Chapter 11

Allied Shipyards, American Strength

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"Without a respectable Navy—alas, America!"[2]

— John Paul Jones
Letter to Robert Morris, October 17, 1776

Sea power rests not only on the ships that sail but on the industrial system that builds and sustains them. The United States enters the next era of maritime competition with a simple but unforgiving truth: deterrence depends on replacement. A fleet that cannot regenerate cannot credibly deter a peer competitor capable of sustaining losses and restoring combat power. At the end of the Second World War,[3] the United States possessed an industrial base capable of launching thousands of vessels—6,768 naval vessels by 1945[4]—and roughly 60 percent of global merchant shipping tonnage.[5] During the Cold War, the U.S. Navy expanded again to meet strategic demands, peaking at 594 ships in 1987 under the Reagan administration's 600-ship Navy initiative,[6] before declining sharply after the Cold War ended by 1992.[7] Today, the Navy deploys 296 ships,[8] supported by shipyards struggling with infrastructure strain, workforce shortages, and production cycles measured in years.

The causes are well understood. From the 1980s onward, globalization and cost-driven offshoring hollowed out U.S. manufacturing capacity, dispersing supply chains and eroding domestic competencies in forging, casting, machining, and advanced fabrication.[9] The commercial shipbuilding industry—critical to sustaining skilled labor and production lines—shrank dramatically. In 2024, U.S. yards launched about 30,000 gross tons of commercial shipping, roughly 0.04 percent of the global output.[10] The naval sector endured similar headwinds, as expanding technical complexity, unstable design requirements, and aging facilities slowed production across major programs.[11]

Meanwhile, China's industrial rise has fundamentally reshaped the global shipbuilding landscape. After securing a record share of new global ship orders in 2024,[12] China's shares moderated slightly in 2025 amid geopolitical tensions and a cooling global economy.[13] Even so, by late 2025, China still held more than 60 percent of the world's commercial ship orderbook—3,454 of 5,735 vessels—exceeding the combined total of the rest of the world.[14]

That industrial dominance translates directly into naval output. Open-source reporting indicates that Chinese shipyards continue to commission multiple large surface combatants annually,[15] maintaining a production tempo unmatched by any other navy. While recent programs emphasize larger, more capable platforms rather than sheer numerical growth, the underlying signal remains consistent: China possesses the industrial capacity to replace and expand its fleet at a pace that the United States currently cannot match. It is this capacity for regeneration—more than any individual platform—that defines the strategic challenge.[16]

Yet this chapter is not about Chinese shipbuilding. It is about the United States—and how America can renew its maritime advantage through industrial modernization, design discipline, and above all, allied integration. The United States does not need to replicate China's scale or return to the shipbuilding tempo of the 1940s.[17] It needs a modern, distributed, resilient industrial network capable of supporting the fleet at speed.

The question that matters is not whether the United States has fallen behind in shipbuilding capacity. It has. The real question is whether it can align its own strengths with those of its allies to build, repair, and regenerate a fleet that remains ready when it matters most. It can.

America's Shipbuilding Bottleneck

The industrial constraints facing American shipbuilding today are the cumulative result of decisions made over decades—decisions that allowed infrastructure to age, supply chains to disperse, and core manufacturing competencies to atrophy. Until the early 1980s, the United States still maintained a diversified shipbuilding and repair ecosystem that supported skilled labor, supplier depth, and repeatable production.[18] The base weakened rapidly in the early 1980s as U.S. construction subsidies ended while leading foreign yards continued to benefit from sustained state support, making it challenging to preserve commercial throughput—and the industrial learning it generates—at home.[19] The long-run effect was structural: fewer "warm" production lines, thinner subcontractor networks, and a workforce pipeline increasingly dependent on episodic naval demand rather than continuous commercial volume.

More than four decades later, the nation still relies on a drastically smaller ecosystem that struggles to keep pace with routine maintenance, let alone wartime surge requirements. The bottleneck is not merely a matter of capacity—it is an industrial architecture mismatched to modern demand.

