

Directions for ROK – U.S. Naval Shipbuilding and MRO Cooperation¹

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The main catalyst that enabled the conclusion of the tariff negotiations between the South Korea and the U.S. in July 2025 was undoubtedly MASGA, or Make American Shipbuilding Great Again. MASGA, a shipbuilding cooperation model proposed by South Korea to the U.S., is centered on South Korea creating a fund worth approximately 210 trillion KRW (150 billion USD) to support the entry of Korean shipbuilders into the U.S market and help rebuild the U.S. shipbuilding industry. Since its announcement, discussions have taken place to expand cooperation in shipbuilding as well as maintenance, repair, and overhaul (MRO) at not only the government-level but also at the working-level between officials from the ROK's Defense Acquisition Program Administration (DAPA), the U.S Department of Defense(War), and the Department of the Navy.

The remaining task for South Korea is to formulate a strategy that develops MASGA into a cooperation model that aligns with the national interests of both Seoul and Washington. In this vein, what preparations are required in order to ensure that MASGA leads to mutually beneficial outcomes not only in the shipbuilding sector but also in diplomacy, security, and economic relations between the two countries? This article provides an overview of the current state of South Korea's shipbuilding industry and proposes suggestions for ROK-U.S. cooperation in naval ship construction and MRO.

¹ This article is based on the author's contribution to the Center for Strategic and International Studies (CSIS), titled "Don't Miss the Boat: Considerations for U.S.–South Korea Maritime Cooperation", June 12, 2025.

■ Strengths of Korea’s Shipbuilding Industry and Searching for Drivers of Growth

South Korea is a global shipbuilding powerhouse, ranked second in global market share for new commercial ship orders and producing more than 220 ships annually, as of 2024. Korean shipbuilders have also accumulated substantial achievements in building specialized vessels, including warships such as destroyers and submarines, enabling them to win successive MRO contracts for U.S. naval vessels in recent years.

Furthermore, Korean shipbuilders have also strived to adopt advanced technologies such as modular shipbuilding and automated welding systems. They have also actively transferred technology to purchasing countries. For instance, HD Hyundai Heavy Industries adopted a ‘joint construction’ model with Peru’s state-owned naval defense firm SIMA PERU when it signed a shipbuilding contract with Peru in 2024. Under the agreement, HD Hyundai will provide ship design, equipment, and technical support, while SIMA PERU carries out the final assembly locally.

Despite these strengths, however, South Korea’s shipbuilding industry faces challenges both at home and abroad. The low-cost strategy of Chinese companies, made possible by the Chinese government’s aggressive subsidy policies as well as dual-use production of commercial and military vessels, has steadily eroded South Korea’s global market share. Domestically, the industry struggles with chronic shortages of skilled labor and supply chain problems regarding components.

In response, Korean shipbuilders are seeking new growth engines through cooperation with the U.S. in naval shipbuilding and MRO.² However, cooperation in shipbuilding is far more complex than in MRO due to closely intertwined political, security, and economic considerations. Concerns persist in the U.S. regarding potential security risks and leakage of advanced technologies when cooperating with foreign countries. The rationale of protecting shipbuilding and maritime industries and resulting regulations, which have long been blamed for the decline of the U.S. shipbuilding industry, also remain in force. Given these constraints, Korean shipbuilders are attempting to expand the scope of ROK-U.S. cooperation to include the construction of U.S. naval vessels through various methods, such as joint shipbuilding and the acquisition of U.S. shipyards.³

² In 2024, Hanwha Ocean performed regular overhaul work on two support ships belonging to the U.S. 7th Fleet—the dry cargo/ammunition ship *Wally Schirra* and the fleet replenishment oiler *Yukon*. In 2025, Hanwha Ocean and HD Hyundai Heavy Industries won overhaul contracts for the *Charles Drew* and the *Alan Shepard*. Meanwhile, Samsung Heavy Industries signed an MOU with U.S.-based MRO specialist Vigor Marine Group to enhance MRO cooperation.

³ Hanwha Ocean has acquired the Philly Shipyard in the U.S., a commercial shipbuilding yard that is seeking to expand into naval vessel construction. In addition, it is reportedly pursuing an increased stake after securing a 9.9 percent ownership share in Australia’s Austal, which operates a shipyard in the United States capable of

■ Directions for ROK-US Cooperation in Shipbuilding and MRO

1. Establishing a Shared Understanding for Comprehensive Cooperation and Pursuing Legal Reform

Cooperation between South Korea and the U.S. in the naval domain is expected to develop in two key areas: MRO and shipbuilding. In order to persuade the US to proactively broaden the scope of cooperation, South Korea should convince the United States that isolated and intermittent cooperation alone will be insufficient in maintaining the competitiveness of Korean shipbuilders, and that this will ultimately hinder U.S. efforts to rebuild its shipbuilding industry and strengthen naval power. At the same time, South Korea should successfully complete ongoing MRO projects for U.S. support vessels to build trust and use these projects as a springboard for further cooperation.

