

# Reviving America's Maritime Strength: Comprehensive by Necessity

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## KEY TAKEAWAYS

The U.S. has an opportunity to develop itself as a major commercial maritime force and as a leader in implementing a novel approach to multi-modal shipping.

Seizing this opportunity will require investing in the future of shipping and shipbuilding today and setting the conditions for a revolution in shipping.

At the same time, clear and present dangers warrant action *now* to secure shipping in order to mitigate today's national security risks.

On March 4, 2025, newly reelected President Donald J. Trump announced before a joint session of Congress his intent to revive the nation's manufacturing prowess. The core of that effort would be shipbuilding, an industrial sector critical both to national security and for hardening the economy against hostile economic coercion.<sup>1</sup> Achieving this will require focus on several key elements of the maritime industry and independent timelines with actions that will have an impact across this national effort. For this reason, success will depend on execution of a coherent, comprehensive, and coordinated national program of maritime rejuvenation using various tools of statecraft, legislation, finance, innovation, and sound engineering and business practices.

Generally, the approach involves executing a national industrial effort involving several

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interconnected initiatives. These involve securing a fragile but burgeoning American maritime industrial sector, ally with key maritime powers, nurture an American maritime comparative advantage, build capacity, and train a modern maritime workforce. All these efforts are equally urgent and interdependent, with the return on investment in money, political capital, and capacity being delivered on a nonlinear timeline. For this reason, a unifying vision and pathway ahead is needed.

Overall, the fundamental goal is as stated in the preamble to the Merchant Marine Act of 1920, known as the Jones Act:

It is necessary for the national defense and for the proper growth of its foreign and domestic commerce that the United States shall have a merchant marine of the best equipped and most suitable types of vessels sufficient to carry the greater portion of its commerce and serve as a naval or military auxiliary in time of war or national emergency...and it is declared to be the policy of the United States to do whatever may be necessary to develop and encourage the maintenance of such a merchant marine....<sup>2</sup>

Unfortunately, the promise expressed in 1920—105 years ago—has never been fulfilled.

## Imperatives for Action

The challenge of reviving America's maritime industry is significant and complex in both scale and scope. The principal threat to the nation at this point is China, which unsurprisingly is a dominant maritime power. Its dominance in shipping, shipbuilding, port operations, and supply chains gives it the ability to control the terms of trade and coerce an America that is overly reliant on foreign ships to support its military and economy.

**Assured Shipping.** As of March 31, 2025, the Maritime Administration (MARAD), an agency within the U.S. Department of Transportation, was charged with overseeing a National Defense Reserve Fleet of 87 ships that can respond within 10 days if needed to support military operations.<sup>3</sup> In September 2023, the Maritime Administration commissioned the services of the Center for Naval Analyses to assess the nation's shipping needs. The results of that effort, completed in late 2024, have not yet been released to the public.

In April 2025, The Heritage Foundation hosted a seminar in which maritime industry and defense experts independently assessed that to be free of hostile interference in peace and conflict, America needs more than

1,300 large commercial ships (greater than 1,000 tons) of various classes.<sup>4</sup> This correlates roughly with other assessments such as one by Maritime Accelerator for Resilience indicating that the nation needs 1,120 commercial vessels in the event of prolonged international conflict (assumed to be conflict with China).<sup>5</sup> The stark reality is that the U.S.-flagged fleet of 187 ships with a combined petroleum shipping capacity of 4,945,754 barrels (the U.S. imports 8.51 million barrels per day<sup>6</sup>) and a container capacity of 265,799 (in 2024, the U.S. moved over 2 million containers or 20-foot equivalent units [TEUs] per month<sup>7</sup>) is inadequate,<sup>8</sup> leaving the U.S. dependent on foreign-controlled shipping. In addition, the capacity of its reserve fleet to sustain the U.S. military in a regional conflict is questionable: A 2019 Turbo Activation exercise, for example, revealed that only 63.9 percent of the reserve fleet was ready for tasking in required timelines.<sup>9</sup>

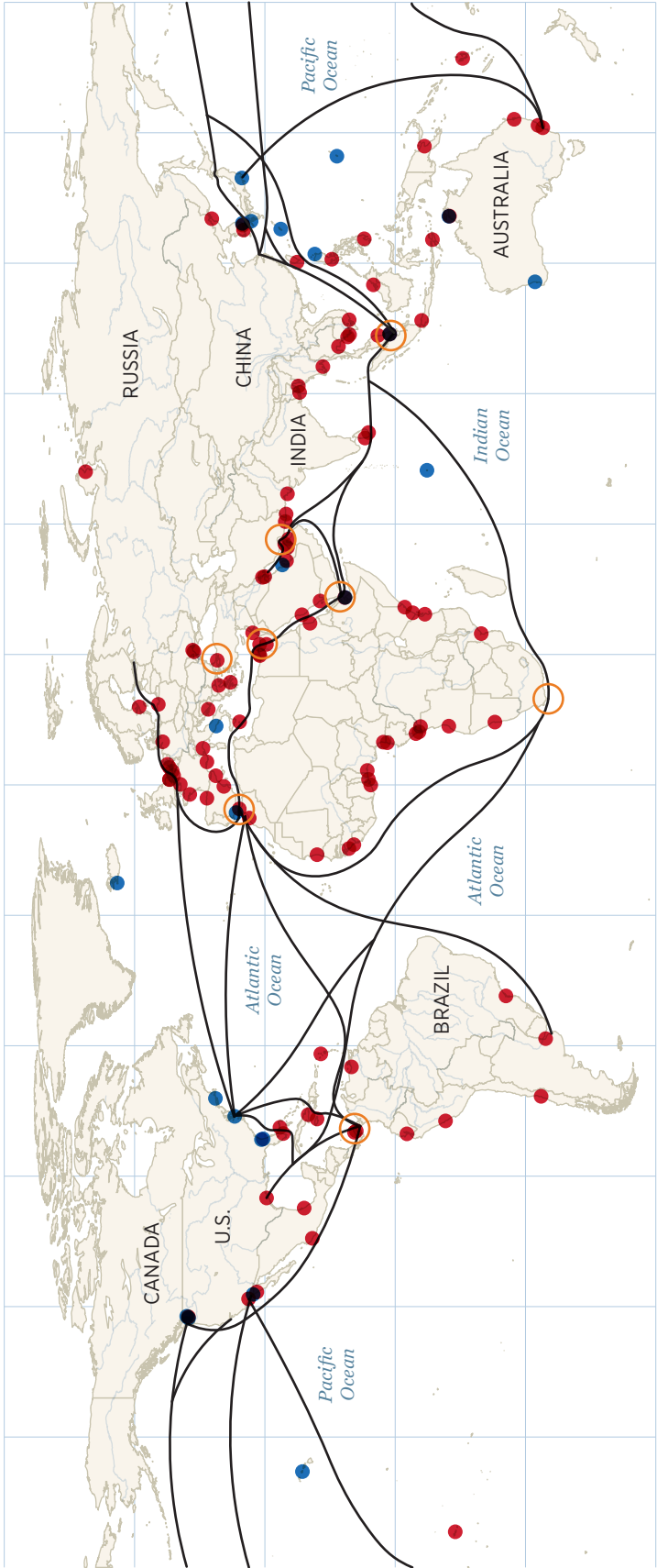
**Maritime Supply Chain Vulnerabilities.** The COVID pandemic awakened Americans to the danger of relying on Chinese-sourced goods like antibiotics, medical gear, and rare earth elements vital to the tech and defense industries. During the recovery phase of the pandemic, supplies became scarce under COVID-zero policies in China that disrupted global shipping operations.<sup>10</sup> That reality remains true today, and two recent events underscore the need to diversify and seek non-Chinese critical industrial components.