America's four public naval shipyards—Norfolk, Portsmouth, Puget Sound, and Pearl Harbor—carry the burden of sustaining nuclear-powered carriers and submarines. Each faces a backlog measured in years. Infrastructure originally designed for mid-century vessels must now support aircraft carriers displacing 100,000 tons and submarines built around increasingly sophisticated propulsion and combat systems.[20] Heavy-lift cranes, dry docks, utilities, and testing facilities all require extensive modernization.[21] The Navy's Shipyard Infrastructure Optimization Program (SIOP) is a long-overdue corrective, but even its multi-decade timeline underscores how far behind the system has fallen.[22]

The private sector faces its own constraints. Although more than 150 shipyards exist in the United States, only nine possess the scale, certification, and capital position to build major naval combatants.[23] Workforce shortages compound the challenge. Skilled trades—welders, pipefitters, naval architects, marine systems engineers—are in short supply nationwide.[24] Security clearances, lengthy certification pipelines, and regional housing shortages further slow hiring and retention.[25] The consequence is predictable: longer build cycles, higher costs, and a widening gap between planned force-structure goals and what yards can realistically deliver.

This gap shows up in fleet math. In FY 2025, the Navy expected to build 10 new ships and retire 19—a net loss of nine hulls in a single fiscal year.[26] Even when shipbuilding plans are well-funded on paper, the industrial base has struggled to deliver ships at the rate of hull retirements, creating persistent pressure on availability and readiness.[27]

Design instability has also become a significant source of delay. Programs such as the Littoral Combat Ship, the Zumwalt-class destroyer, and early iterations of the Constellation-class frigates illustrate a recurring pattern: requirements changing after construction begins.[28] Each alteration triggers cascading disruptions across the supply chain—contract renegotiations, retooling, additional testing, and redesign of systems already partially installed.[29] Allied yards, by contrast, benefit from design stability and high-volume commercial production that allow workflows to mature over time.[30]

The USS *John F. Kennedy* (CVN-79) offers a cautionary example.[31] Commissioned in 2019 but not expected to achieve full operational capability until later in the decade, the carrier has faced delays tied to advanced launch and recovery systems, reliability challenges, and the integration of new technologies.[32] The result has been cost increases from roughly $11.9 billion to over $14 billion—an illustration of systemic strain rather than programmatic failure.[33]

Material supply chains introduce additional friction. Modern warships require advanced steel, composite materials, propulsion components, microelectronics, and precision-machined parts—many of which are sourced from a global market heavily concentrated in Asia.[34] Even when allies supply these materials, bottlenecks emerge in transportation, inspection, certification, and integration. Without diversified, redundant suppliers—both domestic and allied—the United States faces vulnerabilities that extend beyond shipbuilding to munitions, sensors, and propulsion.

These cumulative constraints shape readiness. The Navy increasingly sends ships to sea with deferred maintenance,[35] and overhaul periods often stretch beyond planned timelines. A destroyer expected to return to the Pacific after an eight-month availability may be tied up for a year or more;[36] submarine maintenance frequently extends well past schedule.[37] Every additional month in dry dock is a month not on station—and a month another ship must cover the mission—compounding strain across the fleet.[38]

Perhaps the most pressing issue is the inability to surge. During World War II, the United States built more than 6,000 vessels of all classes—an output enabled by multiple yards, redundant suppliers, enormous labor pools, and standardized designs. Today, surge capacity is effectively nonexistent.[39] A single additional attack submarine or destroyer cannot simply be ordered and delivered in time to influence a conflict.[40] The current construction timelines of nine years for a destroyer and eleven years[41] for an aircraft carrier are incompatible with wartime requirements.[42]

Yet even this bottleneck contains the seeds of recovery. The United States retains world-class designers, advanced research laboratories, and private yards capable of excellence when properly supported. The challenge is not a lack of potential, but the need to align industrial policy, allied partnerships, and acquisition discipline so that potential becomes throughput. The bottleneck is real—but it is neither inevitable nor irreversible. It is the product of choices, and better ones can overcome it.

The China Contrast

Any realistic assessment of American shipbuilding begins with an acknowledgement of China's scale.[43] The comparison is not an argument for fatalism, nor is it the center of this chapter. Instead, it provides the strategic backdrop against which U.S. decisions must now be made. China's shipbuilding capacity is not just larger—it is differently organized, tightly integrated, and optimized for speed, volume, and sustained production across commercial and naval sectors.[44] Understanding this contrast clarifies the stakes of American industrial renewal.

