appendix B.
The game showed us the shocks that could affect CONUS if we focused all of our efforts OCONUS. We'll need more resources if we want to maintain our effectiveness CONUS while projecting force into OCONUS regions.

After playing the game I think that this would be more positive than I initially rated.

After playing the game, it seems that the Coast Guard will need more subject-matter experts and less “jack-of-all-trades” types. It may help retention but may not be as positive for the service.

From game . . . I moved this one up on my importance. This capability will help the service in our global responsibilities.

The game showed us that we need the talent to make the technological leaps and special skills to operate in OCONUS locations long term.

The game made me think of MTS in an entirely different way. The increase in possible automation and goods moving through the ocean means we will want to lead from the front.

NOTE: These figures illustrate general groupings by topic area of the strategic objectives and where they tended to fall on the high-low range for both impact and difficulty-to-implement scales. For more specifics and statistics, see Appendix B.
- Lots of game investments in systems that require IT. Modernizing now allows the CG [USCG] to take advantage of so many systems that make our teams much more efficient.
- More impactful based on the game but about as hard as I originally thought.

**Insights from Evergreen V**

Although this analysis lends itself to collecting perspectives from participants and eliciting individual insights on the topics that are of interest to USCG leadership, these results are not indicators of what the USCG can or should do regarding the strategic objectives. This methodology allowed us to compare the before and after the game and understand whether it potentially affects player perspectives on issues that are relevant to the service.

Given the shifts in players' perceptions before and after the game, the first year of Delphi analyses appeared to indicate that player perceptions of these issues are malleable—the game was able to introduce new ideas and shift player thinking about the difficulty and impact of the presented objectives. In this regard, there appears to be some potential opportunity for the game to influence player perspectives on these issues. Although the game is not designed to prescribe solutions for the USCG and the future of the service, it demonstrates that playing the game can shift player thinking.

**Evergreen VI, Game 1**

Evergreen VI, game 1, was conducted in the RAND Arlington office on December 14 and 15, 2022. Championed by the Deputy Commandant for Operations (DCO), the game drew approximately 30 USCG senior leaders and rising leaders spanning several HQ functions, including budgeting and operations planning. The vice admiral charged them with stress-

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3 At the end of Evergreen V, we ran two games (December 2021 and April 2022), which we sometimes call year 1. In the first year of Evergreen VI, we changed the way we ran the game (implementation plans), and we ran four more (December 2022, February 2023, May 2023, and August 2023), which we sometimes call year 2. Since then, we have created a 2.0 version of the game (new maps, changed mission areas, some new rules) and have run it three more times (December 2023 and twice in April 2024), with the fourth planned for summer 2024. Although year 1 and year 2 are split across Evergreen V and VI, they are more alike than the subsequent runs of the game in Evergreen VI, which we do not cover in this report. We recognize that this is confusing, but the runs were by fiscal year, and each ran about one year in duration, and we do not want to say just "Evergreen VI" because not all of the Evergreen VI games were run this way. (We are still running them and have updated the game significantly. This report covers only the first two years of running the game. We are in year 3 now.)

4 Although the game’s intent is to provide a forum to share ideas and open player thinking about the future of the USCG, we recognize that the game design, mechanics, and scenarios might also lend themselves to potential biases that could influence player thinking toward certain conclusions. We cannot attribute shifts in survey outcomes to the game design versus natural developments of the player’s thinking due to playing the game.
testing the strategic vision communicated in the 2022 USCG strategy and to “look at the challenges that investment in future missions bring to our service” and to “challenge the status quo, be creative, and exercise both in this low-risk environment.”

**Overarching Observations**

Although participants often acknowledged the importance of the workforce and CU and monitored their institutional CU throughout the game, CU generally was treated as a nice-to-have investment. For several (but not all) teams, CU garnered investment at one of two points in gameplay:

- when at a critical juncture at which institutional CU threatened to be insufficiently resilient to enact change
- when efficiencies gained from prior capability investments freed up resources.

At the same time, participants noted that the USCG strategy prioritized the workforce and emphasized its importance to mission success. Many of the investments in new capabilities affected the USCG’s workforce CU and required investment in the institutional adaptations that must occur, such as training, new operational concepts, and organizational structures. Essentially, CU had to catch up to other operational changes. Participants noted that CU is an intangible use of resources, unlike missions or operations, which are tangible. During gameplay, like in reality, CU is not as visible to the stakeholders who drive the scoring of mission performance, but a CU deficit can constrain the USCG in the long run. Put differently, although players could appreciate that investments in new capabilities required adaptation of USCG culture, their default was to think of those investments in terms of material acquisition and operational employment paradigms, and, to ensure that they were thinking about the institutional and cultural aspects of those investments, they had to be constantly reminded of those aspects of acquiring and using the new systems.

**The primacy of CONUS stood out, even in a world with copious demand for the USCG.** Players said that they saw the USCG as fundamentally a domestic-centric service and wanted to invest accordingly. As a result, teams used resources to buy down risk abroad by applying resources efficiently in ways that maintained flexibility. Players frequently resourced CONUS first before turning to other regions with remaining resources. Players also frequently examined other regions through the lens of CONUS, considering how instabilities in these regions might affect the homeland. Overall, however, participants noted that the USCG must reinvent its approaches to CONUS operations by moving from a single-mission focus to a multimission focus in order to free up resources for international missions.

Players also said that they considered how stakeholders might view the roles and responsibilities of the USCG, including the federal entity that stakeholders perceived as having primary responsibility in a region. DoD, for example, has the lead in the Indo-Pacific.

Resourcing also required consideration of the infrastructure in place, the ability to support operations from a distance, and the availability of low-cost options to maintain involve-
ment and thereby mitigate risk, especially in the Indo-Pacific, the Arctic, and Africa. Players confronted the need to make an investment in overseas logistics to maintain a continued presence in more-distant regions, for example. Teams said that they frequently sought to leverage the strong maritime capabilities of partners and allies in the Arctic or Europe to mitigate risk in these regions, but they acknowledged that these relationships needed investment to endure and succeed. By the end of the game, as investments provided efficiencies, participants frequently got out of the mindset of risk mitigation (generally in the Arctic and Indo-Pacific) and began to look for opportunities to influence maritime governance. It was only at this point that the players seemed to reconsider the importance of other regions, such as Africa.

**Missions that secure maritime trade or provide direct support to people were identified as no-fail missions.** Participants expressed strong agreement that EMDR and MTSM were no-fail missions because of their connections to the USCG’s reputation for helping people, their importance to the government and the public, and to maintaining international trade and the U.S. economy. In addition, this is where the USCG has a lot of capability and expertise.

Even OCONUS, players focused on missions in which the USCG had a comparative advantage over other federal entities, such as IE, because of the importance to capacity-building and law enforcement missions and the unique skill sets required (boarding other ships).

On the other hand, DI and marine-safety missions were expected to become less relevant. Participants said that the DI mission was becoming less important, and they expressed willingness to risk that it would continue to do so. Marine safety was discussed as an important mission but one that could be performed by others, including the private sector, with a lower level of USCG involvement.

**The composition of teams also affected decisionmaking.** Teams with greater proportions of senior leaders were more willing or able to identify no-fail missions and those for which some risk was acceptable. This suggests a need to continue building strategic-level thinking at more-junior levels.

All teams acknowledged SAR’s importance to the USCG brand, but the priority given to this mission was mixed. Some teams were adamant that SAR be resourced regardless of I&Ws, while others did not prioritize it at any point in gameplay. Some participants suggested that technological advancements would allow the USCG to take the “search” out of SAR, which would free up time and resources for other missions. Others said that investments in other missions, such as MTSM, PWCS, and marine safety, would increase risk mitigation and reduce demand for SAR.

It was also noted that, although SAR is one of the USCG’s most-visible services, unsuccessful missions historically have not received significant blowback. In contrast, EMDR could involve a much more spectacular failure. Understanding SAR and how it fits into the USCG and the U.S. public’s perception of the USCG was therefore said to be open for debate.

Teams often identified a subset of potential mission areas that might be “in play” based on I&Ws but usually tried to “pick the right one” rather than resource both. The teams
performed well in interpreting the I&Ws in ways that narrowed down the likely mission–region intersections. But even the narrower subset required more resources than might have been available. Most teams chose to try to guess the right intersection rather than cover multiple missions or regions. As the investments began to pay off, the ability to apply investments to help cover multiple intersections helped mitigate this issue.

**Investments in such capabilities as C5ISR, UxSs, and expeditionary logistics were used to amplify the flexibility and adaptability of the force, enabling it to buy down risk from uncertain threats in the homeland and globally.** The I&Ws helped focus the discussion, but resource decisions were still challenged by the uncertainty of the future. Investments were used to buy down this uncertainty when I&Ws led to conflicting conclusions, and this helped improve mission success during gameplay. Although the game intentionally left the specific technologies and capabilities ambiguous, players discussed types of UxSs and how they could use UxSs to provide leverage over a variety of missions.

Similarly, participants invested in AFPs that enabled operational resources to be shifted more readily when mission demand was uncertain. Given the need to respond to a dynamic global environment, the AFPs provide surge capability when the USCG might face multiple priority missions but cannot dedicate resources to them all because of constrained resources. IE was used to leverage and build partner capabilities to free up USCG resources for other regions and missions.

Participants also indicated a desire to maintain flexibility in reducing the tyranny of distance. There was a tendency to use expeditionary logistics to reach regions where threats were likely to be enduring across multiple missions to support them more efficiently. Investment in a more permanent FOB would require having substantially more assets in a region than the USCG typically has today to make it a cost-effective option.

**Evergreen VI, Game 2**

Evergreen VI, game 2, was conducted February 14 and 15, 2023, at Sector San Francisco, with 35 USCG personnel from PACAREA HQ, district 11 (D11), and several other Bay Area field units. Participants were a mix of senior leadership and rising leaders, both officers and enlisted personnel. Championed by DCO and hosted by the commander of D11, this game was the first played in the field by personnel who were not assigned to USCG HQ.

**Overarching Observations**

**Teams said that articulating a strategy to manage short-term and long-term priorities and guide resourcing was essential.** Without these guiding principles, participants said, they realized that it would be challenging to prioritize regions and missions given the uncertainty around the broad range of I&Ws and events they faced throughout the game. The strategy also helped them shape the USCG of the future and consider longer-term needs while accept-
ing the shorter-term risk that was necessary in a resource-constrained environment. In one participant’s words, they were “comfortable being uncomfortable.”

**Like in previous games, the primacy of CONUS stood out, even with abundant demand for the USCG’s unique capabilities. Missions that secured maritime trade or provided direct support to people were identified as no-fail missions.** The four teams consistently identified the no-fail missions as SAR and EMDR—missions that have high visibility, high consequences, and strong association to the USCG as a humanitarian service—and MTSM, which is important for maintaining international trade and the U.S. economy. Also, these are areas in which the USCG has significant capability and expertise and are inherently CONUS focused. More so than in other games, teams expressed the core purpose of the USCG as saving lives, providing humanitarian assistance, and facilitating maritime trade. This was particularly evident in discussions around sustaining SAR and EMDR missions.

However, there was some nuance regarding SAR and EMDR. Some said that, although SAR is one of the USCG’s most-visible services, the baseline level of SAR resourcing was acceptable because investments in other missions, such as MTSM, PWCS, and marine safety, would mitigate risk and reduce demand for SAR. In contrast, EMDR could involve a much more spectacular failure.

**Much of the investment abroad was to help improve maritime governance in ways that reduce risk to the U.S. maritime environment, particularly to support the MTS. I&Ws provided clues about the regions on which to focus, but players often included additional factors to prioritize regions for resourcing. Resourcing decisions also considered the ability to support operations from a distance and the availability of low-cost options to maintain involvement and thereby mitigate risk. Teams said that they sought, for example, to leverage the strong maritime capabilities of partners and allies in Europe to mitigate risk and therefore saw little reason to make substantial investments in the region.**

**All teams expressed consensus about the importance of the Indo-Pacific and Arctic regions to U.S. security interests.** However, teams differed in the opinions they expressed about the USCG’s most effective role in these regions and the appropriate missions that should be prioritized. For example, participants questioned what, specifically, the challenges were that would arise from China’s emerging primacy and where USCG capabilities would be relevant (as opposed to geopolitical concerns in the abstract). Discussions on what overseas missions to prioritize often focused on how the missions supported maritime governance and whether the USCG complemented the capabilities of other U.S. agencies, partners, and allies. Players generally said that they saw IE as leveraging USCG maritime expertise and credibility to develop strategic working relationships with partners and allies without devoting already-constrained resources, while IUU fishing became a focus because of the importance of institutional capacity-building and security governance.

The Latin America and Caribbean region was also frequently discussed both because of its proximity to the homeland and the potential for increased migration or China’s growing influence. At the same time, DI was almost universally deemphasized because of changing
stakeholder priorities, the relatively high resource requirements, and legalization of some drugs.

All teams seemed to immediately recognize the necessity of taking short-term risk, even in CONUS missions, to invest in longer-term capabilities and technology. Investments in such capabilities as C5ISR, AFPs, expeditionary logistics, and UxSs were used to amplify the flexibility and adaptability of the force, enabling it to buy down risk from uncertain threats in the homeland and globally. Investments were used to buy down uncertainty when I&Ws led to alternative or competing conclusions, and this helped with mission success during gameplay. For example, there seemed to be a tendency to use UxSs to provide maritime domain awareness for a variety of missions and to use AFPs to provide surge capability when the USCG might face multiple priority missions but cannot dedicate resources to them all because of constrained resources. Participants tended to put expeditionary logistics in areas where threats were likely to be enduring across multiple missions within the same region over time to support them more efficiently.