- In February 2024, after years of warnings that Chinese built ship-to-shore cranes, a mainstay in container shipping port operations, had known cyber vulnerabilities, the U.S. Coast Guard (USCG) finally began to issue warnings.<sup>11</sup>
- More alarming was the March 26, 2024, collision of the Singapore-flagged container ship *Dali* with the Baltimore Harbor's Francis Scott Key Bridge, killing six construction workers when the bridge collapsed. A June 2024 investigation update indicated that electrical circuit breakers opened unexpectedly, causing the ship to lose power.<sup>12</sup> While this could have been caused by improper fuel tank shifting, it also could have been the result of a cyber-attack. This possibility was never publicly addressed by investigators, but a report issued in 2021 by the Office of the Director of National Intelligence revealed that Chinese-sourced electrical grid circuit breakers have known cyber vulnerabilities.<sup>13</sup> Until the *Dali* investigation is completed, the cause of that deadly incident remains to be determined, and with the *Dali* arriving in China's Huadong Shipyard in January 2025 for repairs, the

MAP 1

China's Strategic Ports and America's Maritime Vulnerability

● Chinese Port   ● U.S. Naval Facility   ○ Chokepoint   — Critical Shipping Routes



**SOURCES:** Clark Banah and Jacob Gunter, "Mapping China's Global Port Network: On the Backfoot in 2024, but Still Well Entrenched," *Merics* [Mercator Institute for China Studies], November 7, 2024, <https://merics.org/en/comment/mapping-chinas-global-port-network-backfoot-2024-still-well-entrenched> (accessed July 21, 2025), and AidData, "China's Official Seaport Finance Dataset, 2000–2021," July 25, 2023, <https://www.aiddata.org/data/chinas-official-seaport-finance-dataset-2000-2021> (accessed July 21, 2025).

possibility of Chinese cyber-attacks via manipulated hardware during repairs or construction remains a serious concern.<sup>14</sup> The consequences of such attacks were made evident with the loss of lives and the billions of dollars it will take to replace the Key Bridge, not to mention disruptions of national supply chains and industrial activity.

**Interruption of Cargo at Overseas Ports.** China has engaged in a decades-long effort to gain control of or influence a network of strategically important ports across the world. Most notable are ports controlled by Chinese-linked firms on both ends of the Panama Canal, which President Trump has demanded be sold to a friendly nation. A \$22.8 billion deal penned in March 2025 for a consortium led by U.S. firm BlackRock to take over those ports from Hong Kong–based CK Hutchison was scuppered by the Chinese Communist Party (CCP), illustrating the strategic importance of these ports to Beijing.<sup>15</sup>

AidData has done foundational work assessing the scale and location of Chinese investment in and potential naval use of 123 port projects worth almost \$30 billion in 46 different countries.<sup>16</sup> Despite this, Chinese port investment and influence in the U.S. is viewed too often only through a narrow military lens. The more present danger of such investments and presence is China’s ability to interfere with competitors’ shipping by snarling in-port cargo operations, slowing in-port ship services such as refueling, or complicating ship repairs.

## Acting Across Timelines and Agencies

Reversing the deficit in America’s shipping—too few ships, underinvestment in shipyards, a workforce that is too small, and insufficient numbers of merchant mariners—will be a decades-long task, but our vulnerability is real and requires action *now*. At the same time, those actions must set the conditions for sustained effort to grow the nation’s maritime capacity: shipyards, naval architects, merchant mariners. This in turn must be guided by an innovation initiative to develop a new American comparative maritime advantage.<sup>17</sup> Only by competing in the global maritime marketplace for the necessary level of market share can the nation rebuild and sustain its maritime power—an effort that must include the Navy needed to deter or defeat China. This will require action along five lines of effort: protect, ally, nurture, build, and train.

**Protect.** The embarrassment of the Third Taiwan Crisis fiasco and Tiananmen Square massacre sanctions on Beijing set in motion actions that have

shaped today's geostrategic realities. Specifically, the CCP committed both to building a modern military, principally naval, that could defeat America and to hardening China's economy against Western sanctions. This would require assuring access to resources, especially overseas petroleum.

Once China's state-controlled economy was given this direction, favorable loans, supportive laws, and diplomatic cover followed, providing its nascent maritime industry with significant advantages. Between 2000 and 2022, China directed approximately \$10 billion in loans overwhelmingly to private entities that it can control, primarily to Russia to finance liquefied natural gas (LNG) carriers built in China. As a result, Beijing gained greater control and access to Russia's Yamal Peninsula petroleum reserves and to the Marshall Islands to finance shippers (mostly Chinese affiliated) with little if any of the money reaching the Marshall islanders themselves.<sup>18</sup> All of this is part of a long-standing Communist Party plan first laid out in a 1998 white paper.<sup>19</sup> The goal of this plan was domination of maritime shipbuilding and shipping, which was accomplished eight years later. This dominance causes too many U.S.-built but aging Jones Act ships to rely on Chinese shipyards for repairs, further discourages capital investments at home, and deters new market entrants that could expand the American maritime industrial base.<sup>20</sup>

Political awareness of this problem and the need for action is a recent development. The Biden Administration's April 2024 action to protect American shipping and steel from unfair Chinese practices, for example,<sup>21</sup> was followed early in the new Trump Administration by the imposition of tariffs, executive orders, and Article 301 complaints of unfair Chinese practices targeting American shipping and shipbuilding.<sup>22</sup> Challenging the CCP's maritime chokehold will require concerted actions to compel the CCP eventually to reverse its targeted assault on America's and allied nations' maritime industries.