China today accounts for more than half of global commercial shipbuilding by tonnage and commands an industrial capacity concentration unprecedented in peacetime.[45] Its major shipyards routinely field orders for tankers, bulk carriers, container ships, and LNG vessels at volumes that allow for continuous production-line learning—something U.S., Japanese, and even Korean builders—despite their efficiency—cannot replicate at the same scale.[46] These efficiencies bleed directly into naval production. Many of China's dual-use yards build commercial vessels alongside destroyers, amphibious ships, and submarines. The model is not something the United States can or should emulate. Still, its outcomes matter: steady workflows, abundant skilled labor, and surge capacity that compresses timelines and lowers risk across programs. Absent a large domestic commercial orderbook, the United States cannot generate these effects alone. The strategic alternative is not imitation, but integration—tapping allied commercial throughput to sustain workforce skills, stabilize suppliers, and compress timelines across a combined industrial base.

Estimates of Chinese naval shipbuilding capacity vary, but even conservative assessments place China's throughput at many multiples of American output.[47] One U.S. naval intelligence assessment suggests that China has 232 times the U.S. shipbuilding capacity in military-relevant shipbuilding.[48] The disparity is rooted in a structural reality: China leverages a massive, integrated maritime ecosystem that encompasses over 300 active shipyards, supported by more than 1,000 smaller facilities—including specialized docks, repair jetties, and dual-use aquaculture hubs—distributed across its 12 coastal provinces.[49] This vast, hierarchical network enables the simultaneous construction and maintenance of complex warships alongside a dominant global share of commercial vessels.

In practice, this means China can deliver multiple destroyers, frigates, and amphibious ships each year, while simultaneously modernizing and expanding its submarine fleet.[50] It can experiment, iterate, and absorb setbacks without derailing the overall production schedule. This resilience is a product of a concentrated industrial ecosystem—where steel mills, component suppliers, design bureaus, and testing centers are co-located and synchronized within massive "shipbuilding bases" like Shanghai's Changxing Island.[51] This integrated model is supported by a political system that treats maritime infrastructure as a primary strategic asset, enabling China to concentrate its industrial growth at a geographic density the United States cannot match.

For the United States, the point is not to equal China ship-for-ship. The United States has several key strengths, including alliances, advanced technology, nuclear propulsion expertise, combat experience, and access to global basing. What matters is the strategic implication of China's scale: in a conflict, China could replace lost ships faster than the United States can. That single fact, more than the raw number of hulls, is what makes industrial capacity a deterrence issue.

China's military-civil fusion (MCF) model also matters.[52] Its shipyards benefit from a vast commercial customer base that keeps production lines warm, stabilizes the workforce, and finances digital automation. Every commercial LNG carrier or container ship contributes to a sustained industrial rhythm that carries over to naval production. The United States lacks high-volume commercial shipbuilding, which means its naval yards must bear the full weight of maintaining skilled labor, purchasing equipment, and sustaining critical suppliers.[53] America cannot replicate China's commercial volumes, but it can leverage the industrial ecosystems of its allies—especially in South Korea, Japan, and Australia—which already possess the scale and discipline that the United States currently lacks.[54]

The China contrast sharpens rather than eclipses the American story. It underscores why U.S. shipbuilding must shift from episodic modernization to systemic renewal,[55] why allies are not optional but essential; and why timelines—not just budgets—must become the defining metric of naval viability.[56] China's capacity illustrates the consequences of inertia, but it does not define America's future. That will be determined by how effectively the United States mobilizes its own strength, reforms its industrial processes, and integrates allied capabilities into a distributed and resilient shipbuilding network.

The challenge is real, but it is not destiny. China's scale sets the pace; American strategy will determine the outcome.

Allied Advantages, American Standards

The United States cannot meet the demands of the coming maritime era solely through domestic efforts. Its shipyards are capable but constrained—limited by workforce shortages, aging facilities, supply-chain bottlenecks, and an acquisition system that too often changes requirements faster than yards can build.