None of the teams seemed to seriously consider investment in more-permanent FOBs, which would require having substantially more assets in a region than the USCG typically has today to be a cost-effective option. Players noted their “places, not bases” mindset. In addition to the efficiencies and agility that capability investments provided, participants said, having the latest technology (or at least catching up to the private sector) would help attract recruits and improve morale. Investments in C5ISR were therefore made by all teams at the outset of the game despite the high cost of resourcing.

Participants expressed some appreciation of why investing in CU was required to sustain institutional change brought on by evolving missions, technologies, and capabilities. But often teams accepted risk in this area in the short term to resource investments, then tried to catch up in later rounds, with mixed success. Players repeatedly discussed that investing in the workforce was critical to successful USCG operations because, more than anything else, “people matter” and should be a core USCG investment. This meant a heavy emphasis on culture within the game. Players also discussed how the workforce was intertwined with every aspect of the mission set and could be addressed through investment in O&M, FM, or technology enhancements. However, several teams nevertheless expressed willingness to take on a short-term cultural deficit in hopes that they could later adjust USCG institutions to meet the service’s new needs. Although some escaped unscathed, other teams faced significant constraints on their resources until this CU deficit was erased.

Evergreen VI, Game 3

Evergreen VI, game 3, was conducted May 11 and 12, 2023, championed by DCO and hosted by the USCG Research and Development Center in New London, Connecticut, with the Vice Commandant of the service joining to observe and offer insights to players. The game participants included nearly 35 USCG active, reserve, auxiliary, and civilian personnel from D1
Overarching Observations

The Vice Commandant of the USCG observed the gameplay and indicated being happy to see participants discussing the real-world challenges for the USCG in the immediate and long terms and making decisions that the senior leadership addressed daily. The admiral noted that the high level of engagement and dialogue during gameplay and the insights they generated boded well for the USCG’s future.

Teams said that articulating a strategy helped them proactively shape the USCG of the future and to consider longer-term needs while accepting the shorter-term risk that was necessary in a resource-constrained environment. Participants said that it became apparent that “one of the fundamental flaws is we shouldn’t be implementing these four-year term strategies; it’s like playing the game for one round and then resetting without the benefits of long-term efforts [investments].” Another noted, “For a strategy to be truly strategic, it has to endure.”

To a greater extent than in previous games, participants indicated appreciation of the importance of investing in CU to sustain the institution while adapting to evolving missions, technologies, and societal norms. This group said that it saw CU as a critical investment that pays long-term dividends essential to performing future missions. Every team discussed CU and its importance to everything the service does. Teams discussed the need to shift from a CU of “doing more with less” to one that knows where it is appropriate to accept some level of risk. One participant pointed out that the USCG needed to shift the CU from one that was “never taught to say no and always to do more with less” to one that responds affirmatively while identifying where risk must be taken: “I can do A, B, or D but not C.” Participants noted that leadership could support this transition by continuing to articulate priorities but that leadership could also articulate where a risk would be acceptable because of constraints on resources and personnel, including their work–life boundaries.

In comparison with that in other games, the discussion of CU was less focused on how shifting trends in technology or societal norms might be drivers of cultural change and more focused on sustaining an organization that is capable of performing many missions while operating in a resource-constrained environment. One player said that leaving CU at a deficit was “a risk multiplier.” One participant referred to sustainment in terms of adaptability and resilience, and most teams invested not only in CU but also in resilience, such as through O&M or FM.

Although no team was willing to accept a cultural deficit, even in the short term, sensitivity to the issue varied with experience. Those with greater time in service and operational
experience were more acutely concerned with the risk posed by putting off investments in adaptability and resilience to the future.

**Overall, players focused more heavily on stakeholder interests and the consequences of their opinions than players had in previous iterations.** For example, when discussing both missions and regions to prioritize, remaining visible to the public to sustain goodwill was noted as important for maintaining political support and encouraging new recruits, and remaining responsive to congressional interests was seen as important for sustaining funding. As one participant said, the USCG wants to “build a reservoir of good will” because, at some point, the service either will not perform well or will take a hit in a mission from a potentially unseen event and will need good will to absorb the punch. Players also noted the importance of the USCG having a narrative around its strategy that it can communicate to various stakeholders to emphasize its many roles and proactively set expectations.

**Missions that secure maritime trade, allow freedom of navigation, maintain international alliances, or provide direct support to people were identified as no-fail missions.** Players focused on the missions that aligned with perceived stakeholder interests because they had high visibility and high consequences or they supported the U.S. economy (facilitating U.S. maritime commerce is a big driver for the service). Discussions about what missions to prioritize also focused on the USCG’s unique capabilities. Players focused less consistently on other missions, choosing to resource them primarily when facing indicators of direct threats.

IE was treated as a priority by all teams. IE was seen as a way to “keep the doors open” or “maintain a foothold” to remain present and active in a region. IE can also leverage partnerships to shore up USCG capabilities (that are distinct from USN capabilities) with limited resources. For similar reasons, IUU fishing often became a focus because of the importance of building capacity and institutionalizing maritime governance for U.S. partners and allies.

DO were identified as important for maintaining freedom of navigation and supporting the USN. However, players noted some concerns about USCG and USN interoperability over time when funding stream levels vary. Players noted that the USCG might have comparative advantage in the gray zone, but they also noted that *gray zone* was not a term commonly used in operations, so participants might not have a complete understanding of what these operations entail.

Although SAR is one of the USCG’s most-visible missions and players said that it was important for both stakeholder opinions and recruiting, participants placed greater emphasis on EMDR. Players said that they did not want to walk away from the SAR mission but that it could be reimagined by leveraging new investments, new operational concepts, and the growing capacity of private entities. In contrast, players said that EMDR could involve a much more spectacular failure and required greater focus.

**All teams expressed consensus about the importance of the Indo-Pacific and Arctic regions to U.S. security interests, but teams hesitated to make long-term investments in these regions.** Across and between teams, there was great discussion of the USCG’s most effective role in these regions and the appropriate missions to prioritize. As noted, players generally saw IE as a way to remain relevant and visible to U.S. policymakers, allies, and part-
ners and to leverage USCG maritime expertise and credibility without a significant burden on already-constrained resources. Players frequently did not resource additional missions in this region—unless given a strong signal of impending threats—and occasionally further reduced resourcing. Instead, they considered how to use investments, such as expeditionary logistics, to efficiently buy down risk in regions that required supporting operations from a distance or to meet threats that clearly affected a few versus several missions in the region.

Intelligence information on I&Ws provided clues about the regions on which to focus, but players often included additional factors to prioritize regions for resourcing. The Latin America and Caribbean region was also frequently treated as a priority because of its proximity to the homeland. In some respects, the region itself was treated as an extension of CONUS. Players noted consistently that factors leading to instability in the region or migration from the region, for example, had direct impacts on CONUS or could leave the region vulnerable to China’s growing influence.

Teams consistently took risks on Europe despite ongoing security concerns. Most teams said that Europe had strong governance and capabilities on which the USCG could rely, given the extensive network of U.S. partners and allies in the region. Players also said that the USCG had a lesser role and comparative advantage in Europe than in other regions.

Like with other iterations of the game, the importance of CONUS stood out, even in a world with abundant demand for the USCG’s unique capabilities. As a result, teams used resources to buy down risk around the world in ways that maintained flexibility. In early rounds, teams often focused on overseas threats and took some risk in CONUS missions to cover missions that help counter China’s or Russia’s aggression or influence, improve maritime governance in ways that reduce risk to freedom of navigation and the MTS, or mitigate IUU fishing. As early investments became operational, teams were able to “pull back” and resource CONUS missions, such as SAR, EMDR, MTSM, PWCS, and MEP.

As noted, players also considered other factors, such as the mechanisms by which instabilities in OCONUS regions might affect the homeland and how stakeholders might view the roles and responsibilities of the USCG, including which federal entity stakeholders perceived as having primary responsibility in the region.

Investments in such capabilities as C5ISR, expeditionary logistics, UxSs, and AFPs were used to amplify the flexibility and adaptability of the force, enabling it to buy down risk from uncertain threats in the homeland and globally. All teams seemed to immediately recognize the value of taking short-term risk, generally in CONUS missions, to invest in longer-term capabilities and technology. Although I&Ws helped focus player discussions, resource decisions were still challenged by the reality of uncertainty. Investments were used to buy down this uncertainty when I&Ws led to multiple or competing conclusions.

To deal with uncertainty, players made investments in UxSs to provide leverage for a variety of mission and AFPs to provide surge capability when they were confident that the USCG would face multiple priority missions in a region of concern but could not dedicate resources to each.
All teams invested in C5ISR from the outset with virtually no debate, despite the high cost to resourcing and the required institutional change, because, they said, they recognized that the USCG was already behind the pace of technological change.

**Evergreen VI, Game 4**

Evergreen VI, game 4, championed by DCO, was conducted on August 22 and 23, 2023, at Air Station Barbers Point in Kapolei, Hawaii. The 30 participants included active-duty and civilian personnel from the USCG, U.S. Air Force, and USN representing USCG PACAREA, D14, USCG Forces Micronesia/Sector Guam, USCG Activities Far East, U.S. Indo-Pacific Command (USINDOPACOM) and Joint Interagency Task Force West, and the Daniel K. Inouye Asia-Pacific Center for Security Studies. Both HQ and operational functions (cutters and aviation) were represented. Notably, this was the first time that participants included those from outside the USCG and who had varying awareness of USCG missions, capabilities, and demands.

**Overarching Observations**

This was the first time that members of the joint community participated in the game, which enriched the discussion about the unique capabilities of the USCG, its role in overseas missions, and the trade-offs that might be necessary to support those missions. Players focused heavily on the USCG’s role in supporting national security interests and said that they viewed the USCG’s involvement overseas and unique capabilities as an effective diplomatic instrument. Many noted that there were missions that only the USCG was well positioned to take on for several reasons. Some missions involved building relationships or required a less-confrontational presence than the USN and other military services convey. For example, USCG activities in the South China Sea were seen as less provocative than USN activities. Others hinged on the USCG’s access to areas that were not available to combat forces; for example, New Zealand prohibits the USN’s nuclear-powered ships from entering its inland waters and ports.

Joint discussions also revealed that the DO mission meant different things to different groups. The term DO could refer to a spectrum of activities, including logistics support and port security, law enforcement, extending DoD missions, and proactive diplomatic engagement. As a result, neither the USCG nor its partners had a clear understanding of what DO for the USCG involve and what the longer-term expectations are for USCG’s responsibilities vis-à-vis the USN’s responsibilities.

Additionally, through gameplay and discussions, joint participants became aware of the more-nuanced purposes of USCG missions. For example, FE was initially perceived as a law enforcement activity for protecting endangered species or controlling overfishing. But an extended discussion led to greater awareness of the mission’s full spectrum of objectives, such as enhancing food security, economic security, and state sovereignty in partner nations, and
the importance of cooperation and capacity-building for developing enduring partnerships. For some, the discussion was “eye-opening” in terms of the USCG’s challenges and the need to discuss policy and options for collaboration and cooperation in the interagency space to try to find efficiencies.

There is reason to believe that the joint aspect of USCG missions will become even more important. Teams noted that the Commandant’s strategy included global engagement but that these missions had greater uncertainty than homeland missions because of the dynamic geopolitical landscape and adversaries’ actions. Furthermore, the specific roles that the USCG can play with federal partners overseas was not as clearly defined as homeland missions, which further complicates long-range planning.

Teams that developed and stuck to a strategy said that they found it easier to manage short- and long-term priorities, resourcing, and investments, but many pointed out the mismatch between long-term strategies and year-to-year funding. Without the guiding principles of a strategy, players said that they realized that it would be challenging to prioritize regions and missions because the uncertainty about whether the I&Ws introduced throughout the game were enduring or short-term threats and how, given the array of possible outcomes, they could manifest as events requiring a mission response.

The strategy also helped them proactively shape the USCG of the future and consider longer-term needs while accepting the shorter-term risk that was necessary in a resource-constrained environment. However, players noted that a long-term strategy in a resource-constrained environment requires communicating choices to both stakeholders and service members about what missions can and cannot be supported. “We’ve talked about doing strategy as an organization but fail at budget requests to Congress,” one participant said. A long-term strategy requires long-term funding commitments, but, because funds are allocated year-to-year, teams ended up using funds to fix outdated platforms instead. Until the financial system can enable longer-term priorities, realizing the strategy will be difficult.

There was consensus across all teams that the Indo-Pacific and Arctic regions were important to U.S. security interests and that the USCG could play an effective role. More so than in other games, perhaps owing to the location of the game and experience of the players, there was less debate about the importance of the Indo-Pacific, and each team said that it saw enduring roles for the USCG to help counter China’s or Russia’s aggression or influence, improve maritime governance and reduce risk to freedom of navigation, engage partners and allies, and mitigate IUU fishing. Russia’s and China’s activities in the resource-rich Arctic were another area of interest, not just for IE and DO but also for MTSM and icebreaking.

Teams indicated acute awareness of the “tyranny of distance” and committed to missions in these regions by making early investments in either a permanent FOB or ELC to support missions more efficiently overseas. This was the first game in which a team invested in two FOBs to support overseas operations. These early investments generated dividends in later turns as the teams routinely prioritized such missions as IE, DO, and IUU fishing.

Overall, teams prioritized IE as a way to build partner capacity, stabilize a region, or sustain a U.S. presence. By leveraging partnerships to shore up USCG capabilities (which are dis-
tinct from the USN’s capabilities), these activities can be force multipliers, which is especially important when resources are limited. For similar reasons, IUU fishing often became a focus because of the importance of building capacity and institutionalizing maritime governance for U.S. partners and allies.