Protecting America's maritime industry and setting in motion its too-long-delayed revival will require a more level playing field. The initial priority should be to negate the financial advantages China affords its maritime sector over American domestic shipbuilding and encourage the use of American-registered or allied-registered shipping to deliver important commodities on key shipping lanes. Early action is being planned to impose fees on Chinese-built or Chinese-flagged vessels that call at U.S. ports as a way to incentivize American shipping by placing costs on imports delivered on Chinese-controlled ships.<sup>23</sup>

At the same time, reduced fees on cargo should be considered when cargo is delivered on allied ships, and U.S.-flagged, U.S.-built, or U.S.-crewed



ships should be exempted. This will also require heading off attempts to circumvent such actions. European Union cross-border fees or tailored drayage fees are useful tools with which to dissuade Chinese transshipments through Canadian and Mexican ports and onward to U.S. overland ports of entry.<sup>24</sup> Additionally, the practice of Chinese labeling of transshipped goods as United States–Mexico–Canada Agreement (USMCA) origin must be stopped. Specifically, this means revising “origin of goods” regulations to prohibit the labeling of any Chinese-manufactured inputs as USMCA-sourced.<sup>25</sup>

Finally, entities that unfairly harm U.S. maritime interests should be sanctioned or blacklisted to ensure fair practices at overseas ports and shipping. The Federal Maritime Commission (FMC) in recent months has updated its list of “controlled carriers” that are subject to greater scrutiny and regulation to include state-controlled Chinese shipping,<sup>26</sup> and on January 7, 2025, the U.S. Department of Defense added Chinese shipping companies COSCO and CNOC to a growing list of commercial shipping tied to the People’s Liberation Army that threatens our national security.<sup>27</sup> These critical “protective” maritime tools are mostly encapsulated in an April 9, 2025, executive order that has not yet been fully implemented.<sup>28</sup> Once these efforts begin in earnest, coordinated execution will be critical and will need be sustained across various agencies (the FMC, Department of Commerce, Office of the U.S. Trade Representative, National Security Council, and U.S. Department of Homeland Security) to be successful.

**Ally.** The objective of these measures, taken together, is to reduce China’s cost advantages, which are enabled by active state support of Beijing’s commercial fleet. However, ensuring that critical shipping routes and trade flows remain unimpeded will require concerted and synchronized efforts with like-minded allies. A key goal will be the facilitation of joint actions by maritime nations that enable national as well as commercial partnerships, ensure the coherence of their policies and regulations, and enhance united efforts within multinational organizations such as the International Maritime Organization. One immediate outcome of this effort would be to secure treaty obligations among allied nations that ensure access to adequate shipping in a time of crisis or conflict.

To operationalize collective maritime action requires an organizing framework. Thankfully, there is an existing precedent: the Group of Seven (G7), an informal body for the coordination of member nations’ market policies. A similar group of like-minded maritime nations could help to ensure that their policies and regulations are coherent and support the group’s collective maritime interests. In the early stages of a program of national

maritime rejuvenation, this multinational group could play a key role by gaining assurance of adequate shipping unmolested by hostile powers—notably China—and setting the conditions conducive to the development of new competitive shipping technologies and techniques such as smart ports and small, modular nuclear power plants for commercial ship propulsion.

To ensure its effectiveness, this group would have to account for a significant global share of the maritime market space: ports, shipbuilding, shipping, seafarers, and merchant mariners. As an informal group, its decisions would be non-binding unless memorialized in a treaty or treaties. Importantly, the group's informality would more likely promote collaboration unburdened by formal bureaucratic consensus-seeking or diplomatic hesitancy. Moreover, to avoid the risk of not being tightly aligned by a common vision and thereby unlikely to sustain the necessary focus on key maritime issues, this group of nations must not be too large or too disparate.

With these concerns in mind, an initial group of nations representing a significant portion of the global maritime industry as well as key customers of sealift would include the U.S., India, Japan, South Korea, the Philippines, France, Taiwan, Greece, and Italy. As this initial maritime group or M10 formed and achieved success other partners could be added.

There is reason for guarded optimism about the ability of a group of maritime nations to work together effectively. In recent years, for example, treaty allies and top shipbuilding nations Japan and South Korea have sought to expand their overseas shipbuilding footprint. Faced with a shrinking labor force as their populations age, limited opportunities to expand domestic production, and nearby threats from such countries as China, North Korea, and Russia, their move abroad makes sense. South Korean shipbuilder Hanwha acquired the Philadelphia shipyard for \$100 million in December 2024 and plans to modernize and expand operations there.<sup>29</sup>

Japanese shipbuilders have been actively searching abroad as well, notably in India. Indian Prime Minister Modi's administration has been pursuing a plan to develop several shipbuilding clusters as part of Maritime Vision 2047.<sup>30</sup> India also has attracted U.S. naval maintenance contracts; in March 2023, maintenance and repair work in India on a U.S. Navy logistic ship was completed for the second time since 2022.<sup>31</sup> Similarly, the first maintenance, repair, and overhaul (MRO) of an American naval vessel in South Korea was completed in March 2025.<sup>32</sup> Finally, underscoring the importance of President Trump's frequent public commitments to reviving the nation's maritime industry, French shipper CMA-CGA has committed to investing \$20 billion in the U.S. with \$8 billion reportedly earmarked to grow a U.S.-flagged fleet of 30 ships.<sup>33</sup>



TABLE 1

**Candidates for Maritime Group of Nations**

RANK	SHIPBUILDING BY TONNAGE AS PERCENTAGE OF GLOBAL TOTAL		NUMBER OF SEAFARERS		NUMBER OF COMMERCIAL SHIPS OWNED*	
1	China	44.2%	Philippines	252,393	China (plus Hong Kong)	9,829
2	South Korea	32.4%	Russia	198,123	Greece	4,870
3	Japan	17.6%	Indonesia	143,702	Japan	4,007
4	Philippines	1.06%	China	134,294	Singapore	2,799
5	Italy	0.82%	India	113,474	Indonesia	2,411
6	Germany	0.63%	Ukraine	76,442	Germany	2,221
7	Vietnam	0.61%	United States	59,586	Norway	1,987
8	Finland	0.36%	Malaysia	35,000	Russia	1,833
9	Taiwan	0.30%	Vietnam	34,590	United States	1,783
10	France	0.29%	United Kingdom	33,743	South Korea	1,680
11	Norway	0.29%	Myanmar	33,290	Turkey	1,583
12	Russia	0.22%	Poland	31,222	United Kingdom	1,380
13	Turkey	0.22%	Greece	30,507	Netherlands	1,189
14	Netherlands	0.19%	Turkey	28,587	Vietnam	1,133
15	India	0.12%	South Korea	27,919	United Arab Emirates	1,087

Ranked in top 15 in all three categories
Ranked in top 15 in two categories

**Recommended Members for Maritime Group of Nations**

United States	Italy	South Korea
France	Japan	Switzerland**
Germany	Netherlands	Taiwan
Greece	Norway	Turkey
India	Philippines	United Kingdom
Indonesia	Singapore	Vietnam

\* Greater than 1,000 gross weight tonnage.