However, where China has achieved scale through geographic concentration and a unitary state model, America's advantage lies in a geographically distributed network of highly capable allies. The shipyards, supply chains, and engineering talent of South Korea, Japan, and Australia represent a latent maritime industrial ecosystem that China cannot replicate through domestic growth alone. This allied capacity is not merely supplementary; it is a decisive counterweight that, when aligned with U.S. standards, becomes a force multiplier for American sea power.

South Korea:
Throughput, Precision, and Industrial Rhythm

South Korea's shipyards represent the world's most efficient combination of high-volume commercial production and complex naval construction. Companies like Hanwha Ocean, Hyundai Heavy Industries, and Samsung Heavy Industries operate massive facilities with deep experience in LNG carriers, commercial tankers, and advanced warships.[57] Their production lines maintain a steady industrial rhythm that U.S. yards cannot match.[58]

This makes South Korea uniquely positioned to assist the United States in scaling throughput via a "plug-and-play" industrial transfer. The 2024 Hanwha acquisition and subsequent $5 billion planned expansion of the Philadelphia Shipyard are a case in point.[59] Under U.S. standards and regulations, Hanwha is transforming a struggling American yard into a digitally enabled, high-efficiency facility capable of producing up to twenty vessels annually.[60] That throughput will not depend on a return to mass U.S. commercial shipbuilding, but rather on a deliberate mix of government-backed commercial vessels, naval auxiliaries, repair and conversion work, and selective access to allied commercial orderbooks. This is allied capacity operating on American soil, under American law, serving as a proof of concept for how production discipline and sustained workflow—not domestic commercial scale alone—can revitalize the U.S. industrial base.

South Korea's model also offers a template for disciplined, stable designs. Korean shipyards excel because they iterate—with each LNG carrier and destroyer benefiting from lessons accumulated across hundreds of previous builds.[61] That compounding knowledge is essential for restoring predictability and reducing delays in U.S. surface fleet programs. The transfer of these lessons does not depend on replicating Korea's scale, but on embedding production systems, digital engineering tools, and design discipline directly into U.S. yards. When stable designs, standardized work packages, and sustained workflows are applied, American shipyard workers—not foreign labor—capture the benefits of accumulated learning.

Japan: Reliability,
System Integration, and Engineering Discipline

Japan brings complementary strengths in high-end systems. Mitsubishi Heavy Industries and Japan Marine United have long built vessels with demanding standards for acoustic quieting, propulsion integration, anti-submarine warfare capabilities, and system reliability.[62] Japanese shipbuilders thrive on engineering discipline—meticulous design review cycles, rigorous quality assurance, and a production culture that privileges stability over speed.

These strengths map naturally onto U.S. needs in undersea warfare and complex surface combatants, even if full interoperability is not frictionless. Japanese naval standards and combat management systems are similar—but not identical—to U.S. requirements, and integration entails time, cost, and disciplined systems engineering. However, Japan's long-standing experience with U.S.-origin architectures—most notably the Aegis Combat System—significantly reduces the integration burden relative to other non-U.S. partners.[63] Rather than wholesale replacement of Japanese systems, the greatest opportunity lies in selective co-development, interface alignment, and early harmonization of digital engineering standards. Managed correctly, these adjustments impose far lower cost and schedule risks than attempting to rebuild equivalent capacity domestically from scratch. Japan also offers a distinctive intangible advantage: political reliability. Industrial cooperation is rooted in a six-decade alliance characterized by strategic alignment, legal transparency, and institutional continuity—making Tokyo a uniquely stable partner for sensitive technology transfers and co-development.[64]

Australia: Sustainment Depth and the Indo-Pacific Hub

While Australia lacks the high-volume commercial capacity of Korea or Japan, it brings two critical assets: strategic geography and an expanding sustainment ecosystem. The AUKUS framework is enabling substantial investments in Adelaide and Perth, with facilities being modernized to support nuclear-powered submarines, advanced surface combatants, and Australian–U.S. maintenance partnerships.[65]