Other global areas and missions were downgraded. Across the board, teams took risk in Europe and frequently in the Middle East and Africa. Most teams said that the USCG could rely on Europe’s strong governance and capabilities, given longtime U.S. cooperation in the region and that the USCG could gain a greater return on investment by using its constrained resources in other regions. Similarly, all teams expressed interest in deprioritizing or eliminating the DI mission because it required significant resources, garnered minimal public awareness, was increasingly addressed by others, and had limited effectiveness overall.

Like in other iterations of the game, the importance of CONUS stood out because of the USCG’s value to the homeland, the public visibility of these missions, the close association these missions had with USCG identity, and their enduring nature. As one participant noted, failing in CONUS would be “an existential threat” to the USCG, whereas the USCG’s role overseas was less clear. Teams tended to prioritize missions that were highly visible to stakeholders or enabled trade, such as EMDR and MTSM.

Although SAR is one of the USCG’s most-visible missions and many players said that it was the USCG’s “bread and butter,” teams were split on how to treat it. Two teams said that SAR was sufficiently resourced or overresourced and therefore did not allocate additional resources to the mission, while the other two consistently resourced SAR as a mission that was core to the USCG identity and was underresourced.

In early rounds, teams often took some risk in CONUS missions, seeming to assume that current funding could sustain these missions in the short term. However, as investments that provided efficiencies or flexibilities became operational, teams were able to resource more CONUS missions. This pattern follows some strategies we had seen in previous iterations, but it contrasts with many observed strategies that resourced CONUS first and then used investments and efficiencies to reduce risk in overseas missions.

Investments in such capabilities as C5ISR, UxSs, and AFPs were used to amplify the flexibility and adaptability of the force, enabling it to generate efficiencies and buy down risk from uncertain threats in the homeland and abroad. All teams invested in C5ISR from the outset with little debate, despite the high cost and the required institutional change. To deal with uncertainty around the I&Ws, players invested in UxSs and AFPs to provide leverage over a variety of missions. The intent was to provide flexible response capability when they were confident that the USCG would face multiple priority missions in a region of concern but could not dedicate resources to each.

At the same time, more so than in other iterations of the game, participants expressed fatigue over the tranche of new technologies and platforms entering the force. They pointed to ineffective integration of these new technologies into operational concepts and the lack of training to fully realize benefits. Teams universally invested in O&M and FM, recognizing that infrastructure was already severely degraded and that investment was needed to sup-
port missions: “One of the priorities is investment in infrastructure—that takes time. And if you don’t have that, then all these other missions can’t be done.” This emphasis on how infrastructure affects other missions was new; in prior iterations of the game, infrastructure investments were frequently said to be necessary for morale, recruitment, and retention. In the game, discipline in funding investments, maintaining (or rebuilding) CU, and fully funding facilities and O&M were important and achievable strategic goals for the teams but not something that they observed in the USCG.

Investments in CU (institutional change) were initially minimal, and teams later paid a price in terms of mission success. Investment in CU was demonstrated to be needed to implement institutional change—adjustments to organization, workforce, doctrine, training, equipment, and more—when new technology, new ways of performing or defining missions, or shifts in mission emphasis are introduced. One team noted that the introduction of many new systems in the USCG is already causing challenges, including the workforce’s ability to operate these systems and the development of new operational concepts that leverage data. Yet that team invested little in CU throughout the game, acknowledging that the long-term effects of these deficits are not always evident. The team eventually learned that it could ignore CU for only a short time before paying a price in terms of mission success. Similarly, other teams invested in CU only minimally to enable capability investments or by default when agreement on other investments could not be obtained, but most began rebuilding CU in later rounds.

**Evergreen VI: Modified Delphi Findings**

The modified Delphi exercises during Evergreen VI were more streamlined, were rated and ranked relative to one another rather than independently scored, and had a higher number of responses both before and after the game. Because of these changes in execution, themes, trends, and connections to in-game discussions can be highlighted, but this was not a statistical endeavor aimed at yielding precise outcomes.

Generally, the rankings across games were fairly different, which is not unexpected given that the games included substantially different audiences. However, workforce was generally said to be a high priority for impact. The gray zone, IE, and changing CONOPSs were said fairly consistently to be at a low priority for impact. With respect to difficulty in implementing changes, ratings for workforce, data and technology, and infrastructure had some consistency in being considered fairly difficult to implement. Additionally, there were some changes in results between the pregame and postgame surveys, indicating that at least some participants did change their views. However, building consensus, as measured by shrinking standard deviations in responses, was not consistent, although it does appear that, during game 2, participants were perhaps more inclined to agree by the end. Consensus was not a requirement of the process per discussion of the methodology.

From the accompanying discussions, it appeared that participants had less concrete and consistent understandings of what was meant by some objectives, such as those related to the
gray zone, national interests, and IE, which caused some to rate these as less important than objectives they perceived more concretely. Some participants rated certain objectives, such as those related to workforce and data and technology, as difficult to implement for several reasons, including cost and the need for cultural change.

In Chapter 4, we delve further into the analysis of the games. Appendix B provides a more in-depth look at the modified Delphi analysis.
A central goal of Paratus Futurum in the first year of Evergreen VI was to understand how the Commandant’s strategy would perform (1) under a variety of plausible futures and (2) when treated as a long-term strategy for the USCG.\footnote{Evergreen V games were part of Evergreen V, not Evergreen VI, and were focused on understanding the commonalities and differences in potential USCG responses to the four Evergreen V scenarios. This section focuses on Evergreen VI and the Commandant’s new (at the time of the games) strategy.} To better understand this question, we first examined the implementation plans developed by the teams.

When determining which regions to prioritize, teams selected four in-game regions—CONUS Atlantic, CONUS Pacific, the Indo-Pacific, and the Arctic—in almost equal measure. The players’ discussions and selections highlighted how the service is so frequently pulled in multiple directions. Under DHS, the USCG is primarily a homeland entity. At the same time, it is drawn on as a military service to meet the demand signals of the National Defense Strategy, particularly in such areas as the Indo-Pacific and the Arctic, where the USCG has capabilities and partner relationships that the other services do not.

When players were asked to consider core USCG missions, this balance between foreign and domestic responsibilities was once again highlighted. The two most–heavily prioritized missions were EMDR and IE. EMDR was frequently described as the USCG’s key no-fail mission because not only is it core to the USCG’s identity but it also has the greatest risk of spectacular failure. IE, alternatively, is not a core statutory mission for the USCG, but players discussed the myriad ways in which IE is perhaps the key mission for the USCG overseas. The USCG during peacetime operations is able to operate in some manners and locations in which the USN cannot—because, for example, it is seen as less openly antagonistic toward competitors.\footnote{It might be because this type of operation is routine or clearly within the USCG’s operational paradigm that USCG members do not think of it in terms of gray-zone operations, which could help explain some of the comments we received about how the USCG thinks about the gray zone.} At the same time, the USCG is able to provide expertise in maritime governance that builds partner capacity and enhances the relationship between the United States and its allies and partners.

Outside of IE, however, players tended to express a greater need to prioritize homeland missions. They frequently prioritized as no-fail missions SAR and MTSM, two homeland missions that speak to the historical core responsibilities of the USCG. In addition, we found
that, when considering mission-based prioritization (as opposed to region-based prioritization), if a mission existed both in CONUS and in another region, the general preference was to resource the mission in CONUS first.

Players came to near universal agreement that Europe could be deemphasized. Participants noted that the USCG had a minimal footprint in Europe, with fewer responsibilities than in other regions. Furthermore, this assessment did not change even after Russia’s invasion of Ukraine: The players indicated that the United States and the USCG could rely on allies and partners in the region rather than on USCG assets.

Teams often faced a much greater struggle with mission deprioritization. Players frequently noted that they had never been given permission to deprioritize a mission, making the exercise feel unnatural. Ultimately, players frequently chose to take risk in the DI mission for a variety of reasons. First, players noted that this mission could change entirely in the future because of changing perceptions about legalization and changing sources of certain drugs. Furthermore, players expressed concern about how effective and efficient the mission was, noting that, in the future, drugs might enter the United States via new, more-complex vectors as the pace of technological change increases.

We found that prioritization was often stovepiped in that players prioritized regions, missions, and investments distinctly and that sometimes priorities conflicted—for example, choosing the Indo-Pacific and the Arctic as regional priorities and then prioritizing MTSM missions, which, in the game, are represented only in CONUS. Although this disconnect is somewhat a function of the game structure (e.g., the binning of regions and missions across the game board), within the play of the game, there is reason to think that the USCG’s perceptions of priority shift depending on how players parse the problem set. When considering missions, they defaulted to the domestic missions, but, when considering regions of concern, they were willing to push beyond CONUS in a manner reflective of the other services.

When prioritizing investments, players expressed a clear picture of long- and short-term needs derived from the Commandant’s strategy. The priority investment for players was predominantly C5ISR. When adapting technological advancements, players said that the USCG was already behind the curve. To truly make use of force multipliers, such as advancements in cyber and space capabilities, the USCG must begin making investments immediately, including in the institutional change necessary to support adaptation.

At the same time, players said that the USCG needed to prioritize the challenges of the day. They highlighted current capabilities and infrastructure being stretched beyond capacity as one of the biggest challenges that the USCG was facing. Players consistently prioritized FM and O&M, only rarely taking a risk by forgoing either investment.

Players were also asked to identify investments that were not priorities in their implementation plans, and they indicated that certain investments were not in service of the Commandant’s strategy. Overseas, there was a clear emphasis on a “places, not bases” mentality. Players preferred to retain flexibility rather than have fixed infrastructure overseas. Thus, very few teams were willing to invest in a permanent overseas FOB instead of the more-regionally
flexible expeditionary logistics, even given the added operational benefits of the FOB and the equal costs and cost reductions of the two investments.

Our analysis across teams suggests that there were significant commonalities in how players sought to implement the Commandant’s strategy as a long-term vision of the USCG.

How Did Strategies Get Implemented?

In this section, we discuss how the teams’ implementation plans were enacted in practice and how they performed in an uncertain world. In general, the more carefully a team had constructed a strategy, the more committed its members were to following that strategy despite setbacks from adverse-event cards or the effects of chance. Where teams were less committed to a strategy, adverse events tended to result in resourcing decisions divorced from strategic principles and focused on chasing new events as they arose. For most teams, by the end of turn 3, their strategies were being fully implemented, aided by early investments that paid off and made implementing the strategies easier.

In the same way that looking first at missions or first at regions framed how players made decisions, as discussed above, variations in how players framed or sequenced their discussion affected how resources were allocated. In some cases, teams focused first on regional or operational commitments, based on the I&Ws and on their stated regional priorities. Then they would allocate remaining resources to investments and potentially rebalance again between investment and operations. Other teams focused first on an overarching investment strategy (often continuing to invest until the culture costs became prohibitive). Remaining resources would be allocated based on a combination of regional priorities and I&Ws. No team developed an a priori resource strategy that allocated a specific amount (or percentage) to operations and investments, nor was there a well-defined investment-over-time path. There was merely a statement of intent on investments that guided fresh decisionmaking each turn.

In the first year of the game, players knew the future scenario in which they would be living and were provided a specific strategic mission to implement that had been tailored to that scenario. So their implementation plans varied, but, in general, they closely followed the guidance laid out in their assigned strategic vision for the initial round. As the rounds progressed and investments were realized, those who had been homeland focused often expanded globally, and those who had started with a global distribution of resources would use their investments to respond as needed globally but brought their resources back to the homeland to reduce risk and begin to prioritize in CONUS. This sinusoidal expansion and contraction over time was common across most teams.

In the second year of games, when players were not told their future scenarios and were given the 2022 service strategy and Commandant’s intent and asked to implement them, players made a wide variety of implementation choices by region, by mission, and by investment. Each could refer to part of the strategic guidance documents to explain why one should be chosen over another. Many remarked that the gap between the strategic guidance they
received from senior leadership and the implementation choices was significant and left too much room for interpretation.

The strategy that players developed often went beyond the key mission areas they identified at its outset. There were particular missions and regions where, even if not prioritized at the outset of the game, players expressed a clear desire to cover down (reduce risk) with some level of investment or resourcing, especially when these missions were flagged in the I&Ws. Most consistently, players were reluctant to take sustained risk in CONUS, particularly in the PWCS, MTSM, and EMDR missions. Furthermore, when resources and investments were devoted to these missions, they tended to remain relatively fixed over the course of the game.

At the same time, some missions and regions were more clearly palatable for risk-taking, such as IUU fishing in the Middle East and Africa. Players often used investments to cover down on missions abroad and then would draw resources to cover down on missions of priority. This was especially true if the I&Ws presented threats to the homeland. Players could see the demand for presence abroad and wanted to cover down on missions that they felt were important, but CONUS often was seen as the first priority.

Like with their implementation plans, the players seemed to align their strategies, and deviations from their strategies, to cover down on risks to mission areas and regions that were either defined as part of the homeland security mission—protecting public security in the United States, including the economic system and critical infrastructure—and the National Defense Strategy—which has been weighted toward competition with China and rising competition in the Arctic. If I&Ws hinted at threats to missions that jeopardized these areas, players seemed to prioritize them and resource them faster than missions that they might have seen as several degrees removed from these broader mission areas.

Commonalities Within Scenarios

Across the gameplays, the players in the same scenarios encountered similar, if not the same, trends, via a newspaper of highlights on the state of their world in 2040. Given the opportunity to conduct analysis across the games, we identified some common resource-allocation patterns within individual scenarios. Many variables could influence players’ decision-making, such as constraints imposed by trend cards in previous turns, the outcomes of previous turns, and players’ ability to immerse themselves in their respective games and scenarios. This means that there are many potentially confounding variables when analyzing player behavior. As a result, we do not make causal claims but instead point out noticeable, consistent patterns across games.