\*\* Switzerland is a significant financier and owner of oceangoing vessels.

**SOURCE:** United Nations Conference on Trade and Development, *Review of Maritime Transport 2022: Navigating Stormy Waters*, [https://unctad.org/system/files/official-document/rmt2022\\_en.pdf](https://unctad.org/system/files/official-document/rmt2022_en.pdf) (accessed July 21, 2025).

As new technologies like small modular reactors for commercial ships mature, ensuring coherent regulatory policies among partner nations will be critical in ensuring safe operation and fostering a sustainable business model. All told, the U.S. can become a leader in the maritime market again

only by deploying technologies and concepts in novel ways. Given the risks and urgency involved, the conditions for industrial innovation and commercial risk-taking must be set to nurture a new American maritime comparative advantage.

**Nurture.** As efforts to protect and ally are executed, they must be informed by a long-term vision of a “Revolution in Shipping,” the ambition being to develop a compelling American comparative advantage in the global maritime market space that meets urgent military operational problems while being commercially viable. This includes sustaining dispersed military forces across littoral terrain and combining various technologies, like small modular nuclear reactors, in a new multi-modalism.<sup>34</sup> One key component of this vision is nuclear power for shipping, which has been supported in past legislation like the 2023 ADVANCE Act.<sup>35</sup> Convincing allies, investors, and taxpayers of the viability of this new approach to multi-modalism will require a demonstration to illustrate its techniques, engineering challenges, and business model.<sup>36</sup>

This new maritime comparative advantage will require the integration of various techniques and technologies in a new logistic framework that includes innovators from various fields. Innovation incubators, a well-known approach in business, can provide the platform for this endeavor, but the conventional model will need to be retooled for use in maritime industry. If this is done properly, the result will be novel approaches facilitated by co-locating the business and engineering support services needed by innovative start-up firms and existing companies as new commercial entrants to the maritime sector. Moreover, in developing the workforce of the future, these sites would incorporate advanced mariner training centers and naval architecture advanced degree programs so that, as new manufacturing, design processes, and maritime operations were tested, they could be used in training regimes to facilitate adoption by industry.

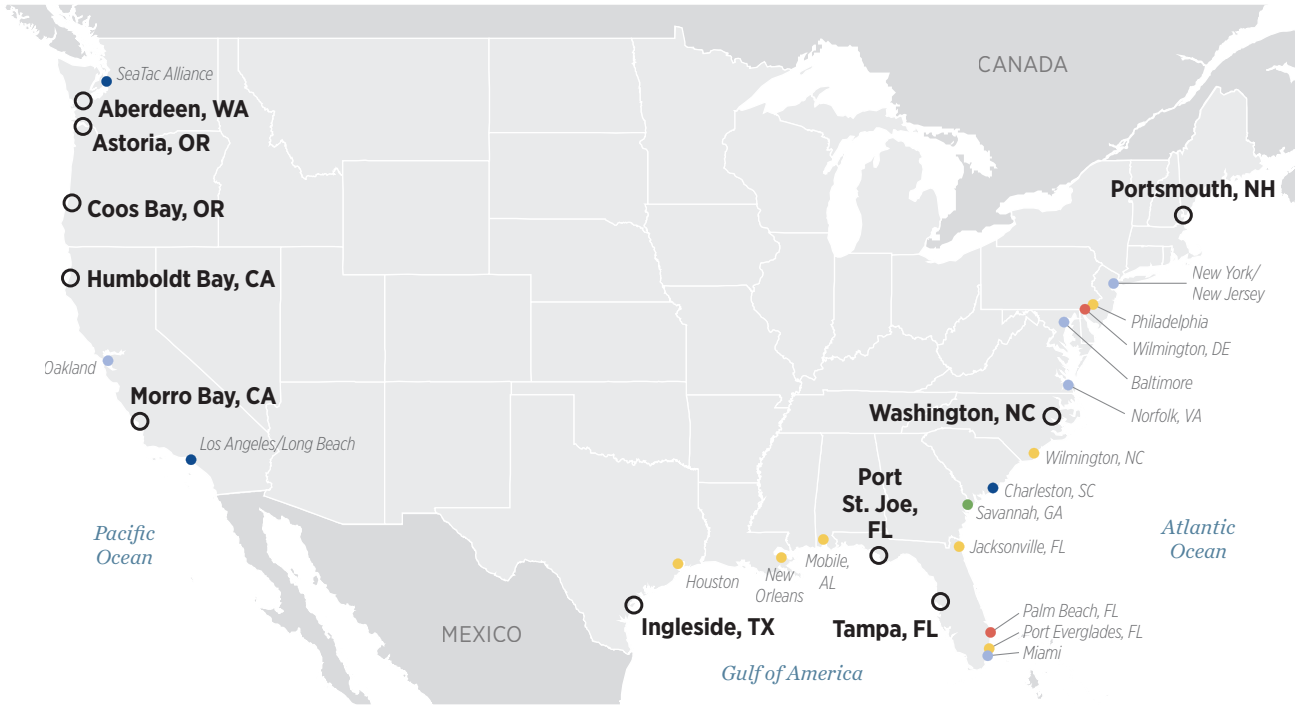
To ensure that American shipbuilding benefits from these developments, maritime incubators should be located near existing or planned greenfield shipyards. The goal, as indicated above, is to provide an environment that encourages creation of the technologies and workforce needed for a new multi-modalism while providing solutions to key near-term military operational problems and building the foundations for a modern American maritime revival.

The importance of nurturing America’s maritime innovation has been recognized both in legislation and in presidential executive orders. Congress has included maritime prosperity zones in the Building Ships in America Act,<sup>37</sup> and the concept is mirrored in President Trump’s Executive Order

MAP 2

Improving Logistics Resiliency with a New Intermodalism

Few U.S. ports can accommodate the largest shipping vessels. Under a new intermodalism approach that allows large ships to remain offshore while unloading cargo via a variety of feeder vessels and vertical lift options, smaller ports can be transformed at reduced costs into additional hubs for maritime trade.



CANDIDATES FOR NEW INTERMODALISM				EXISTING PORTS		
Location	CARGO MOVEMENT OPTIONS			Category	Capacity in TEU*	Mean Low Water Channel Depth, in Feet
	Feeder Vessel	Airport	In Port			
Aberdeen, WA	✓			● Panamax or less	4,200	<38
Astoria, OR	✓	✓	✓	● Panamax	4,500	39–40
Coos Bay, OR	✓	✓		● Post-Panamax I	6,000	40–45
Humboldt Bay, CA	✓	✓		● Post-Panamax II	8,000	45–48
Morro Bay, CA	✓			● New Panamax	12,000	48–50
Ingleside, TX	✓	✓	✓	● Ultra-Large	16,000	51+
Port St. Joe, FL	✓					
Tampa, FL	✓	✓	✓			
Washington, NC		✓				
Portsmouth, NH	✓	✓				

TEU refers to twenty-foot equivalent unit, which is a measure of volume in units of twenty-foot-long containers.  
**SOURCE:** Chart, “Channel Depth at Major North American Container Ports,” in Jean-Paul Rodrigue, *The Geography of Transport Systems*, 6th ed. (New York: Routledge, 2024), <https://transportgeography.org/contents/chapter6/port-terminals/channel-depth-ports-north-america/> (accessed July 21, 2025).