This matters because the Indo-Pacific is enormous, and distance imposes a persistent strategic tax. Sustainment hubs in Australia significantly shorten the repair and regeneration loop—particularly for CONUS-based submarines and surge forces, as well as for forward-deployed ships that would otherwise be required to return to Hawaii or the U.S. West Coast for major work. While Hawaii-based forces already operate forward, Australian hubs continue to increase operational availability by enabling regional repair, battle-damage restoration, and a faster return to service. In a future conflict, such hubs could prove decisive—returning damaged ships to sea in weeks rather than months.[66] Australia's industrial base is expanding through a network of transnational partners, including BAE Systems Australia and Kongsberg Defence, creating a southern anchor for a distributed sustainment network.[67]

Southeast Asia and India: Forward Repair and Geographic Reach

Singapore, the Philippines, and India each bring complementary value in forward maintenance, repair, and dispersal. Their positions create strategic depth: nodes that complicate adversary targeting and ensure no single yard becomes a vulnerability.[68]

Singapore has long supported U.S. Navy littoral combat ships and logistics vessels. Its yards are technologically advanced and well-suited for maintenance availabilities that do not require nuclear certification or deep dry dock infrastructure.[69]

The Philippines is emerging as a cornerstone of "tiered sustainment." The reopening of Subic Bay shipyard—supported by Cerberus Capital and South Korea's Hanwha—offers a future opportunity for conventional ship repair near contested waters.[70]

India adds scale. Its large commercial yards, including Cochin Shipyard Limited and Larsen & Toubro's defense facilities, possess dry docks and fabrication halls suitable for substantial repair work.[71] While India's strategic orientation is unique, its industrial potential and proximity to critical sea lanes offer meaningful opportunities for coordination.[72]

Allied Capacity + American Standards
= Strategic Advantage

The strength of this allied ecosystem lies not just in numbers, but in alignment. Korea offers throughput, Japan offers engineering precision, Australia offers geography and sustainment depth, and Southeast Asia and India offer forward repair and dispersal. Together, they form a lattice of capability that complements U.S. strengths and compensates for U.S. bottlenecks.

However, allied advantages only translate into American strength when aligned with U.S. standards—such as classification, cybersecurity, quality assurance, and survivability requirements. By integrating these yards into U.S. digital design environments and combat systems architectures, the U.S. can move beyond transactional shipbuilding toward a truly integrated maritime industrial base. The challenge is not to replicate U.S. shipbuilding abroad, but to create a network of certified yards that can build modules, repair battle damage, and support U.S. and allied fleets at scale.

A Network the PRC Cannot Match

This approach leverages a structural asymmetry that favors America. China has shipyards; the United States has allies with shipyards. A distributed, multi-nodal industrial network—encompassing locations such as Philadelphia, San Diego, Perth, Singapore, Yokosuka, Subic, and Busan—complicates adversary planning, enhances resilience against disruption, and enables the fleet to sustain operations across time and distance.

No single yard needs to carry the burden. No single strike can remove U.S. naval repair capacity. This is not just industrial diversification—it is strategic deterrence.[73]

Lethality by Availability

In naval warfare, lethality is not defined solely by firepower, sensors, or platform sophistication.[74] It is defined by availability—the number of ships ready to fight at any given moment, the speed at which damaged vessels can be restored, and the tempo at which replacements can be delivered if losses occur. A fleet that cannot be maintained cannot be credible. And a fleet that cannot regenerate cannot deter.

This is where allied integration moves from industrial cooperation to operational consequences. When the United States expands its sustainment and repair capacity across allied shipyards, it changes the geometry of naval power. Distributed repair hubs in Australia, Singapore, Japan, Korea, India, and the Philippines shorten maintenance loops, increase time on station, and eliminate the "transit tax" of long journeys back to U.S. yards.[75] These efficiencies compound. A destroyer that spends four additional weeks each year in the operating theater instead of in transit effectively expands the fleet's presence without requiring the multi-billion-dollar investment of a new hull.[76]

Availability also multiplies the impact of the U.S. forward posture.[77] Ships repaired closer to contested areas can rejoin operations in days or weeks, rather than months. In a crisis, the ability of Japan, Korea, or Australia to execute emergency repairs on a damaged surface combatant—restoring combat systems or propulsion in time to influence ongoing operations—could be decisive. In a theater where warning timelines are short and distances are vast, the ability to maintain presence shapes the very dynamics of escalation.