3 For examples, see Davenport et al., USCG Project Evergreen V, Appendix A.
Beyond the Horizon
In the Beyond the Horizon scenario, players were told that hurricanes had produced record damage in recent years and that increasing episodes of extreme weather were expected. Each team responded by investing in EMDR and MTSM, saying that they needed to be prepared to respond not just to the possibility of an extremely destructive event but also to restoring the MTS to avoid disruptions to important economic activity.

Beyond the Horizon also featured an increasingly assertive China, not just militarily but also economically. Players responded by increasing IE and DO in both the Indo-Pacific and the Arctic. But the challenges presented by an expansive China often pushed them to try to counter China in Latin America and the Caribbean. In contrast, only one team sought to counter China’s influence in the Middle East and Africa despite its growing influence there, suggesting that they were most fearful of China’s growing economic power in their own backyard.

The Beyond the Horizon scenario also had the United States confronting economic decline due to stagnant economic growth, in part because of the rise in total government debt. In contrast to the previous trends, there was less of a pattern in responses to this concern. Although some teams did increase their focus on the MTS and teams consistently were likely to resource O&M and FM when confronting these threats, it is harder to tie this directly to their views on U.S. economic decline.

Steady Growth
In the Steady Growth scenario, players were confronted with the increased pace of technological change. They said that this was likeliest to manifest in increases in efficiency but also in the vulnerability of maritime shipping. As a result, teams sought to prioritize the MTSM and PWCS missions at home. In addition, players considered the ability of transnational criminal organizations to leverage these new technologies, often seeing the need to resource the DI mission arising from Latin America and the Caribbean. Players also sought to take advantage of this technology change to their own benefit, investing in C5ISR and UxSs to keep pace with this change.

The United States also experiences greater economic prosperity in the Steady Growth scenario. This allows the U.S. government to focus on revitalizing domestic production and entrepreneurship and, with that revitalization, increasing domestic commerce. For players, this further increased the necessity for resourcing the MTSM mission, such that players resourced this mission in both CONUS regions for a majority of turns.

In this scenario, the United States seeks to increase its presence—focusing on safety and sea-lane stewardship—including around the South China Sea (though not in the Taiwan Strait), while partner navies focus on China’s gray-zone activities. China’s military behavior in the region is more limited in this scenario. As a result, players were split on the role of the United States in the Indo-Pacific. They focused largely on assistance to partners, including IE and IUU fishing.
At the same time, the scenario has China maintaining a strong interest in the Arctic, including Arctic shipping. Players sought to make the Arctic an area of focus but seemed consistently torn about how best to handle the increasingly open Arctic. Participants most consistently thought to double down on partner relations and management of the MTS, stating that the region required enhanced governance and regulation of commerce.

**Diverging Paths**

In the Diverging Paths scenario, political pressures and a brief economic downturn force the United States to turn inward. Players also frequently turned inward, choosing to heavily resource CONUS missions, particularly ones they said would be highly visible, such as EMDR and SAR.

Players also experienced great technological advancement in this scenario that led to significant vulnerabilities for U.S. infrastructure and commerce. The ports of Los Angeles–Long Beach, Portland, and Seattle are on the road to becoming “minimally staffed,” making them more efficient but leaving them at greater risk for malign activity. Players frequently sought to resource the MTSM and PWCS missions to minimize this threat.

At the same time, the scenario portrays an increasingly capable China. This created a dilemma for players: What role should the USCG play in a world in which the United States has taken on a less active role in global politics as its great-power competitor seeks to expand its influence? Players said that they felt the problem of constrained resources particularly acutely during gameplay. This led to disparate tactics in regions of interest: While one team largely divested from the Indo-Pacific for much of the game, another sought to enhance the USCG’s defense mission to push back against China’s influence. Resourcing was similarly uneven in the Arctic.

**Increasing Disorder**

The Increasing Disorder scenario presents an extremely challenging world with an ongoing pandemic not unlike COVID-19. Players drew on their own pandemic experience to ensure that the USCG of the future would be prepared to tackle expected challenges, such as ports overwhelmed by the entry of goods and people and the need to manage the increasingly active MTS in light of a dramatic increase in international shipping and trade.

In this scenario, the effects of climate change were dramatic and persistent. Much like in Beyond the Horizon, players sought to manage this risk by resourcing the EMDR mission and placing additional resources on SAR. Players also said that intense climate events were likelier to produce climate migration, requiring preparation for the migrant interdiction mission, which was consistently resourced across games. Players saw the human effects of climate change as the top priority for resourcing in this scenario.

Of particular interest, this scenario is the only one in which players do not confront assertive behavior from China. Players engaged with this world largely as presented, accepting the lack of coercive behavior from China at face value. However, they sought to maintain some
level of presence in the Indo-Pacific, via resourcing either missions or investments. Despite indications of increased activity from Russia, however, players across games maintained that it was unlikely to affect USCG demand and chose to divest entirely from Europe and even reducing emphasis on the Arctic.

**Value to Participants**

Participants frequently described how the game provided players with a rare opportunity to collaborate and think beyond their individual areas of responsibility and to consider the entire USCG enterprise across missions and regions. It helped them better understand the global risks and trades that must be made as major geopolitical, technological, social, and environmental changes occur. Participants had the opportunity to consider the long view as opposed to focusing predominantly on existing challenges and to better understand the second- and third-order effects of decisions that needed to be made. They could probe the implications of various decisions and futures collaboratively with others who brought different perspectives to the decision space.

During each round of play, participants had to manage uncertainty and risk and to think about what the future might look like and how to position the USCG to excel under any circumstance. They said that they found real value in applying USCG resources to the service’s responsibilities in a fail-safe environment, experiencing firsthand “how much USCG struggles with funding.” Some said that it taught them “why the USCG is so risk averse as an institution.” Yet although most groups focused on minimizing long-term risk based on their assessments of the I&Ws, others said that it was more productive to move away from this mindset and focus more on opportunities that these trends revealed. The game allowed participants to take necessary risks and be comfortable with being uncomfortable.

It also exposed participants to the value of long-term planning and resourcing, including understanding the value of adhering to a strategy even when events occur that stress or challenge the strategy. Participants were able to experience the benefits of investments in new capabilities that could take a decade to realize. They said that they gained a greater appreciation that long-term planning and investing required thinking beyond a four-year time horizon and noted that a strategy that lasts only four years is not a true strategy. They also said that they learned that articulating and broadly communicating strategy is an important element of driving short- and long-term decisions.

Participants were required to confront different stakeholder priorities and the pressures to balance what Congress, the executive branch, and the public want the USCG to do with what the USCG needs to do to sustain readiness. Participants said that they quickly realized that they could not be all things to all stakeholders. There were lively discussions around the essential elements of the USCG brand and how to maintain it. There were thoughtful discussions around the unique capabilities and comparative advantage that the USCG brings to a given mission in a region. There were also thoughtful discussions about the extent to which
the USCG should focus on just doing its mission rather than focusing on appeasing or being appealing to stakeholders. Most identified MTSM and EMDR as key USCG missions, and the environment enabled debate on the importance of SAR to the future of the USCG that might otherwise be taboo. Players also explored the USCG’s current and future responsibilities and roles abroad, and many expressed a greater appreciation for the benefits of IE after playing the game. Ultimately, the game allowed participants to exchange perspectives on the roles the USCG serves in different regions in response to shifting pressures.

The game also required participants to confront the consequences of their decisions on USCG CU, which affects the USCG’s ability to train and retain personnel who can effectively execute missions in the future. This was an aspect of the game that many noted was novel and impactful. Teams differed in their investment approaches to CU—largely in how much risk, if any, they were willing to accept. Notably, service culture became more of a focus of discussion and investment with progressive iterations of the game.

Junior and midcareer personnel also expressed that the game framework gave them opportunities to see beyond the scope of their daily mission sets and to stop and think about the long-term strategy that USCG has to implement. They especially appreciated hearing the more-senior officers’ viewpoints on strategic resource allocation, something to which they would not generally be party in an operational setting. Other participants suggested that the game provides learning opportunities across the USCG and should not be restricted to a subset of the service. Participants repeatedly mentioned that exposure to this type of thinking and gaming should start much earlier in the career progression because often those who are making trade-off decisions are confronting that sort of strategic thinking for the first time.

In sum, participants said that they saw the interactive nature of the game as an experiential learning opportunity. They said that they learned to develop, communicate, and apply a strategy to manage future risks and opportunities. Perhaps most importantly, participants said that they learned by engaging with colleagues with different perspectives who hailed from other parts of the service, expressed appreciation for the unique opportunity to consider the long term, and reported having developed a greater appreciation for the hard choices that must be made across the enterprise.
CHAPTER 5

Conclusion

Through our analysis, we identified several insights for senior leadership and offer some perspective on the future of gaming in the USCG.

Takeaways for Senior Leadership

The Commandant’s Strategy Can Confront an Uncertain World, but Its Scope Remains Broad, and Implementation Requires Prioritization and Entails Risk

When players were given a fictional strategic vision and a known-future scenario, they were either globally or domestically focused as directed, and each saw an expansion and contraction (or vice versa) over time. When given the Commandant’s 2022 strategy, players developed implementation plans that could be homeland focused or globally focused, and what is significant is that they could all be traced back to the same documents. At the same time, players across games identified clear priorities for the USCG of the future. Missions that secure maritime trade, allow freedom of navigation, maintain international alliances, or provide direct support to people were consistently identified as no-fail missions.

Paratus Futurum does not and is not designed to prescribe which missions the USCG should prioritize or deprioritize. However, it does require players to set areas of priority and areas in which they are willing to take risk as part of a long-term strategy. Furthermore, the game requires players to acknowledge that the USCG must change the way it performs some missions to be less resource intensive—even those seen as vital to the USCG’s identity today. When teams immersed themselves in a scenario that departed from the existing world, a strong focus on its demand signals could override the taboo of accepting risk in such missions as SAR and the need to continue to prioritize them.

Players noted that, although the USCG consistently operates at risk because of its extensive responsibilities and stretched resources, it is rarely given explicit direction to deprioritize a specific mission. They suggested that the USCG would benefit from senior leadership stating, “These are the things that have to move now, and here are the resources and direction,” while also providing “explicit permission to stop doing the things that will have to be deprioritized.” Put differently, the USCG norm seems to be to attempt to do everything that is asked of it, even when doing so puts the service’s ability to meet mission standards at risk.
The game asks players to consider how to negotiate where to take risk in order to decrease risk elsewhere rather than to accept every request.

**Long-Term Thinking Presents Challenges**

One of the goals of the game was for players to envision the USCG of 2040 and make progress toward that vision. Participants said that they found this type of long-term, global thinking difficult. In each iteration, players initially struggled to articulate and operationalize what the USCG should be and do in the 2040 time frame. In the first year of *Paratus Futurum*, players were given scenarios presenting challenges the USCG would confront during this time frame and a strategic vision from USCG leadership for this specific future. In the second year of the game, players were instead asked to treat the Commandant’s 2022 strategy, which had greater nuance and depth than the strategic visions, as a long-term strategy to carry out through the 2040 time frame.

Yet, in both iterations, few teams at the outset were able to divorce themselves from the present and embrace a different future, regardless of the trends they encountered. For example, many teams retained a strong emphasis on countering China even when trends indicated that China’s aggression had waned or that a more cooperative, global regime was in place.

At the end of each game, players expressed how difficult it was to get out of the planning-cycle mindset and think purposefully about the long-term direction of the USCG, although they recognized that the game required that they do so. One player observed that it took “more than 12 years to see investment payoffs and transformational change, but that is beyond any of our normal cycles.” The lesson, that player said, was that the USCG cannot remain in “a four-year planning cycle; we have to be in a generational planning cycle.” Another participant added that, “for a strategy to be truly strategic, it has to endure.”

Players constantly had to balance whether to maintain the resourcing and investment strategy that they established early on or pivot to respond to what the I&Ws suggested was coming in the subsequent four years. Should they accept risk to the mission by not providing more resources in response to likely events in the next four years, or accept risk to their long-term strategy for building and sustaining the service? One of the central takeaways from the games to date is that the USCG needs to set a strategic vision for the long term, support it with short-term strategic waypoints, and be prepared to balance the short-term risk to mission and the longer-term risk to strategy when facing emergent demands.

**The Coast Guard’s Identity Is Multifaceted**

The USCG faces conflicting demands between its identity at home supporting DHS and its identity at home and abroad supporting the military and the National Defense Strategy. Given this complex identity, the USCG must manage a wide array of missions and demands—some

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1 USCG, *Strategy.*
of which change in importance according to the administration in office and the shifting geopolitical environment.

In the game, the USCG’s prioritizations and planning are similarly stretched between the consistent, steady-state demands of the homeland and the changing geopolitical environment. In implementing the Commandant’s vision and formulating the future of the USCG, players expressed often feeling the pull of the existing demand signals abroad, such as competition with China in the Indo-Pacific, competing with the demands of traditional CONUS missions, such as EMDR, SAR, and MTSM. The pull of the Arctic was even more complex because players said that they saw it as an extension of the homeland and an area of great-power competition, as well as a region where some believed that the USCG should be the primary tool of the U.S. government.

One of the core elements of the game was to help players think about what the USCG could—and maybe should—look like in the future, which should also include considering how the USCG should think about itself as a service. Maintaining awareness of the influences that the demands of the homeland security–related missions and global national security have on USCG identity could help those shaping the short-term and long-term future of the USCG factor in the push and pull of demands that they might face.