14269.<sup>38</sup> These actions encourage states to host and commercial entities to invest in maritime incubators as the centers for future maritime industrial activity.<sup>39</sup> Moreover, instead of only one maritime incubator, several regional maritime incubators should be established, each with a unique focus in the maritime industry tailored to host state's potential for maturing specific maritime capabilities.

Finally, it should be emphasized that a positive "Revolution in Shipping" vision can be an important safeguard against mission creep and diversion of resources away from the national maritime effort. Tentative steps were taken in late 2024 when the Maritime Administration partnered with the American Bureau of Shipping to establish the Center for Maritime Innovation, which is also included in the proposed Building Ships in America Act.<sup>40</sup> Whether this center will be adequately supported so that it can guide a national maritime effort across various industries and emerging technologies and build on congressional actions like the ADVANCE Act remains to be seen. Developing America's maritime comparative advantage is a generational endeavor, but the need for shipbuilding needs to be addressed—and addressed seriously—*now*.

**Build.** By 2022, backed by state subsidies with 53 percent of all compensated gross tonnage coming from state-owned shipyards, China had succeeded in dominating 49 percent of the global shipbuilding market.<sup>41</sup> Meanwhile, not a single American port ranks among the world's 50 best in terms of efficiency.<sup>42</sup>

America's national maritime rejuvenation will require action along three broad timelines: securing access to shipping in less than two years; modernizing and expanding shipping and shipbuilding capacities; and setting the conditions for greenfield ports and shipyards, leveraging fully the techniques made possible by the "Revolution in Shipping." Within these three broad areas, several specific actions should be pursued.

- **Secure shipping capacity.** Meeting the nation's need for assured shipping today would require obligations amounting to approximately 8 percent of the total shipping owned and operated by treaty allies with an interest in mitigating China's maritime dominance. As noted, this shipping could be secured by seeking revisions in existing security treaty obligations with nations like Japan and France. However, the fact that such assurances are never fool-proof makes domestically flagged and crewed ships as well as shipbuilding essential. Domestic shipbuilding will take a decade to deliver on need, but this can be mitigated somewhat by expanding the U.S.-flagged and U.S.-crewed fleet on foreign-built ships.

- **Fund American shipbuilding.** The proposed SHIPS for America Act of 2025 would begin an immediate course correction. A Maritime Security Trust Fund would impose fees and levies on hostile and unfair shipping entities to fund an American strategic commercial fleet.<sup>43</sup> This trust fund would partly underwrite the reconstitution of the fuel tankers, military cargo vessels, and undersea cable layers needed to secure the nation.

The act also proposes a forward-looking financing tool: a trust system that would impose levies on state-subsidized actors and entities of concern, notably China. The imposition of inflation-adjusted levies starting at \$1.25–\$5.00 per ton on state-subsidized ships and shipping entities of concern under the act is echoed in recent executive orders.<sup>44</sup> This would encourage allied nations to reflag ships and seek ever-increasing manufacturing inputs from the American maritime industry. Initially, more ships would conduct maintenance in American shipyards, and the resulting revenue would fund the expansion of shipyard capabilities and services to include greater shipbuilding capacity.

- **Establish a strategic commercial fleet.** As training incentives take hold, it is imperative that there be adequate shipping jobs available for these new merchant mariners and unlicensed crew. Too often, lack of lucrative at-sea employment causes merchant mariners to walk away from their certifications.<sup>45</sup> Buying ships on the open market is being pursued as a stop-gap measure, but this does not serve the larger goal of an American maritime revival.<sup>46</sup> Instead, adequate demand for domestic ship orders is needed to attract the necessary capital investments and workforce. The Building Ships in America Act addresses this need with a strategic commercial fleet that would grow to 250 ships over a decade and be involved in international trade—the type of ships the military and the nation’s industry need in a war.

As noted, to mitigate overreliance on hostile shipping, the nation needs approximately 1,300 ships—a goal that the strategic commercial fleet alone would not meet. The deficit in American shipping would be addressed initially with allied, U.S.-owned but foreign-flagged ships procured on the open market. The need for these non-U.S. ships will shrink as American shipbuilding grows, and the strategic commercial fleet can be understood as providing a demand to American shipyards to grow backlog orders and attract investment

for new designs incorporating the advances enabled by maritime innovation incubators.

Building this fleet initially will depend on financial input from Congress—specifically, an output capacity-based grant formula system modeled on reforms proposed for the defense industrial base. The principle is simple: The federal government should directly subsidize the fixed costs associated with maintaining and then growing strategic output capacity. A shipyard that could produce four vessels a year but received only two orders should receive a grant equal to the fixed cost of sustaining the additional capacity. As commercial orders rose, the grant would shrink; as orders fell, the grant would grow. Crucially, these grants would have to be based on performance. A shipbuilder that did not deliver on time or meet production benchmarks should lose eligibility for the next round of funding. This would ensure that the system rewards infrastructure and workforce investment for efficiency with good faith. The minimum output should be a surge-ready shipbuilding sector with the capacity to sustain a wartime economy and military. Additionally, as shipyards invest in increased shipbuilding capacity, the grant calculations would adjust as well, further incentivizing shipbuilding activity and capacity growth.

- **Incentivize investment in America’s maritime industry.**

Attracting and sustaining needed investments will require structural reforms in the tax code and favorable treatment of investments in the maritime industry. According to economic analyst Miles Pollard, the corporate income tax remains one of the most distortionary elements of U.S. economic policy, penalizing reinvestment, rewarding accounting gimmicks, and undermining the competitiveness of capital-intensive industries like shipbuilding.<sup>47</sup> A remedy for this that rewards maritime investment would be to replace the corporate income tax with a distributed profits tax for American port operators, shipbuilders, and shippers. A similar approach is already being used to great effect in Estonia, which is ranked 8th globally in The Heritage Foundation’s *2025 Index of Economic Freedom*.<sup>48</sup> Under a distributed profits tax, companies would be taxed only when profits are distributed to shareholders, not when they are reinvested in equipment, yards, or workforce development. This would neutralize anti-investment bias and reward productive behavior focused on modernizing and expanding maritime industrial capacity.