Co-production and modular construction add another dimension to availability. When allied yards build modules or hull sections to common standards, production becomes more resilient. If a U.S. yard faces delays, an allied yard can deliver pre-certified components to keep the schedule moving. This distributed production is not simply an industrial convenience—it is a strategic asset that increases the probability that the United States can absorb and replace combat losses rapidly.[78]

Finally, allied industrial integration also expands the fleet's "magazine depth."[79] Modern warships rely on complex, global supply chains for everything from propulsion components to mission systems.[80] By co-locating stockpiles and production lines for these critical components within allied territory, forward forces gain greater resilience. Destroyers and submarines can reload and refit without retreating to a U.S. depot, preserving operational tempo during prolonged periods of tension.[81]

The strategic logic is straightforward: lethality emerges from readiness, and readiness emerges from availability.[82] By integrating allied shipyards into a unified sustainment and production network, the United States transforms industrial capacity into operational firepower. Availability becomes deterrence. Availability becomes combat power. Availability becomes the margin by which war can be prevented—or, if necessary, won.

Hard Problems to Solve

Integrating allied shipbuilding capacity into America's maritime enterprise is strategically compelling—and operationally necessary—but it is not simple.[83] The obstacles are real: legal, security, political, and industrial. Addressing them requires discipline, not despair.

The most consequential barriers lie in the regulatory system that governs the transfer of defense-related technology and information. Two frameworks are of primary importance: the International Traffic in Arms Regulations (ITAR)[84] and the Export Administration Regulations (EAR).[85] ITAR controls the export and handling of defense articles, technical data, and services. EAR governs sensitive dual-use technologies with both commercial and military applications. These regimes were established when U.S. defense production was overwhelmingly domestic.[86] Today, they inadvertently slow cross-border design collaboration and delay certification of allied yards. Export control regimes require tailored mechanisms to ensure trusted allies do not hinder the very industrial resilience they are meant to protect.

A second structural constraint is the Jones Act.[87] While the Act supports American labor and preserves a domestic capacity for commercial trade, it has contributed to lower commercial throughput and limited competitive pressure.[88] Because commercial health informs naval capacity, the Jones Act indirectly shapes America's ability to scale. The goal is not necessarily to repeal, but to ensure its application does not stifle the integration of allied modular production or shared supply chains.[89]

Political sensitivities add a third layer of complexity. Shipbuilding is deeply embedded in local economies, union landscapes, and congressional districts.[90] Any arrangement that appears to shift work overseas is met with resistance—even when the aim is to expand American capacity, not reduce it. The Hanwha investment in Philadelphia succeeded partly because it created American jobs and revitalized an American yard under U.S. law.[91] Future partnerships must be framed in the same way: as allied participation driving U.S. economic renewal, rather than displacing domestic industry.

Operational security presents another challenge, especially in forward repair hubs located in regions where cyber intrusion, surveillance, or interference by malign actors is more likely. Allied facilities that service U.S. platforms must meet strict standards for physical protection, digital security, and personnel vetting. Establishing these standards abroad requires sustained engagement, shared investment, and continuous compliance monitoring.

Finally, interdependence carries its own risk. A distributed network of allied yards increases resilience through dispersal, but it also creates new dependencies that must be managed carefully. No single allied partner should become a critical bottleneck for components, modules, or repair capacity. Diversifying across multiple allied nations—and maintaining some unique U.S.-only capabilities—ensures that resilience does not give way to vulnerability.

None of these obstacles is prohibitive. They are design constraints. And, as with any engineering challenge, they can be addressed with disciplined policy, aligned standards, shared incentives, and political leadership. The hard problems do not weaken the case for allied integration—they define the conditions under which a resilient, credible, and effective allied industrial network can be built.