The Coast Guard Invests for the Future

Across games, players said that they recognized the need for USCG investments to serve as a means of supporting, rather than defining, the identity of the USCG. The nature of investments, such as permanent FOBs versus highly flexible assets, such as UxSs, did not necessarily define the USCG over the course of the game: The fact that the players made permanent investments that could not move from region to region did not mean that the USCG was less flexible, nor did investing in UxSs mean that the players were shifting these investments every turn. Rather, players used these investments in very similar ways, often covering down on risk in a region in ways that freed up resources that could reduce risk in the homeland and elsewhere. Thus, the investments themselves do not define the strategy but are a means to buy down risk, buy flexibility or efficiencies, and implement the broader strategy.

This insight could lend itself to helping the USCG plan its investments and how it leverages existing assets with consideration of the overall service identity. Rather than buying assets based on immediate demand and availability, planning investments within the broader context of USCG, future demands, and how the investment would fit into the future service could help support and solidify USCG identity and its ability to meet the challenges it might face in an uncertain future.

Because the game focuses on capabilities and deemphasizes investments in specific, new generations of ships or aircraft, their maintenance and modernization fall under the O&M and facility maintenance investments available to the teams. Several teams chose not to focus on these initially, but most teams chose to resource them every turn—while lamenting the perceived shortfalls in the current USCG when it comes to fully funding these accounts. In
essence, although they did not state it in their strategic priorities, the players implied that these two accounts should fit into the high-priority, no-fail mission box.

Many investments require attendant investment in CU, the institutional adaptations that must be made, such as new operational concepts, organizational structures, and training. Many treated CU as a nice-to-have investment because of its intangibility or because the long-term effects of deficits in CU are not always evident. For others, CU was a “must do” in that they were unwilling to accept what they deemed the “compounding risk” of assuming a deficit in CU. Over the course of the games, players expressed an increasing appreciation for the importance of CU to sustaining the force and the mission.

**Perceived Value of the Game Varied with Participant Type**

Who a player is and where they come from in the USCG appears to influence their perceptions of the game’s value. *Paratus Futurum* has been played by a variety of people, including senior leadership, technical personnel who spend most of their days on cutters, aviators who spend their days focused predominantly on SAR, civilians who support the USCG offices, cadets weeks away from graduating the USCG Academy, and joint participants from other services. When presented with the same game board, missions, regions, and strategy, we saw as many perspectives as there were players in the room. Although there were sometimes tensions in how players wanted to make decisions and execute strategy, the conversations involving these unique perspectives provided insight into what informed and shaped players’ perceptions of the USCG’s existing identity and how it should look in the future.

Having these diverse players and perspectives in the room was a value added for the USCG leadership analyzing the game and the discussions. It was also a benefit for the players themselves to be able to share ideas with one another and have discussions that might not always be readily available across areas of the USCG. Players were able to ask each other questions and learn about the different processes, decisions, and problems that others might face that they might not have known about and not considered otherwise. On many teams, advocates for specific USCG missions or perspectives were able to force debates and influence their teams’ decisionmaking. For example, having an expert on IUU fishing or the Arctic on a team often led to different types of mission prioritization debates than on teams without such advocates or specific expertise. Having opportunities to share perspectives, ask questions, and collaborate across the service can help build a common picture across the wide array of people who make up the USCG identity.

**Future of Gaming and the Coast Guard**

We observed that the game facilitators learned from running multiple iterations of the game and became better at using it to leverage player learning as they gained experience. This is important because, if USCG leaders want to execute this game internally, they will need an experienced, trained cadre to run it. The iterative improvements of the game, described
above, also argue for a trained cadre and for a process to continue to adapt and improve the
game as the USCG learns more from additional iterations.

A centralized database and a formal data-collection process (e.g., what investments were
made at each turn, what missions were resourced and at what level) could yield additional
institutional learning and research opportunities. We began this data-collection process, and
the process will be improved for future iterations of the game.

One of the most-frequent recommendations from participants who played the game
was to expand the reach so that more people could play it. Some of the more-senior partici-
pants remarked that they wished they had been able to play the game earlier in their careers,
and some more-junior players said they felt they had a better understanding of the types of
decisions that senior leadership faces and a better understanding of the service as a whole.
Although the game was not initially developed as a sustainable training tool, the systemic use
of *Paratus Futurum* or something like it with rising leaders could be beneficial to the service.
Additionally, although it was developed as a USCG-only game, *Paratus Futurum* could be a
useful tool when engaging with stakeholders outside the service (e.g., DoD, DHS, congres-
sional members). The game could help them develop a greater appreciation for the challenges
and trades the USCG must make and a more common understanding of USCG roles.

In addition to expanding the reach of the current game, *Paratus Futurum* provides an
adaptable framework to test alternative gaming structures. For example, as discussed, players
said that the game might achieve different results if players started with a resource layout that
represented existing conditions and had to focus on changing it rather than starting with a
clean slate. This question could be directly examined by playing both the standard version
of this game and the alternative structure in parallel, holding scenario and participant type
constant.

Beyond *Paratus Futurum*, gaming provides a method for beginning to address wicked
problems that the USCG faces. As we have noted, gaming provides a way to bring various
stakeholders and communities of interest to the table to understand core issues. Furthermore,
it provides a safe-to-fail environment in which to explore strategies for addressing them. Any
method based on human participation is subject to certain concerns, such as lack of institu-
tional knowledge or operational experience among participants, reluctance to speak up or
challenge opinions, and, of course, individual bias. As we have described, with our design, we
sought to minimize these concerns. Nevertheless, neither the results of a single game nor a
series of games will tell the USCG what to do. Instead, the game allows the USCG to explore
the contours of complex problems and set a course for addressing those challenges.
Individual Team Summaries

This appendix presents the insights and results of each run of the game for each of the four team scenarios: Beyond the Horizon, Steady Growth, Diverging Paths, and Increasing Disorder. Each section briefly describes (1) the scenario, (2) the strategic vision that each team was assigned (for example, international missions), and (3) the investment decisions and trade-offs each team made.

Evergreen V, Game 1

Evergreen V, game 1, championed by the DCO-X office chief, was conducted virtually on January 11 and 12, 2022, with about 30 mid- to senior-level USCG and civilian personnel, representing HQ functions, LANTAREA, and PACAREA.

Scenario 1: Beyond the Horizon

- In Beyond the Horizon, the team faced a declining U.S. economy, growing aggression from China, climate change effects, technological advances in automation, and a growing population.
- The team’s strategic vision prioritized DoD interoperability; missions in CONUS, USINDOPACOM, and Latin America and the Caribbean; and the use of technology to advance efficiency.
- Team 1 focused on resourcing its strategic vision in the early turns of the game, with resource chips allocated across the Indo-Pacific, CONUS, and Latin America and the Caribbean mission sets, while retaining sufficient resources to sustain repeated investment. As the game progressed, the team said that the events that transpired required them to become more global by, for example, attempting to mitigate risk in the Arctic by leveraging investments made in earlier turns. In later turns, the team decided to deviate slightly from the strategic vision by removing resources in Latin America and the Caribbean and allocating them to the Arctic to respond to a growing threat from China.
Scenario 2: Steady Growth

- In Steady Growth, the team faced growing aggression from China and technological advancements that led to automation and the digitization of the shipping industry.
- The team’s strategic vision stated that deployable teams would support OCONUS missions except in the Arctic, where a constant presence was expected. As a result, the USCG would likely shift to an away-focus culture that draws resources from CONUS and emphasizes international relationship-building, leveraging USCG expertise in such areas as FE.
- Players focused heavily on investments at the outset of the game, to an even greater extent than resourcing the missions and regions in their strategic vision. As their investments came to fruition, players focused on filling out missions in the Indo-Pacific, CONUS, and Latin America and the Caribbean. In later turns, players poured resources into keeping their CU positive and continued to apply resources to bolster the Arctic while beginning to resource missions in the Middle East and Africa.

Scenario 3: Diverging Paths

- In Diverging Paths, the team faced a U.S. economic decline and an increasingly aggressive China.
- The team’s strategic vision was to devote resources to the Indo-Pacific and Africa, draw down the ATON mission (including ice operations) domestically, and reduce the search aspect of SAR. The strategic vision also emphasized the PWCS mission, growing cyber-capabilities, and enabling commerce and disaster response through adaptive solutions.
- Early on, team 3 focused entirely on resourcing CONUS, Africa, and the Indo-Pacific. Ultimately, the team brought all of its missions except marine safety and SAR in CONUS to a focus level of priority. Team 3 also made fewer investments at the outset of the game than teams 1 and 2 before subsequently increasing its investment rate to reduce costs of operations in CONUS, Africa, and, eventually, Latin America and the Caribbean. Continued investments, particularly in UxSs, required investing in keeping the strength of USCG CU.

Scenario 4: Increasing Disorder

- In Increasing Disorder, the team faced increasing impacts of climate change, Russia’s influence in the Arctic, maturing electric-car and -vessel technology, and a weakening U.S. economy.
- The team’s strategic vision was to integrate with DoD to a greater extent, leverage technology, use a heavy presence in Europe and the Arctic to combat Russia’s influence, and shift to an oversight role for missions, including ATON and disaster response.
- In the early stages of the game, team 4, like team 3, focused more heavily on resourcing existing mission sets than on investments. The team followed a similar trend to that of other teams and spent 11 resource tokens on investments in the first turn. Throughout
the game, the team had to repeatedly invest in CU to ensure that its score was above the minimum threshold. The team first focused on CONUS missions and then allocated remaining resources to mission areas in Europe, the Indo-Pacific, and the Arctic to counter the threat from Russia. In later turns, the team engaged in continual investment and CU purchases. In response to new trends, the team later deviated from its strategic vision and shifted investments away from Europe, but it was then unprepared for subsequent challenges and realigned back to Europe.

**Evergreen V, Game 2**

Evergreen V, game 2, championed by the Deputy Commandant for Mission Support, was conducted in RAND’s Arlington office on March 30 and April 1, 2022, with more than 25 senior USCG leaders the vice admiral identified as some of the “best and the boldest thinkers.” The Deputy Commandant offered that “this is a low-risk environment, with the potential for high gains. So be bold.” The strategic visions and scenarios remained unchanged from game 1.

**Scenario 1: Beyond the Horizon**

- Players said that, in addition to the strategic vision they were given, stakeholders would require the USCG to continue to emphasize its traditional domestic missions. There was therefore a constant trade-off between what players had been directed to achieve in their vision and where players expected stakeholders to devote the greatest attention. Players focused on the aspects of international missions in which the USCG was better positioned than DoD to form a complementary force rather than a mini-Navy.
- Players said that acquiring and sharing data was of the highest importance for the USCG moving forward. Significant investments in technology (C5ISR, UxSs) allowed players to generate efficiencies in later turns that helped them cover international missions to a greater extent.

**Scenario 2: Steady Growth**

- At the outset, players invested more heavily in future capabilities than in mission priorities. The team took short-term risk in domestic missions to cover their investments, planning to return resources to domestic focus after investments were realized. Because investing in future capabilities often requires CU change, the team poured resources into CU to try to keep its CU score positive. As investments came online (became available for full use, not just technically built), the players shifted mission resources back to the Western Hemisphere and used their investments to mitigate risk in the Indo-Pacific and the Arctic.
- Players balanced investments between hardware solutions (C5ISR, UxSs) and organizational or training solutions (FAOs, LEDETs, expeditionary logistics, AFPs).
Scenario 3: Diverging Paths

- Players invested heavily in future capabilities at the outset, taking some risk in domestic missions and CU. As new capabilities were deployed, resource allocation focused on prioritizing enduring missions and enabling those missions driven by geopolitical shifts in OCONUS regions in ways that were adaptable or efficient.

- After several rounds of play and when investments were deployed, resource allocation shifted from capability investments to CU, facilities, and maintenance investments, as well as to domestic missions. Players described this as a special operations force-like service, without substantial enduring presence, but with the capability and agility to respond quickly to a variety of events both domestically and abroad. Players also noted that any time the “big picture” of the services’ footprint and priorities changed, additional investment in CU would be needed to address the “old-guard” mentality.

Scenario 4: Increasing Disorder

- The team focused on how to best deal with constrained resources and emphasized building partnerships with DoD, federal entities, allies, and partners. Initial investments focused on capabilities that allowed the USCG to maintain presence overseas but involved huge declines in USCG CU to which players did not respond for several rounds, with negative effects.

- Although domestic missions were left at risk initially, over time, priorities shifted back to the homeland, enabled by a much more targeted approach to overseas presence that employed flexible operational approaches that avoided committing significant resources. This meant that the team took risks in regions abroad that did not always pay off, but ultimately, the team said that they took the right risks. Being bold meant relying on these international investments to enable a greater focus on USCG core missions.

Evergreen VI, Game 1

Evergreen VI, game 1, was conducted in RAND’s Arlington office on December 14 and 15, 2022. Championed by DCO, the game drew approximately 30 USCG senior leaders and rising leaders representing several HQ functions, including budgeting and operations planning. The vice admiral charged them with stress-testing the strategic vision communicated in the 2022 USCG strategy and to “look at the challenges that investment in future missions bring to our service” and to “challenge the status quo, be creative, and exercise both in this low-risk environment.”

Scenario 1: Beyond the Horizon

- Team 1 remained dedicated to its implementation plan more consistently than any other team in this iteration after having significant debate over how to shape the USCG of
the future. The players adapted to I&Ws using the lens of their established framework throughout gameplay.