Such changes as these can incentivize current industry players, but attracting new maritime sector entrants and capital from further afield requires more. President Trump's demonstrated interest in revitalizing the nation's maritime industry has given some companies such as South Korea's Hanwha and France's CMA-CGA the confidence to invest in the U.S. However, triggering a cycle of innovation and industrial expansion calls for some version of a proven approach: special economic zones.<sup>49</sup>

- **Modernize and expand cargo handling, expand opportunities for American shipping, and increase shipbuilding capacities.** Among merchant mariners, there is a saying: "Cargo is king." It is shipping's reason for being, and improving the movement of cargo will be critical if the revival of American shipping is to be successful. Like shipyards, docks handling cargo will need capital investments to modernize and expand their workforces. Investments in promising smart port endeavors like the one being explored at Ponce in Puerto Rico that increase port productivity also increase demand for cargo handling and workforce.<sup>50</sup> These ports will require procurement of new non-Chinese ship-to-shore cranes, expanded port facilities, dredging for larger commercial ships, and warehousing, to name just a few critical investments. Aware of the cyber dangers of China-sourced ship-to-shore cranes, Representative Carlos Gimenez has proposed the Port Crane Security and Inspection Act of 2025.<sup>51</sup> Such measures, however, while helpful, are only a part of a larger need.

Providing incentives for maritime industrial activity (shipping and shipbuilding) is intended to attract investment in both existing and new greenfield maritime projects. These port and shipyard projects would add capacities and efficiencies that enhance America's maritime comparative advantage, in turn driving demand for American shipbuilding and shipping. A promising example that is just gaining traction is the California Forever project, which aims to turn fallow industrially viable waterfront into a major shipbuilding hub, potentially creating 53,000 new jobs in nominally industry-hostile California.<sup>52</sup>

One way to kick-start investments and the development cycle in such projects would be to create maritime prosperity zones modeled on

CHART 1


## Regulatory Costs in the Manufacturing Sector

COST PER EMPLOYEE FOR MANUFACTURING, IN 2023 DOLLARS

Type of Regulation	Total Cost per Employee, All Firms	Share of Total	
Environmental	\$13,425	54%	<div></div>
Economic*	\$10,178	41%	<div></div>
OSHHS**	\$1,040	4%	<div></div>
Tax Compliance	\$377	2%	<div></div>
All Federal Regulations	\$25,020		

\* Includes production, transport, credit, and labor regulations.  
\*\* Occupational safety and health regulations and homeland security regulations.  
**NOTE:** Figures have been adjusted for inflation.

**SOURCE:** Table 2, “Regulatory Costs in the Manufacturing Sector by Firm Size, 2012,” in W. Mark Crain and Nicole V. Crain, *The Cost of Federal Regulation to the U.S. Economy, Manufacturing and Small Business*, National Association of Manufacturers, released September 10, 2014, p. 5, <https://www.nam.org/wp-content/uploads/2019/05/Federal-Regulation-Full-Study.pdf> (accessed July 21, 2025).

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President Trump’s successful opportunity zones that waive capital gains taxes for land developers in disadvantaged communities. To attract maritime industrial activity, tailored regulatory relief for specific locations would be necessary. For example, relief from National Environmental Policy Act of 1969 (NEPA) requirements and state environmental regulations should take a “do no net harm” approach.<sup>53</sup> According to economist Peter St Onge, domestic regulations and restrictions (controlling for labor costs) render American shipping roughly 18 times more expensive than it should be. The overwhelming majority of those costs reside in onerous environmental regulations.<sup>54</sup> Each maritime prosperity zone would have to strike the right balance of regulatory relief and tax incentives, requiring states and the federal government to work together and rapidly identify the locations and scope of maritime industrial development. Conceived and implemented properly, these zones would attract more investment that grows maritime industrial activity without causing undue harm to the environment.

**Train.** Ironically, success in an American maritime revival's early stages could engender its very failure. As more people are encouraged to become merchant mariners to crew commercial ships or to be trained in the skills needed for shipyard work, they must have jobs waiting in their newly chosen fields. The return on investment in training and certifications could be as short as two years, necessitating near-term job creation at sea, in ports, and in shipyards. Because failing to do this would jeopardize the national maritime revival, the incentive to train a larger maritime workforce should be synchronized with the demand for this workforce. Despite its failures, the Jones Act provides some mechanisms for ensuring this needed synchronization, and the Maritime Administration and U.S. Coast Guard would play critical roles in getting this balance right in their execution of national maritime policies.

- **Change the Maritime Administration's institutional culture.**

MARAD runs several programs that are intended to ensure the health of America's maritime industrial sector. For example, cargo preference can ensure a minimal shipping demand for Jones Act-compliant ships but has proven that it cannot by itself sustain today's meager fleet.<sup>55</sup> Another program that could address port labor demand is MARAD's Port Infrastructure Development Program, which has provided \$2.25 billion over the five years from 2022 to 2026 to improve port operations.<sup>56</sup> Arguably, this is not enough to address the national need, but even these funds' adjudication is uncertain and take well over a year to be disbursed, rendering it largely ineffective to those who it is intended to benefit.<sup>57</sup> Compounding this problem is MARAD's 12.3 percent vacancy rate for an authorized staff of 941 full-time employees, and "the number of retirement-eligible staff is projected to increase to 43 percent by calendar year 2029."<sup>58</sup> All told, for MARAD to play an effective role in ushering in the needed revitalization of our water-fronts, it will need to refocus from management to an institutional culture of action in pursuit of maritime industrial growth.

- **Modernize oversight of obligated service and improve the certification process.** As the nation races to address its inadequate shipping needs, crews will be urgently needed, and this will require retaining and attracting merchant mariners to regain their credentials and re-enter the maritime marketplace. MARAD is working on a Mariner Workforce Strategic Plan to address the need to increase the opportunities for American mariners and reduce the currently

onerous qualification processes involved in their certification.<sup>59</sup> This plan must rely on the U.S. Coast Guard (USCG), which is responsible for enforcing the certification of merchant mariners within standards set by the U.S. government and the International Maritime Organization (IMO) International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW).<sup>60</sup> These international standards were implemented in January 1, 2017, but interpreting and applying them to U.S. needs has created confusion and, in many cases, repetition.<sup>61</sup> This places an extra burden on American merchant mariners, academies, and training centers.

The previously referenced Building Ships in America Act<sup>62</sup> and the Mariner Exam Modernization Act<sup>63</sup> would go a long way toward providing the tools and resources needed to address the issue of mariner certification. Success, however, would depend on how well MARAD and the USCG work together in executing this legislation.