Practical Pathways

Restoring American maritime strength will require more than identifying problems; it demands a coherent set of practical steps that transform strategy into industrial capacity—and capacity into operational readiness.[92] The first of these steps is a shift toward modular, distributed production. Modern shipbuilding no longer requires a single yard to fabricate every component of a vessel. Hull blocks, habitability modules, mission bays, and structural sections can be built in parallel across multiple facilities—an approach perfected by South Korean and Japanese shipbuilders. By harmonizing digital engineering standards, design tools, and quality assurance practices with allied yards, the United States can create a system in which modules produced abroad integrate seamlessly into U.S. final assembly lines. This approach not only shortens timelines but also diversifies production, reducing vulnerability created by single-yard bottlenecks.[93]

A second pathway involves expanding the concept of multinational sustainment that has already proven itself in aviation. The F-35 program demonstrated the feasibility of a global maintenance network capable of supporting highly sensitive systems across allied territories. A similar arrangement for surface combatants and auxiliary vessels would distribute depot-level maintenance across Japan, Korea, Australia, Singapore, and the Philippines.[94] Creating this network would enable U.S. public shipyards to focus on nuclear work and complex modernization, while allowing allied facilities to shoulder a greater share of maintenance and repair. Such a model would significantly enhance the operational availability of forward-deployed forces and reduce the repair cycle during crises.

Realizing these benefits requires shared systems of certification and standards. Allied yards must be able to handle sensitive materials, digital engineering files, and classified components under stringent U.S. standards. Establishing a predictable certification regime—like the airworthiness standards that harmonize civil aviation across nations—would provide a clear pathway for allied shipyards to participate in U.S. naval construction and repair without relying on case-by-case exceptions.

Forward maintenance authorities represent another crucial step. In peacetime, the United States can afford to bring damaged ships home for repair. In conflict, this becomes a strategic liability. Pre-negotiated agreements that enable allied yards to conduct emergency repairs, restore propulsion, or replace mission systems would allow damaged ships to rejoin operations far more quickly. These authorities should be exercised routinely in combined training events to ensure familiarity and readiness.

Finally, the United States should encourage and facilitate allied investment in American yards. The transformation of the Philadelphia Shipyard under Hanwha's leadership demonstrates what is possible when capital, modern production techniques, and U.S. regulatory oversight converge. Similar investments could rejuvenate other American facilities, expand workforce pipelines, and accelerate the adoption of advanced manufacturing. When supported by coordinated industrial planning among allies, these reforms would transform shipbuilding from a national struggle into a shared strategic enterprise—one capable of meeting the demands of competitive multipolarity.

Recent executive and legislative initiatives suggest growing recognition in Washington that shipbuilding is no longer a peripheral industrial issue, but a core element of national security. The Administration's maritime executive order seeks to arrest decades of decline by directing the development of a comprehensive Maritime Action Plan[95] — one intended to strengthen the domestic industrial base, expand workforce pipelines, modernize maritime education, and incentivize private investment.[96] In parallel, bipartisan legislation such as the proposed SHIPS for America Act reflects a renewed congressional effort to link commercial maritime capacity to strategic readiness through targeted incentives, fleet expansion initiatives, and workforce development measures.[97]

These initiatives matter—not because they solve the problem on their own, but because they can enable the practical pathways outlined above. Policy momentum creates space for modular production, multinational sustainment, allied investment, and workforce regeneration to scale. Absent disciplined execution, stable requirements, and integration with allied industrial capacity, however, even well-funded programs risk reproducing the same bottlenecks under a new label. Strategy, not legislation alone, will determine whether these efforts translate into usable capacity at scale.

Metrics that Matter

For decades, American shipbuilding has been assessed primarily by budgets, contract awards, and the number of hulls authorized in five-year planning documents. These indicators are important, but they mask the reality that what truly determines maritime readiness is not what is funded on paper, but what is delivered to the fleet—and how quickly ships return to operational waters after repairs. A revitalized industrial strategy, therefore, requires a different kind of measurement, one anchored in outcomes rather than intentions.

The first and most critical indicator is fleet availability. The percentage of ships that are ready for tasking—not in extended maintenance, awaiting parts, or delayed in dry docks—is the truest expression of naval capacity. A force of 300 ships with high availability can deliver more combat power than a nominal fleet of 350 ships plagued by maintenance delays. Tracking and improving availability directly links industrial performance to operational lethality and deterrence credibility.

A second indicator is time in maintenance, measured not only against planned milestones but also against historical performance. Reducing the duration of depot availabilities, accelerating certification of completed work, and shortening the transit time to and from repair hubs all increase the Navy's effective presence. In a future conflict, the side that can repair battle damage faster will hold the operational initiative.