- The team quickly came to consensus that the Indo-Pacific should be a focus for the USCG because of concerns about the threat of malign influence by both China and Russia. The team was also focused on the “people side of things,” which required emphasis in CONUS. There was significant disagreement about what regions could be deprioritized and, although a decision was ultimately reached to accept risk in Europe, players remained uncertain of their choice.
- Early in the gameplay, the consensus was that no-fail missions were SAR and IE. Players noted that SAR was so indicative of their CU that they found it impossible to move resources away from it. As the game progressed, players noted that IE remained important and a good “bang for their buck” when facing OCONUS demand signals.
- Investment priorities focused on C5ISR and O&M. However, the team was slower to invest than others both in this iteration and across iterations, with significant investments made only in later years.

### Scenario 2: Steady Growth

- Team 2 discussed that the USCG needs to reinvent the way it pursues CONUS operations and become less siloed and more adaptable to free up resources for an expanding set of operations. Its focus therefore was on mitigating risk rather than trying to guarantee success in any one mission. The team used the I&Ws to shift around mission resources, rarely covering a mission the same way across turns.
- The team was most heavily focused on the long-term investments that would support this strategy. Specifically, the team focused on C5ISR, AFPs, UxSs, and expeditionary logistics as necessary components of a 2040 USCG.
- The team agreed at the outset that CONUS took precedence and sought merely to mitigate risk as it arose in more-distant regions. This meant shifting from the Indo-Pacific in earlier turns to Latin America and the Caribbean and the Arctic in later turns.
- In comparison with other teams, team 2 was focused to a lesser extent on missions. Although EMDR and SAR were discussed as potential no-fail missions because of public response, the team chose missions largely as demand signals shifted.

### Scenario 3: Diverging Paths

- Team 3 focused on the central question of what would stay constant for the USCG and what would change, asking what the world looks like in 2040 and working backward from there. Players expected the USCG of the future to be largely CONUS focused but to be better supported by advances in technology, such as C5ISR and UxSs.
- Team 3 prioritized CONUS first, with an emphasis on maritime security and safety. The team discussed the entire Western Hemisphere to be a priority because of Latin
America and the Caribbean’s effect on CONUS but often found themselves unwilling to resource the region, particularly interdiction missions.

- The team expressed concern about two significant threats at the outset: a more assertive China and the effects of climate change. Although they were confronted with China’s assertion throughout the game, it was often in unexpected regions, such as the Middle East and Africa, that had been underresourced.
- More so than any other team in this iteration, this group made a point to promote a positive cultural balance. Furthermore, players consistently paid for ongoing O&M and FM.

**Scenario 4: Increasing Disorder**

- Team 4 took greater risk in the present to provide for the future, saying that the world confronting them was highly uncertain. In general, they were trying to address risk before addressing opportunities and used investments in data and technology, priorities of the Commandant, to make it easier and more efficient to pivot if stakeholders wanted them to.
- The team came to a consensus quickly that CONUS was a no-fail region, while MTSM and EMDR were no-fail missions because the USCG had unique capabilities and roles in the maritime transportation and governance space that would be needed as maritime trade continues to grow. Similarly, EMDR would become more critical with climate change. SAR was identified as a critical mission, but the team said that technology could be leveraged to perform the mission and that, by bolstering other missions, the demand for SAR would decline over time.
- One of the key concerns was the effect of climate change and the pandemic on Latin America and the Caribbean; the effect was seen as contributing to instability and unlawful migration. At the same time, there was general but not universal agreement that DI could be deemphasized as legalization and societal changes occur.
- In the end, the team acknowledged that it had not invested enough in CU even though organizational change is challenging, and they indicated the importance of investing in the workforce.

**Evergreen VI, Game 2**

Evergreen VI, game 2, was conducted February 14 and 15, 2023, at Sector San Francisco, with 35 USCG personnel from PACAREA HQ, D11, and several other Bay Area field units. Participants were a mix of senior leadership and rising leaders, both officers and enlisted personnel charged with implementing the 2022 service strategy. Championed by DCO and hosted by the commander of D11, this game was the first played in the field by personnel who were not assigned to USCG HQ.
Scenario 1: Beyond the Horizon

- Team 1 noted tensions between regional priorities, which were OCONUS, and mission priorities, which were CONUS based, forcing them to make trade-offs to meet demand. Overall, the team took short-term risk in CONUS missions to tackle immediate priority issues, such as CU and O&M, and to invest in flexible future capabilities. Although the team was well positioned to deal with most contingencies, it confronted the fact that some elements of USCG missions were out of the team’s control. In later rounds, the team’s investments provided efficiencies and flexibilities that allowed it to double down on CONUS missions and limit the effects of chance despite uncertainty.

- Team 1 identified the Arctic and Indo-Pacific as the priority regions largely because of geopolitical concerns and risks of climate change that could be addressed in the maritime domain. The team had a lengthy discussion about the importance of Latin America and the Caribbean, particularly because of growing influence from China and anticipated climate change stressors that would exacerbate migration. It took risk in Europe, saying that Europe could rely more heavily on NATO’s strong capabilities, as well as the Middle East and Africa, where the team saw less risk of spectacular failure.

- By contrast, its major mission sets focused on CONUS. In the beginning, SAR was identified as a core mission, with EMDR as a close second. But by the end of the game, most team members had moved away from SAR and refocused on EMDR as a more highly visible mission set. Although aspects of the team’s strategy shifted over time in response to increasing demand signals, the emphasis on EMDR never waned.

- Another area of high importance and value to USCG missions was ensuring maritime trade. In contrast, there was overwhelming consensus to deemphasize DI because of the resource expenditures required and shifting public priorities.

- Team members were deeply focused on maintaining a positive CU given existing operational strains. They also continued to invest in O&M and FM every turn for similar reasons. However, team 1 indicated that accepting short-term risk to make investments early on would help the USCG in the long term. Players said that the USCG of the future needs to be flexible and mobile and, toward that end, invested in multiple AFPs, which they said that they considered a valuable force multiplier, and UxSs, which enabled them to double down on CONUS missions.

Scenario 2: Steady Growth

- Team 2 rapidly identified its core mission as maintaining the security of free trade and transportation. Players reached consensus efficiently each turn, adjusting regional resource allocation in response to I&Ws. They put the remainder of their resources toward mission sets and investments that would boost the capabilities of allies and partners to perform tasks that typically fall to the USCG.

- Team 2 decided to focus its attention most heavily on CONUS (both Atlantic and Pacific), the Indo-Pacific, and the Arctic, and this focus remained consistent through-
out the game. Players expressed willingness to take greater risk in Europe and Africa and chose to focus only on DI in the Caribbean and South America.

- The CONUS mission that the team prioritized was MTSM, noting that, although SAR was the “lifeblood” of the USCG, the public cared about keeping the economy moving. This is consistent with other teams’ acknowledgments that SAR was a visible mission but that other missions require more commitment and therefore take precedence. Over time, as resources allowed, the team also focused on EMDR and PWCS.

- Overseas resourcing prioritized FE and IE, areas in which the USCG had a comparative advantage in working with allies and partners, although priorities shifted to cover DI in Latin America and the Caribbean or PWCS in Europe or the Middle East and Africa after new I&W information was introduced.

- The team indicated strong agreement that future capabilities were critical and invested in C5ISR, two UxSs, an AFP, an ELC, and sustained investment in O&M and FM.

Scenario 3: Diverging Paths

- Team 3 had a difficult time articulating a strategy. In contrast with its behavior in other iterations, team 3 deferred solidifying a long-term strategy until turn 2 or 3. Nevertheless, the team did agree early on to prioritize the CONUS regions and MTSM and SAR missions and avoided any major damage in CONUS. It ultimately determined to consistently resource EMDR as well.

- The Indo-Pacific and Arctic were also considered important because of the threats from China. Because IE was a key mission overseas, the team later invested in an FAO to provide an efficient way to meet mission demands in the Indo-Pacific. Although players expressed some concerns as the game progressed, the team consistently accepted risk in Europe and in the Middle East and Africa and chose to de-emphasize the DI mission.

- The team invested early in C5ISR, UxSs, and ELC to gain efficiencies to operate overseas. Participants applied minimal investments to facilities, O&M, and CU only when operational demands allowed. However, the team was required to focus on these elements after they posed repeated threats to the mission.

Scenario 4: Increasing Disorder

- Team 4 sought to leverage USCG expertise at home in key missions, such as SAR and MTSM, and export it to other countries through IE. The team remained steadfast throughout the game in its strategy for resourcing both CONUS and OCONUS missions and used I&Ws to make minor adjustments to mission priorities when investments became available. They took greater risk in the present to provide for the future, mitigating risk overseas by relying on partners and leveraging new capabilities that came to fruition.

- Team 4’s regional priorities were the Indo-Pacific and Arctic. The team relied on the I&Ws to determine mission priorities in the Indo-Pacific and Arctic and used capability
investments to buy down the greatest risk at the lowest cost. Capability investments in ELC, AFPs, UxSs, and FAOs were deployed in these regions.

- SAR was the definitive no-fail mission because of its high visibility, high consequence (in terms of stakeholder views of the USCG), and centrality to the humanitarian focus that distinguishes the USCG.
- Despite the stated focus on OCONUS regions, the team’s resourcing more often focused on CONUS missions in which SAR, EMDR, and MTSM dominated. As resources became available, the team invested in PWCS and marine safety as a reaction to I&W and changing world events.
- The team ultimately settled on DI as a mission that could be deemphasized, but players also engaged in a larger discussion of the missions that the USCG was performing at the time of gameplay that could be made easier by partnerships with other government or private entities.
- The team initially made significant investments in future capabilities that came with a CU cost and suffered difficulties with incorporating new recruits because of that CU deficit. As a result, the players did not accept a cultural deficit at any other point during the game. They also continued investing in O&M and facilities throughout.
- As resources became available, the team covered migrant interdiction in Latin America and the Caribbean and IUU in the Middle East and Africa, relying on DoD to buy down risk in these areas earlier. Notably, the team never invested in Europe, relying on partners to cover missions there.

**Evergreen VI, Game 3**

Evergreen VI, game 3, was conducted May 11 and 12, 2023, championed by DCO, and hosted by the USCG Research and Development Center in New London, Connecticut, with the Vice Commandant of the service joining to observe and offer insights to players as they played the 2022 service strategy. The game participants included nearly 35 USCG active, reserve, auxiliary, and civilian personnel from D1 (representing response, enforcement, and incident management); Sectors Boston, Northern New England, Southeastern New England, and Long Island Sound; the Research and Development Center; the Leadership Development Center; the USCG Academy; and several other policy and training centers and field units.

**Scenario 1: Beyond the Horizon**

- Team I was torn between CONUS missions, which are clearly identified with the USCG brand of serving the public’s interests, and those missions that they said aligned with Congress’ and the executive branch’s interests, which they said require a forward-leaning USCG. Factors that most influenced the choice of priorities were the intersection of mission and stakeholder opinion and missions in which the USCG had a comparative advantage.
• Ultimately, IE was quickly identified as a priority mission by a large majority of the team, followed by DO. Both missions were identified as congressional priorities. IE was prioritized because of the potential to build partnerships that could deliver exponential impacts with modest resources, while DO was prioritized because of the broad spectrum of activities that could occur in the gray zone.

• The team also discussed the role of SAR, which is historically and culturally a central USCG mission. For example, this mission drove the location of small-boat stations and provided a lot of public visibility to the service that boosts recruiting. However, communication technology trends that reduce operational performance requirements and private-sector activities (e.g., support to oil rigs, cruise ships, and helicopter transport in general) were such that the USCG could free up some resources dedicated to this mission by focusing on filling gaps—specifically, rescues farther from the coast.

• DI was ultimately deprioritized. Although DI garners funding for the USCG, the expenditures required mean a relatively low return on investment, and other policy levers could be more effective: “Drug busts are sexy, but other things need more of our energy.”

• The team identified the Arctic and Latin America and the Caribbean as the priority regions because of concerns about China and Russia and about climate change, which would increase activity in the maritime domain (e.g., shipping, natural resource extraction) and potentially exacerbate instabilities near U.S. borders. The Indo-Pacific was a close third for many of the same reasons. Europe was left at risk because of NATO’s strong capabilities and strong existing relationships, although the team noted that such events as the Ukraine war could quickly alter that risk calculation. The team initially was bolder globally, with less focus on resourcing CONUS missions, and, as the game progressed, used its investments to cover down on risk while pulling resources back to more-traditional USCG missions in CONUS.

• Team 1 acknowledged that accepting short-term risk in the “right areas” to make investments early on would help the USCG in the long term. Players expressed willingness to accept failure, especially initially, to stick to their overarching strategy. However, the team focused on maintaining a positive CU given existing strains on operations and made sure not to buy “new capabilities on the backs of people.” In later rounds, the team’s investments provided efficiencies and flexibilities to operate abroad while doubling down on key CONUS missions. It also continued to invest in O&M and FM every turn.

• More so than in previous games, players said that they saw the rewards of their prioritizations and investments very acutely. Nearly every die roll was on the cusp of a category of mission success (acceptable outcomes became good, and poor outcomes became adequate), and the team had consistently more-positive results from its resourcing and investments.
Scenario 2: Steady Growth

- Primary considerations for team 2 were (1) what missions helped the USCG remain “visible” to stakeholders and the public, (2) whether mission failure would strongly affect perceptions of USCG credibility or whether it would be perceived as out of the USCG’s control, and (3) what missions aligned with congressional priorities to help ensure resourcing.

- The team decided to focus its attention most heavily on CONUS Atlantic and the Arctic, followed by CONUS Pacific and the Indo-Pacific. Players said that they believed these to be the areas where the USCG clearly had the capabilities needed to address the I&Ws and meet stakeholder priorities in ways that DoD and others could not.