- **Grow a modern merchant mariner force and resource the dormant U.S. Maritime Service.** Even as the nation nurtures a new American comparative maritime advantage, merchant mariners and shipyard workers will be needed now. Stipends for training in more advanced technical skills relevant to the maritime industry should therefore be offered. Promising candidates, to include those currently in the maritime industry, should be given assurance that, upon completion, students can return to their prior employment. Also needed are allowances to reward those who do enter the maritime industry with personal tax incentives and stipends for retaining maritime industrial skills.

Some of this is included in the proposed Building SHIPS for America Act of 2025.<sup>64</sup> There is a need to infuse American maritime education and industry with best practices and engineering processes from around the world, and the act would establish a new International Scholarship for Mariner and Naval Architecture focusing on graduate-level education.<sup>65</sup> In tandem with this, to bolster our own maritime education, which produces about a dozen American naval architects a year, options for allied nations to send instructors to American institutions and federal academies (i.e. U.S. Merchant Marine Academy, Naval Academy) should be pursued. Institutions like the U.S. Merchant Marine Academy must again lead the world in commercial maritime innovation as was the case with commercial nuclear propulsion in the 1950s.<sup>66</sup>

Finally, until there is a larger and viable American shipping industry, opportunities for gainful employment in the U.S. will be limited. Stipends should therefore be offered to American merchant mariners serving aboard friendly foreign-flagged ships to maintain relevant maritime certifications. Such American mariners would be obligated to serve on U.S. merchant vessels in time of war. Missing is a robust structure for overseeing and ensuring professional development for a growing number of American merchant mariners and unlicensed crews.

To foster a larger professional merchant marine, it will be necessary to resource the dormant U.S. Maritime Service. Authorized by Title 46 of the U.S. Code, the U.S. Maritime Service was established in 1938 to crew American commercial ships that sustained our allies and America in World War II.<sup>67</sup> The Service was dissolved in 1954 but remains in law today. Led by senior commissioned Merchant Marine officers familiar with the commercial and military aspects of shipping, the Service could lead the acquisition of needed shipping and crews for peacetime operations and commercial activity while being ready to provide full support for a wartime effort. Without such a uniformed service option, a third of graduates from the U.S. Merchant Marine Academy opt for commissions in other active-duty services.<sup>68</sup> Resurrection of the U.S. Maritime Service would start by addressing the Navy's need to fully crew its troubled Military Sealift Command (MSC).

- **Expand the capacity to train certified merchant mariners, unlicensed seafarers, and shipyard workers.** The need for mariners just to sustain today's too small Navy is dire. In 2024, the MSC announced that it was sidelining 17 ships because too few merchant mariners were available.<sup>69</sup> If the nation is to regain global maritime market share and a healthy maritime industrial base, it must expand existing merchant marine academies such as the U.S. Merchant Marine Academy to include state institutions that also train unlicensed crew. Again, Congress is beginning to address much of this, and states can also prioritize existing educational and technical training grants for special skills critical to shipbuilding, such as naval architecture and welding.

Moreover, in conjunction with innovation incubators, co-located training centers should provide cutting-edge education in industrial skills, advanced degrees and certifications for naval architects, and

advanced operational training relevant to the new multi-modalism (such as unmanned ship operations and advanced port operations). This effort would benefit from collaboration with existing trade schools and union-run maritime schools like Calhoon College in Maryland, which was established in 1966 as part of the Licensed Engineers Apprentice Program (LEAP) to address a critical shortage of marine engineers during the Vietnam War.<sup>70</sup> Today, Calhoon and similar institutions can play a critical role in the national maritime rejuvenation with updated curriculum, expanded student capacity, and the establishment of new schools as needed to support and leverage the maritime innovation incubators more effectively.

**Summary.** To crew today's Military Sealift Command naval logistics ships and commercial fleets, both certified mariners and unlicensed seafarers will be needed. This makes a review of onerous certification processes, with a particular focus on streamlining the International Maritime Organization's cumbersome training requirements, essential. At the same time, we must attract and retain American merchant mariners with favorable tax incentives, increase college stipends with longer obligated service requirements, and consider targeted personal subsidies.<sup>71</sup> There should be rewards for those who remain in the maritime sector and sustain U.S. Coast Guard mariner certifications.

Overall, the training line of effort encompasses three initiatives:

- Ensure that obligated maritime service is being met while enhancing efficiencies in the certification process to retain merchant mariners,
- Increase opportunities for career enhancing training and employment at-sea in concert with allied nations' shipping and shipbuilding industries, and
- Increase the capacity of maritime schools and expand naval architect academic programs while increasing collaboration with maritime innovation incubators to ensure that the revolution in shipping can be sustained well into the future.

## How to Begin America's Maritime Revival

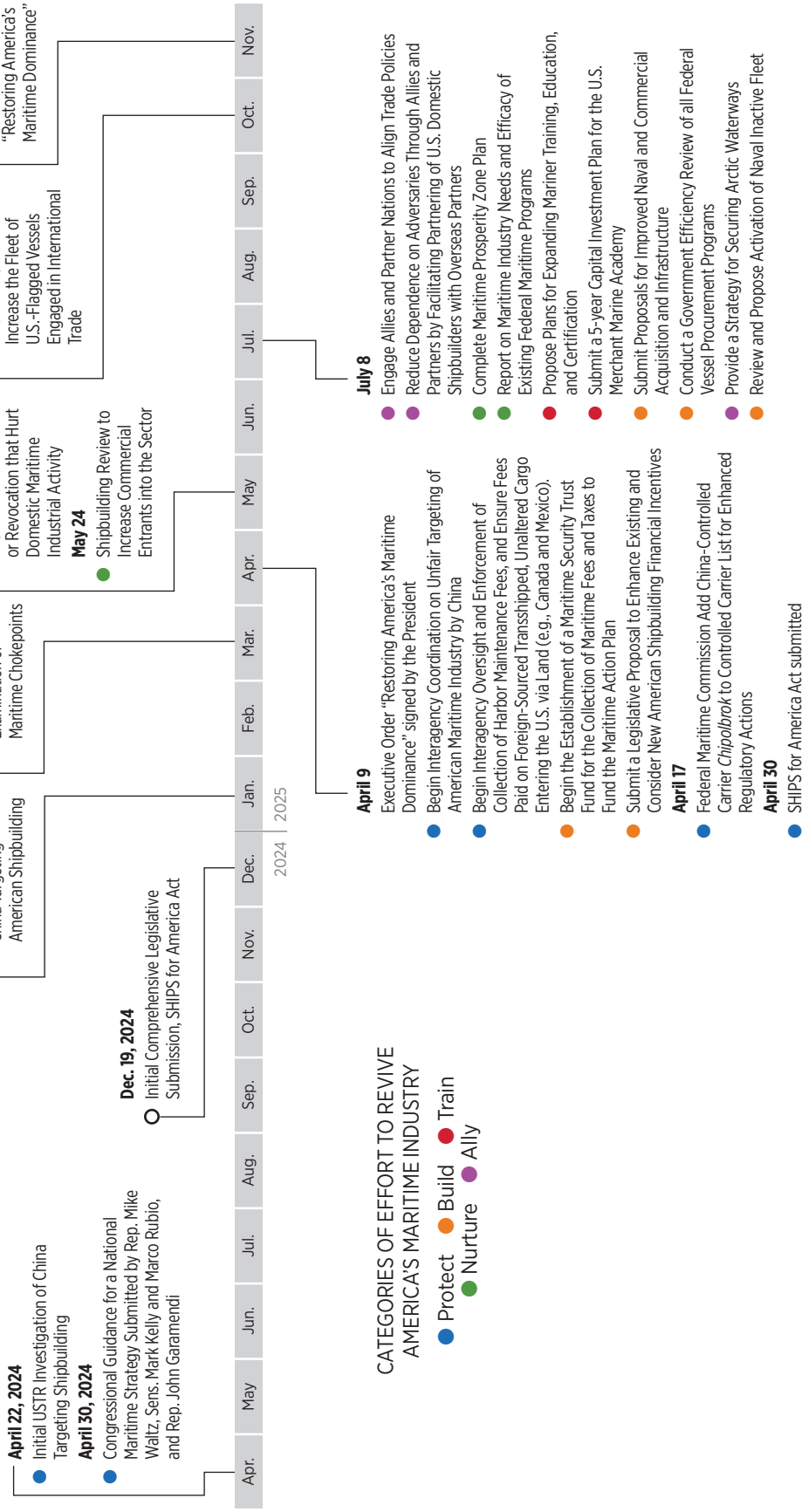
Getting a national maritime program of rejuvenation underway will require leadership informed by a vision of a new American