A third category involves industrial responsiveness. Metrics such as the time required to certify an allied yard, the speed with which modules can be produced across distributed facilities, and the reliability of supply chains for critical components reveal whether the broader ecosystem is gaining resilience or slipping into new dependencies.

Finally, delivery cadence—the steady, predictable arrival of new ships—matters as much as total numbers. Unpredictable schedules disrupt training pipelines, maintenance planning, and fleet modernization cycles. While consistent cadence signals disciplined design, mature production lines, and effective coordination between government and industry.

Together, these metrics shift the focus from aspirational fleet sizes to measurable readiness. They enable policymakers, industry, and allies alike to monitor whether reforms are yielding the one outcome that matters most: a Navy that can surge, sustain, and prevail at sea.

Allied Arsenal at Sea

As the United States adapts to the demands of competitive multipolarity, its maritime advantage will depend less on any single platform than on the system that builds, repairs, and sustains the fleet. A navy is only as strong as the industrial base beneath it. The United States once possessed a shipbuilding ecosystem so vast that it could replace wartime losses faster than its adversaries could inflict them. That era is gone, but the underlying principle endures because deterrence rests on the credible ability to regenerate power at sea. The question is not whether the United States can return to the shipbuilding scale of the 1940s, but whether it can build a modern industrial network capable of sustaining maritime strength in the most contested theater of this century.

The emerging answer begins with a shift in perspective. American sea power no longer hinges solely on what can be produced within the boundaries of the United States, but on how effectively the nation aligns its industrial strengths with those of its closest partners. The enduring asset the United States possesses is not just its shipyards, but its ability to mobilize a community of maritime democracies that share both standards and strategic purpose. No peer competitor possesses an industrial base distributed across multiple allied nations, tied together by shared security commitments and interoperable systems.

This alignment transforms shipbuilding from a national enterprise into a cooperative one. When allied investments modernize U.S. yards and American planning incorporates overseas sustainment hubs where they are certified and operationally appropriate, the result is not a patchwork of isolated efforts but a unified ecosystem—flexible, resilient, and difficult for any adversary to disrupt. It is this architecture of shared capacity, rather than the output of any single nation, that provides the United States with its most durable maritime advantage.

This approach is not outsourcing. It is force multiplication. The transformation of the Philadelphia Shipyard under Hanwha's leadership illustrates how allied capital can modernize American industrial capacity in line with U.S. standards—upgrading infrastructure, creating jobs at home, and establishing the conditions for increased productivity. Although the yard has not yet been awarded U.S. Navy shipbuilding or sustainment contracts, its modernization represents a calculated investment in optionality—one that would require deliberate risk acceptance, certification, and phased integration before naval combatant production can commence. Conversely, the growth of certified maintenance and repair hubs overseas reduces the operational penalties imposed by distance, ensuring that forward-deployed ships remain ready when tensions rise. Together, these developments create a strategically significant shift: the ability of the United States to maintain and regenerate maritime power no longer depends on a single yard or a single coast, but on a distributed network of allied capabilities.

If deterrence is credibility, and credibility is the ability to replace what is lost, then shipbuilding is no longer merely an economic sector; it is a strategic instrument. By allowing its shipbuilding base to atrophy over decades, the United States has already accepted significant strategic risk—one that now constrains deterrence rather than reinforcing it. Addressing this risk will require political will, regulatory modernization, and a disciplined approach to partnership.

But the direction is clear. By aligning allied capacity with American standards, the United States can turn today's bottlenecks into tomorrow's maritime edge—an allied arsenal at sea that preserves stability, strengthens deterrence, and ensures the fleet remains ready when it matters most.

Endnotes

1 The author is deeply grateful for the invaluable feedback and insightful critiques provided by several individuals who have chosen to remain anonymous. This research also benefited significantly from firsthand insights gained during briefings and site visits to the Hanwha Philadelphia Shipyard and the Pearl Harbor Naval Shipyard. Any errors of omission or commission, as well as the views expressed herein, are solely the responsibility of the author and do not necessarily reflect the official policy or position of the Daniel K. Inouye Asia-Pacific Center for Security Studies, the U.S. Department of War, or the U.S. government.

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