- In CONUS, resourcing focused initially on ensuring maritime trade and domestic fisheries. As the game progressed, demand signals and I&Ws required a shift to MEP. Players did not deviate from their original strategy by reducing resources to MTSM; instead, they drew resources away from fishery management. SAR as a stand-alone mission was deemphasized, but players noted that there was a need to better communicate that SAR could be covered by a combination of other missions and new technology. Overseas resourcing consistently prioritized FE and IE, as well as DI in Latin America and the Caribbean. Other missions were covered only after new I&Ws suggested novel, pressing threats.

- Initially, players were willing to take greater risk in Europe and in the Middle East and Africa, in part because few threats were identified in these regions and because of a sense that the risk posed no enduring impact to U.S. stakeholders. As investments provided additional flexibility and China’s influence appeared to wane, players shifted resources from the Indo-Pacific to these regions in response to I&Ws about potential threats. CONUS was consistently resourced the entire game.

- Team 2 made an early, long-term commitment to operations in the Arctic and said that a more expansive infrastructure would provide resourcing flexibility in the future. This perspective is notable because most teams said that they preferred to avoid long-term commitments to an overseas region as a hedge against changing future U.S. priorities (flexibility is a cultural trait of the USCG) irrespective of the I&Ws. However, this team said that, given long-term needs in the Arctic, a commitment to more expansive infrastructure would provide resourcing flexibility in the future.

- The team indicated a “people-first” approach to investing, ensuring that CU was supported before resourcing additional new capabilities. Supporting the workforce was also a consistent priority for this team and was expressed early on, resulting in consistent investments in O&M and CU throughout gameplay. The team said that this early investment in building cultural capital gave it flexibility to invest in additional capabilities over time as needed.
Scenario 3: Diverging Paths

- Team 3 said that it sought to use investments to remain relevant to key stakeholders, extend the presence of the USCG, and mitigate risk to overseas missions in the priority regions of the Indo-Pacific and the Arctic. Notably, the team’s investments were deliberate and planned over two to three rounds. Although the mission strategy was often more reactive than proactive, the capability these investments provided helped the team manage risk despite having reduced resourcing and constraints placed on it as the game progressed. Throughout gameplay, the team’s resourcing prioritized the CONUS-based missions and used the capability investments to cover overseas missions despite experiencing severe resource constraints in later rounds.

- The team invested early in C5ISR, LEDETs, and ELC to gain efficiencies that would allow it to minimize risk across a wide cross-section of missions. The team expressed discomfort committing to a region for the long term, instead investing in expeditionary logistics over the FOB, even though the ELC remained in the Indo-Pacific throughout the game.

- Presence in the Arctic and Indo-Pacific were prioritized for building capability because of the threats from China and Russia. In addition, the team expressed concerns about ensuring continued engagement in Latin America and the Caribbean because of China’s activity, climate change, and the potential for affecting the homeland given the region’s proximity to U.S. waters. The team consistently put a lower priority on Europe and the Middle East and Africa.

- There was debate about how the unique capabilities of the USCG would be most effectively used. To address China’s and Russia’s threats in the Arctic, the eventual consensus was that MTSM in the Arctic was a USCG capability that sustained some freedom-of-navigation leveraging capabilities that other government actors did not have.

- EMDR and SAR were prioritized over maritime security operations in part because maritime security operations are less visible to stakeholders and provide safety benefits in the longer term rather than in the short term. When required to place a greater focus on CONUS, however, players decided to broaden the number of mission areas of focus rather than concentrate more heavily on its initial CONUS mission priorities.

- CU was a priority for this team, and, although it took modest risk in CU to pay for the early investments, it considered the impact on CU of every investment decision and bought it back to very positive levels as resources were freed up. Participants did not consistently invest in O&M, however, and it cost the team substantial resources when assets fell into disrepair.

Scenario 4: Increasing Disorder

- More so than perhaps any other team in any previous iteration, team 4 encompassed a wide variety of perspectives on how best to prioritize and deprioritize regions and missions at the outset of the game. This demonstrated that there are varying conceptions
of the identity of the USCG both now and in the future. As one player noted, “As USCG morphs within DHS, our identity is being lost; there is no clear vision of USCG under DHS—I see traditional roles being deemphasized, and, if we continue down that path, we’ll lose our support in Congress.”

- For the first time, players were unable to agree on a mission to deprioritize, offering eight unique responses from eight players. This led to agreement that the USCG as a service is reluctant to deprioritize missions, which makes it difficult for players to determine where to take risk. Despite significant divergence in the beginning of the game, the team developed a unified strategy that emphasized resourcing missions at home and leveraging technological improvements to become more forward leaning.

- The team was split between a focus on CONUS or OCONUS but ultimately decided to place its greatest focus on CONUS Pacific and the Indo-Pacific, with CONUS Pacific seen both as an area of traditional domestic missions and as the direct link to the Indo-Pacific and the Arctic. Players expressed most concern about establishing rules of maritime governance in these regions, which they saw as a comparative advantage. Players also indicated concern about the role of China, and, when China began to turn inward, players were able to devote fewer resources to these regions. Players consistently expressed agreement that European missions could be left to regional actors but expressed concern in pulling back in areas of conventional footholds.

- Ultimately, like those on other teams in this iteration, players focused on missions that were of key value to stakeholders, such as IE because “our increase in funding from Congress comes with expectation of international force projection,” while “SAR doesn’t pay the bills.” The team stuck to its strategy to guide mission resourcing and consistently invested in new capabilities, CU, and facilities, resulting in significant risk in the short term in exchange for success in the long term. Despite the fact that some events went poorly for reasons outside players’ control, the players repeatedly agreed that they had no reason to deviate from their strategy.

- Capability investments in C5ISR, AFPs, and UxSs required that the team take heavy operational risk at the outset of the game. However, in later years, their initial risk-taking allowed the team to be relevant globally while maintaining tangible systems in CONUS. Investments helped the team stay just above the threshold of disaster on multiple occasions, “turning zeros (on the dice roll) into twos.”

- They remained steadfastly committed to preserving CU, paying all CU costs in real time to maintain a “culture reservoir” to guard against an uncertain future. They also complemented these investments with O&M and FM.

**Evergreen VI, Game 4**

Evergreen VI, game 4, championed by DCO, was conducted on August 22 and 23, 2023, at Air Station Barbers Point in Kapolei, Hawaii. The 30 participants included active-duty and civil-
ian personnel from the USCG, the Air Force, and the USN representing USCG PACAREA, D14, Sector Guam, USCG Activities Far East, USINDOPACOM and Joint Interagency Task Force West, and the Daniel K. Inouye Asia-Pacific Center for Security Studies. Both HQ and operational functions (cutters and aviation) were represented. Notably, this was the first time that participants included those from outside the USCG, who had varying awareness of USCG missions, capabilities, and demands.

Scenario 1: Beyond the Horizon

- The team was split between CONUS missions and the Indo-Pacific and Arctic. The team considered the abilities of partners and allies, opportunities to use technology or other agencies’ capabilities, the size of the populations affected, and risk versus existing levels of resourcing. They stayed true to these priorities, adjusting with each new set of I&Ws.
- The Indo-Pacific and Arctic were prioritized because of threats from China, Russia, and climate change that could exacerbate regional instabilities, jeopardize freedom of navigation, or imperil fish stocks. IE, DO, and FE were routinely prioritized in these regions. Notably, the team committed early to missions in the Indo-Pacific and Arctic by investing in a permanent FOB.
- CONUS missions, such as EMDR, MTSM, SAR, and MEP, were routinely prioritized because they were important to the public, economy, and homeland security. In later rounds, the team’s investments provided efficiencies and flexibilities to operate abroad while doubling down on CONUS missions.
- The team indicated that there was risk associated with current resourcing, so continuing to accept short-term risk in some CONUS missions to make investments early on would help the USCG in the long term. The team pursued investments to improve efficiency. Investments in O&M and FM were also consistently made to sustain mission operations because of the poor condition of some infrastructure (benefits to morale were not mentioned, unlike in other iterations of the game). The team invested little in CU because its benefits were less evident, and the team paid a price in terms of mission success.

Scenario 2: Steady Growth

- The team said that CONUS and the Indo-Pacific should be priority areas for the USCG. But players had difficulty finding a consensus on strategy and instead evolved an approach over the course of the game.
- They considered SAR and IE to be important missions strategically because they enabled the USCG to be engaged with stakeholder interests and priorities identified in the Commandant’s strategy.
- They consistently resourced missions that facilitated maritime trade, such as MTSM and PWCS on the West Coast and MTSM and EMDR on the East Coast.
• In general, this team’s investment strategy was opportunistic rather than deliberate in that it resourced missions first, then invested in other areas when the opportunity presented itself. Opportunistic investments included FAOs, uncrewed autonomous systems, C5ISR, and consistent investments in O&M and FM. The FAOs were intended to boost IE missions around the world, with the initial investment in the Indo-Pacific and then later in the Arctic, the Middle East and Africa, and Latin America and the Caribbean as they covered down on regions that they perceived to be at risk of gray-zone pressures. UxSs and C5ISR were used to mitigate risk in CONUS and abroad, with one UxS invested on the West Coast and a second UxS in the Indo-Pacific to cover down on risk and allow the FAO to be reallocated to Latin America and the Caribbean. Investments in CU were made after other consensus-priority missions were resourced.

Scenario 3: Diverging Paths
• The team sought to address national interests at home and abroad by considering where the USCG had unique capabilities that could support national security missions and where other agencies could step in.
• The team prioritized the away game, focusing predominantly on IE and DO in the Indo-Pacific and on DO and MTSM in the Arctic. Early on, the team committed to overseas missions by investing in FAOs and ELC.
• Initially, CONUS missions except for MTSM were left at risk with no resources allocated to them because the players allocated a significant share of resources to future investments. But as the game progressed, new I&Ws specified that the threat from foreign adversaries had diminished, reducing USCG demand in the Arctic and Indo-Pacific. This twist caused the team to refocus on homeland and core, enduring, and traditional concerns and such mission areas as PWCS and LMRs, although, notably, the team never prioritized SAR.
• This was facilitated in part by the heavy investments made in the first round that allowed the team to mitigate risk to missions abroad and draw resources back to CONUS missions. C5ISR and uncrewed aircraft systems were capability investments intended to provide greater efficiencies, and O&M and FM were said to be essential to operations.
• Players deprioritized Europe and the DI mission, which can be performed by other entities, such as NATO and U.S. Customs and Border Protection or the U.S. Drug Enforcement Administration, respectively.
• The team minimized its investments in CU. After finding themselves repeatedly unable to adapt to institutional change, players said that not investing in CU was “a failure of our team.”

Scenario 4: Increasing Disorder
• Overall, the team’s priorities also considered the threat landscape, existing relative resourcing of these regions, USCG competitive advantages vis-à-vis partner-agency
capabilities, and relative gains that could be made. The team said that it was comfortable with sticking to its strategy, which was anchored on the Commandant’s strategy, and made adjustments each turn for the I&Ws.

- The team definitively prioritized the Indo-Pacific. Engagement in the Indo-Pacific was accomplished through the IUU-fishing and IE missions, facilitated by ELC and an uncrewed aircraft system.
- Players sought a balance between expanding internationally to address the complex geopolitical landscape in the Indo-Pacific and maintaining USCG equities at home as climate effects and threats from advanced technologies were realized. CONUS Pacific was seen as both an area of traditional domestic missions and a direct link to the Indo-Pacific. Players also prioritized CONUS Atlantic and tackled their concerns about climate change, economic interests, and stakeholder interests by resourcing domestic EMDR, MTSM, and PWCS.
- Europe was deemphasized because of the strength and capabilities of European allies and in order to enable resourcing in areas with greater potential impacts. In the Arctic, the team focused on enabling maritime transportation, and an AFP was used to cover down other potential demands.
- The team invested heavily in the first round, including in CU and O&M, while taking some risk in missions in CONUS and the Indo-Pacific. The efficiencies and flexibilities gained from these investments paid off when the team experienced the negative effects of chance.
APPENDIX B

A Modified Delphi Scan of Strategic Objective Prioritization

This appendix provides an overview of the modified Delphi analysis for Evergreen V and VI, including the different methodologies applied to the games.

The Evergreen V Modified Delphi Methodology

In the Delphi analysis for Evergreen V, participants were asked to rate a series of strategic initiatives, detailed in the main body of this report, along two axes: difficulty to implement and impact on the USCG if implemented. Players were asked to rate each initiative on a scale of 1 to 9, with lower numbers representing lower levels of effort and lower levels of impact. Figure B.1 summarizes the difficulty and impact rating scales, as well as their binning into three categories for effort and impact. Participants were also asked to provide comments about their individual difficulty and impact ratings, including institutional costs (e.g., changing training, changing recruitment and retention methods) and culture costs (e.g., changing management, senior leader focus).

Once the responses were collected and analyzed, the next step in the process was to determine whether the participants agreed or whether the responses varied so greatly that the par-

FIGURE B.1

Difficulty and Impact Scales for Evergreen V Delphi Analysis

<table>
<thead>
<tr>
<th>Difficulty</th>
<th>Hard effort</th>
<th>Reasonable effort</th>
<th>Easy effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive impact</td>
<td>9 8 7</td>
<td>6 5 4</td>
<td>3 2 1</td>
</tr>
<tr>
<td>Limited impact</td>
<td>9 8 7</td>
<td>6 5 4</td>
<td>3 2 1</td>
</tr>
<tr>
<td>Negative impact</td>
<td>9 8 7</td>
<td>6 5 4</td>
<td>3 2 1</td>
</tr>
</tbody>
</table>
participants could not agree or reach consensus. The original research methodology presented two means of defining agreement and disagreement:

- A strict definition of agreement requires that all ratings fall within one of the predefined three-point ranges (1 to 3, 4 to 6, or 7 to 9).
- A relaxed definition requires only that all the ratings fall within any three-point range.