FIGURE 1

# Maritime Revival's Initial Effort Timeline and Executive Order Milestones

This timeline shows actions taken, ongoing, and planned per the President's executive orders to revive America's maritime industry.



SOURCE: Author's analysis.

maritime comparative advantage. As a critical first step, according to former National Security Council staffer William Cahill, “[a] successful U.S. maritime strategy must prioritize attracting capital and lowering regulatory burdens to amplify America’s technology and geography advantages.”<sup>72</sup>

Given the record of failed attempts and false starts to revive the nation’s maritime industry, it is clear that institutional change must be considered. Moreover, given the urgency of the need to ensure adequate shipping today while setting the stage for a revival of American maritime industrial strength, the following specific actions should be taken:

- **Name a Maritime Advisor to the President.** The President should not wait for the Building Ships in America Act to reach his desk and name a Maritime Security Advisor. Given the intertwined equities of economic and national security in a national maritime effort, the Maritime Advisor should be co-equal to the National Security Advisor and the Director of the National Economic Council. This could be done by reviving a reformulated maritime industrial team formally in the National Security Council. Building on the existing executive orders, the advisor’s first task would be to form an interagency framework for executing a national maritime action plan to be complete by the end of 2025 as stipulated in President Trump’s April 2025 executive order “Restoring America’s Maritime Dominance.”<sup>73</sup>

Regaining America’s global competitiveness in shipping and shipbuilding is a generational effort and will likewise require meeting current military needs and mitigating commercial shipping vulnerabilities. Such an endeavor is complex and requires coherent multiagency execution to be effective and timely, which underscores the importance of a special advisor to ensure that the President’s intentions are being implemented. To make his intentions clear, an associated updated Presidential directive is recommended like the National Security Directive (NSD-28) on Sealift signed by President George H. W. Bush in October 1989.<sup>74</sup>

- **Establish a Maritime Group of Nations.** The President should Establish a Maritime Group of Nations (MGN). The MGN would be an informal group whose purpose would be to improve the coordination of regulatory and commerce policies that facilitate development of

new multi-modalism capabilities and protect its members' collective maritime industrial interests. The MGN's initial meeting should include representatives from like-minded maritime nations and be held in the United States. (For a list of potential candidates, see Table 1.) The initial agenda could include ways to assure access to shipping in crisis and commonality in regulation of small nuclear reactors in commercial shipping.

- **Tailor regulations for maritime prosperity zones and maritime innovation incubators.** To attract and responsibly accelerate industrial activity at new shipping and shipbuilding sites, a review of pertinent regulations such as NEPA will be needed, and exceptions will need to be proposed based on which specific types of maritime industrial activity are most appropriate at specific locations. These reviews should be led by the Environmental Protection Agency with state governors to tailor regulatory frameworks that would be appropriate within the geographic confines of agreed maritime prosperity zones and maritime innovation incubators.
- **Reorganize disparate agencies into a Maritime Department.** With the consent of Congress, the President should establish a Maritime Department drawing on existing staffs to support a new Maritime Secretary. Today, the agencies responsible for executing the national maritime program are disconnected and insufficiently resourced in their parent departments. The four principal maritime agencies (MARAD, USCG, National Oceanic and Atmospheric Administration, and FMC) should therefore be merged into a single Maritime Department headed by a Cabinet secretary. While these four agencies must adapt and grow to execute a national maritime revival, their functions and staff at first would remain intact as the secretariat of the Maritime Department takes on overall policy planning, departmental budgeting, and legislative affairs. Finally, given that the Military Sealift Command relies on civilian mariners to crew its logistics ships, consideration should be given to moving this agency within MARAD.

## Conclusion

While it might seem counterintuitive given the growth of trade in recent years, the fact is that global shipbuilding capacity has declined by almost

40 percent in tonnage since a peak in 2011.<sup>75</sup> At the same time, the global maritime industry is on the cusp of a reversal in demand for ships. It is expected that, to feed modern industry's growing appetite for rare earth elements and energy, demand for bulk cargo will surge by upwards of 50 percent over today's capacity and that shipping to move energy will nearly double by the middle of the 2030s.<sup>76</sup> Should these predictions prove true, the demand for new shipbuilding will be increase accordingly.

This situation presents the U.S. with an opportunity to develop itself as a major commercial maritime force founded on revolutionary techniques and designs in shipbuilding and as a leader in implementing a novel approach to multi-modal shipping. Seizing this opportunity will require investing in the future of shipping and shipbuilding today and setting the conditions for a revolution in shipping that can endow America with first mover advantages. At the same time, clear and present dangers warrant action *now* to secure shipping in order to mitigate today's national security risks.

America needs a national program of maritime rejuvenation that is founded on the goal of nurturing an enduring American comparative advantage in the global maritime marketplace. Existing decades-old approaches have not paced the threat—the state-directed Goliath that is China's maritime industry. Nor have conventional approaches produced a competitive American maritime industry. It is time to regain the mantle of global maritime leader, which can be done only by creating a favorable business environment at home in concert with like-minded allies guided by national leadership informed by a vision of a new multi-modalism.

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