RAND researchers adjusted these strict and relaxed definitions in 1991 to accommodate larger participant pools and incorporated percentage of responses in the same three-point region.1 The standard for determining appropriateness is to use the responses’ interpercentile range (IPR) between the 30th and 70th percentiles and the IPR adjusted for symmetry (IPRAS). The IPR is calculated by subtracting the 30th percentile from the 70th percentile to determine the range between the two values. The IPRAS is the limit beyond which the IPR shows disagreement and is calculated as $IPRAS = IPR_r + (AI \times CFA)$. In this equation, $IPR_r$ represents the IPR required for disagreement when perfect symmetry exists, $AI$ is the asymmetry index and $CFA$ is the correction factor for asymmetry. The optimal values derived using the methodology to produce classical values for agreement are $IPR_r = 2.35$ and $CFA = 1.5$. These values were used in this analysis. The asymmetry index is found by subtracting the IPR center point between the 30th and 70th percentiles from the midpoint of the scale, which is 5 on a nine-point scale. If the IPR is less than the IPRAS, there is agreement. If the IPR is greater than the IPRAS, there is disagreement.2

**Evergreen V Delphi Results**

Participant responses from each game were evaluated as individual panels and combined into a large single panel for all the games to reveal any commonalities. Several common themes in participant response emerged, such as each panel consistently indicating that both before and after completing the game, the most-impactful strategic objectives revolved around technology, such as IT infrastructure upgrades and data integration. The combined panel results revealed that several personnel and HR objectives were also highly impactful, including creating a flexible talent management system, taking organizational risk, and developing a workforce for OCONUS regions. The game participants also consistently commented that funding and resources and cultural inertia were the greatest barriers to implementation of any strategic objectives. Some of the hardest-to-implement objectives across both panels were creating a flexible talent management system, data integration, and rapidly growing the service. Table B.1 shows the median scores and IPRs, from the entire data set, broken out by strategic objective.

1 Fink et al., *Consensus Methods*. These new definitions are not satisfactory for all participant pool sizes; the original study used a panel of nine participants, and using it for smaller participant pools can lead to possible biases in a study.

Repeated Survey Results

With the 12 participants who were able to take the postgame survey, we conducted a limited additional analysis to understand potential ways in which the game might have shifted player thinking. Although we cannot draw definitive conclusions from the data, the analysis provides valuable leads into ways in which the game and the event could affect player thinking that could be explored with future analysis and iterations of the game.

After the game, the participants' ratings for impact of implementation changed by an average of 0.36 points either as more or less impactful. Six of the 16 strategic objectives were more positive, six remained unchanged, and four were less positive (see Figure B.2). The game also caused a change in difficulty-of-implementation scores for the participants: The average score change was 0.66 with ten of the 16 strategic objectives being scored as more difficult to
FIGURE B.2
Change in Median Impact Ratings

FIGURE B.3
Change in Median Difficulty Ratings
implement, two remaining the same, and four being rated as less difficult to implement after playing the game (see Figure B.3).

The game also created a change in the amount of consensus the 12 participants had when rating each objective. Consensus as part of this analysis was determined by measuring the IPR of the responses between the 30th and 70th percentiles. The larger the IPR, the less consensus the panel had for the given strategic objective. As shown in Figure B.4, 11 of the 16 strategic objectives remained the same or improved in consensus for impact of implementation after playing the game. As shown in Figure B.5, 12 of the 16 strategic objectives remained the same or improved for consensus for difficulty to implement after playing the game.

FIGURE B.4
Consensus Change in Impact Ratings

![Consensus Change in Impact Ratings](image)

NOTE: A higher IPR indicates less consensus. The percentages and whiskers indicate the change in IPR from before to after the game.
Evergreen VI Delphi Results

As noted in the main body of the report, we modified the Delphi approach in Evergreen VI to focus on the Commandant’s strategic initiatives. Using the modified Delphi–inspired approach, game facilitators presented participants with the pregame survey results approximately midway through each game. Participants were shown ranking totals (sum of all rankings for a particular strategic objective per question across all participants), average rankings, and standard deviations. Participants were also shown selected, anonymous comments and were given about 10 to 15 minutes in each game to discuss the results and why they answered the way they did. They could also factor it into discussions and decisions throughout the remainder of the game. After the conclusion of the game, participants were surveyed again using an identical instrument. Notably, we asked the players to fill out the survey in person and prior to the hot wash of the event, so the repeat survey pool was notably larger than the one for Evergreen V. Table B.2 presents a summary of Delphi results for impact, and Table B.3 summarizes the results for difficulty of implementation.

NOTE: A higher IPR indicates less consensus. The percentages and whiskers indicate the change in IPR from before to after the game. The pregame value for objective 3 (red) and the postgame value for objective 8 (green) were calculated by the difference between the 70th and 30th percentiles. In these cases, those two numbers were the same, so the difference was 0.
### TABLE B.2
Summary of Delphi Results for Impact

<table>
<thead>
<tr>
<th>Objective</th>
<th>December</th>
<th>February</th>
<th>May</th>
<th>Change in Average</th>
<th>Change in Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
<td>December</td>
</tr>
<tr>
<td>National interests (SAR, PWCS, LE)</td>
<td>3.48</td>
<td>3.78</td>
<td>2.09</td>
<td>1.93</td>
<td>3.11</td>
</tr>
<tr>
<td>Gray-zone and international joint operations</td>
<td>5.65</td>
<td>6.22</td>
<td>4.81</td>
<td>5.96</td>
<td>5.78</td>
</tr>
<tr>
<td>IE</td>
<td>4.48</td>
<td>4.61</td>
<td>4.47</td>
<td>4.15</td>
<td>5.00</td>
</tr>
<tr>
<td>Workforce improvements</td>
<td>2.52</td>
<td>2.56</td>
<td>3.09</td>
<td>3.26</td>
<td>2.63</td>
</tr>
<tr>
<td>Redesign CONOPSs</td>
<td>4.83</td>
<td>4.72</td>
<td>4.94</td>
<td>4.70</td>
<td>4.93</td>
</tr>
<tr>
<td>Data and technology investment</td>
<td>3.65</td>
<td>2.94</td>
<td>4.88</td>
<td>4.04</td>
<td>3.52</td>
</tr>
<tr>
<td>Infrastructure and asset investment</td>
<td>3.39</td>
<td>3.17</td>
<td>3.56</td>
<td>3.96</td>
<td>2.96</td>
</tr>
</tbody>
</table>

**NOTE:** Lower average numbers indicate higher rankings in each category. Bold = a negative difference. In averages, a negative difference indicates an increase in priority postgame. In standard deviations, a negative difference indicates greater consensus postgame. Because of rounding, some averages and differences might not calculate precisely.
### TABLE B.3
Summary of Delphi Results for Difficulty of Implementation

<table>
<thead>
<tr>
<th>Objective</th>
<th>Average</th>
<th>Change in Average</th>
<th>Change in Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>December</td>
<td>February</td>
<td>May</td>
</tr>
<tr>
<td>National interests (SAR, PWCS, LE)</td>
<td>5.96</td>
<td>6.18</td>
<td>4.91</td>
</tr>
<tr>
<td></td>
<td>-0.62</td>
<td>0.40</td>
<td>-0.26</td>
</tr>
<tr>
<td>Gray-zone and international joint operations IE</td>
<td>4.48</td>
<td>4.29</td>
<td>3.66</td>
</tr>
<tr>
<td></td>
<td>0.28</td>
<td>0.16</td>
<td>-0.21</td>
</tr>
<tr>
<td>Workforce improvements</td>
<td>2.96</td>
<td>3.06</td>
<td>3.66</td>
</tr>
<tr>
<td></td>
<td>-0.08</td>
<td>-0.61</td>
<td>-0.33</td>
</tr>
<tr>
<td>Redesign CONOPs</td>
<td>4.61</td>
<td>5.00</td>
<td>4.84</td>
</tr>
<tr>
<td></td>
<td>0.12</td>
<td>0.26</td>
<td>0.47</td>
</tr>
<tr>
<td>Data and technology investment</td>
<td>2.91</td>
<td>2.71</td>
<td>3.78</td>
</tr>
<tr>
<td></td>
<td>0.22</td>
<td>-0.13</td>
<td>-0.44</td>
</tr>
<tr>
<td>Infrastructure and asset investment</td>
<td>2.30</td>
<td>2.88</td>
<td>3.25</td>
</tr>
<tr>
<td></td>
<td>0.30</td>
<td>0.07</td>
<td>-0.07</td>
</tr>
</tbody>
</table>

NOTE: Lower average numbers indicate higher rankings in each category. Bold = a negative difference. In averages, a negative difference indicates an increase in priority postgame. In standard deviations, a negative difference indicates greater consensus postgame. Because of rounding, some averages and differences might not calculate precisely.
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFP</td>
<td>adaptive force package</td>
</tr>
<tr>
<td>ATON</td>
<td>aid to navigation</td>
</tr>
<tr>
<td>C5ISR</td>
<td>command, control, communications, computers, cyber, intelligence, surveillance, and reconnaissance</td>
</tr>
<tr>
<td>CO</td>
<td>congressional opinion</td>
</tr>
<tr>
<td>CONOPS</td>
<td>concept of operations</td>
</tr>
<tr>
<td>CONUS</td>
<td>continental United States</td>
</tr>
<tr>
<td>COVID-19</td>
<td>coronavirus disease 2019</td>
</tr>
<tr>
<td>CU</td>
<td>culture</td>
</tr>
<tr>
<td>DCO</td>
<td>Deputy Commandant for Operations</td>
</tr>
<tr>
<td>DCO-X</td>
<td>Office of Emerging Policy</td>
</tr>
<tr>
<td>Dx</td>
<td>district, where $x$ is the district number</td>
</tr>
<tr>
<td>DHS</td>
<td>U.S. Department of Homeland Security</td>
</tr>
<tr>
<td>DI</td>
<td>drug interdiction</td>
</tr>
<tr>
<td>DO</td>
<td>defense operations</td>
</tr>
<tr>
<td>DoD</td>
<td>U.S. Department of Defense</td>
</tr>
<tr>
<td>EB</td>
<td>executive branch opinion</td>
</tr>
<tr>
<td>ELC</td>
<td>expeditionary logistics capacity</td>
</tr>
<tr>
<td>EMDR</td>
<td>emergency management and disaster response</td>
</tr>
<tr>
<td>FAO</td>
<td>foreign-area officer</td>
</tr>
<tr>
<td>FE</td>
<td>fishery enforcement</td>
</tr>
<tr>
<td>FM</td>
<td>facility modernization</td>
</tr>
<tr>
<td>FOB</td>
<td>forward operating base</td>
</tr>
<tr>
<td>HA/DR</td>
<td>humanitarian assistance and disaster relief</td>
</tr>
<tr>
<td>HQ</td>
<td>headquarters</td>
</tr>
<tr>
<td>HR</td>
<td>human relation</td>
</tr>
<tr>
<td>HSOAC</td>
<td>Homeland Security Operational Analysis Center</td>
</tr>
<tr>
<td>IE</td>
<td>international engagement</td>
</tr>
<tr>
<td>IPR</td>
<td>interpercentile range</td>
</tr>
<tr>
<td>IPRAS</td>
<td>interpercentile range adjusted for symmetry</td>
</tr>
<tr>
<td>IT</td>
<td>information technology</td>
</tr>
<tr>
<td>IUU</td>
<td>illegal, unreported, and unregulated</td>
</tr>
</tbody>
</table>
I&W  indications and warnings
LANTAREA  Atlantic Area
LEDET  law enforcement detachment
LMR  living marine resource
MEP  marine environmental protection
MTS  Marine Transportation System
MTSM  Marine Transportation System management
NATO  North Atlantic Treaty Organization
NC  no change
OCONUS  outside the continental United States
OLE  other law enforcement
O&M  operations and maintenance
PACAREA  Pacific Area
PO  public opinion
PWCS  port, waterway, and coastal security
SAR  search and rescue
USCG  U.S. Coast Guard
USINDOPACOM  U.S. Indo-Pacific Command
USN  U.S. Navy
UxS  uncrewed system
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To gain insight into challenges and changes it could face and make long-term plans to prepare for them, the U.S. Coast Guard (USCG) operates a strategic foresight initiative, Project Evergreen. After several years of Evergreen workshops, researchers designed an analytic game in which players assess possible changes to demand for USCG missions and the service’s capacity to execute them. Paratus Futurum (Latin for “ready for the future”) was developed specifically for the initiative to work through the scenarios. The game is more engaging than the workshops, the consequences of players’ decisions are more vivid, and the game’s outcomes are more robust. Players make distinct choices about mission priorities and investments and experience the consequences of their choices in a safe-to-fail environment. By weighing the long view of changes in the operating environment alongside existing or nearer-term demands, the USCG can gain greater awareness of potential blind spots in current strategies and plans.

The game focuses on how the USCG can fulfill its roles and missions over a 20-plus-year time horizon filled with uncertainty and under constrained resources. It also considers how decisions might be viewed and evaluated by the USCG’s core constituencies: its own workforce, the U.S. public, Congress, the U.S. Department of Homeland Security, the U.S. Department of Defense, and other U.S. executive branch entities. This report documents the researchers’ findings and recommendations for coming iterations of Paratus Futurum and Evergreen VI.