To consolidate a stable long-term cooperative relationship, shifts in U.S. attitudes should lead to policy and legal reforms. In particular, it is essential to revise the *Byrnes–Tollefson Amendment* and the *Maintenance of Naval Vessels* regulations that directly restrict shipbuilding and MRO cooperation. There have recently been promising efforts to lessen the restrictions of the Byrnes–Tollefson Amendment. In February 2025, Republican Senators Mike Lee (Utah) and John Curtis (Utah) introduced the Ensuring Naval Readiness Act and the Ensuring Coast Guard Readiness Act, which would respectively “allow the option to construct naval and coast guard vessels in shipyards of NATO member countries or allies such as the ROK.”⁴ In addition, the U.S. has reportedly conveyed its intent to possibly circumvent the Byrnes–Tollefson Amendment through executive orders.⁵ However, given that it is unlikely that these Acts will be approved in the immediate future, South Korea should continue monitoring the progress of these bills that are under review at the Senate as of December 2025. At the same time, South Korea should also urge the U.S. to consider temporary waivers or bypass mechanisms through executive orders and the National Defense Authorization Act (NDAA).

Meanwhile, the Maintenance of Naval Vessels provisions, which prohibit U.S. naval vessels based in the United States or Guam from undergoing MRO at shipyards outside the United States, constrains

constructing naval vessels. Meanwhile, HD Hyundai Heavy Industries has signed a memorandum of understanding (MOU) with Huntington Ingalls Industries, the largest naval shipbuilder in the U.S., to cooperate in ship construction.

⁴ The main purpose of these bills is to provide exemptions that allow the construction of U.S. navy/coast guard vessels at foreign shipyards. However, the bills stipulate that eligible shipyards must be located in NATO member states or treaty allies in the Indo-Pacific, and that the cost of construction must be lower than at US shipyards. These bills are currently under Senate review.

⁵ Hyoju Sohn, Hoonsang Park, “Paths opening for U.S. Naval Ships to be Built at South Korean Shipyards (in Korean),” *Dongailbo*, August 28, 2025,

the scope of ROK-U.S. cooperation and thus needs to be revised.⁶ Furthermore, even when MRO activities are carried out at U.S. shipyards at which South Korean companies have invested, such work may be performed by foreign personnel only under highly exceptional circumstances.⁷ Therefore, efforts are necessary to revise these restrictions in order to enable broader and broader ROK-U.S. cooperation in the MRO sector.

In addition, changes should be encouraged regarding other legal and regulatory frameworks that limit stable cooperation in the naval sector between the two countries. This includes legislation such as the Buy American Act (BAA) related to supply chains and the International Traffic in Arms Regulations that restricts exports,⁸ as well as 10 USC. §2466 (the so-called '50:50 Rule') that is a DoD restriction regulating maintenance operations. Specifically, while the BAA is expected to constitute a major obstacle to shipbuilding, it may be partially circumvented through the conclusion of a Reciprocal Defense Procurement Agreement (RDP-A), which is currently being discussed by the South Korea and the U.S.⁹ Nevertheless, it has been reported that exemptions granted to participating countries are often not recognized or are actively opposed by U.S. program offices, members of Congress, or the executive branch.¹⁰ As such, South Korea should urge the US government to educate and improve

⁶ In the case of the U.S. Seventh Fleet, whose homeport is located in Japan, a substantial portion of MRO activities has been conducted in Japan, South Korea, and Singapore. However, as of 2024, among the 295 total numbers of U.S. naval vessels only approximately 40 are homeported outside the US. Consequently, this means that MRO for the vast majority of U.S. naval vessels must ultimately be performed at shipyards within the U.S.

⁷ So-young Lee, "U.S. Legal Restrictions on Naval Vessel MRO and the Prospects for South Korea's Entry into the MRO Market (in Korean)," *Defense & Technology* no. 553 (March 2025), pp. 122-129.

⁸ For Korean companies to enter U.S. naval shipbuilding projects, it is necessary not only to address shipbuilding protection statutes but also to identify ways to navigate US federal and defense industrial protection regulations. Relevant regulatory regimes include domestic preference requirements (*Buy American Act* and the *Berry Amendment*), technology transfer and leakage prevention measures (*International Traffic in Arms Regulations*, ITAR), physical access restrictions (Facility Security Clearance and Personnel Security Clearance), and information control provisions (*Bayh-Dole Act*). Park, Joon-soo et al. *Enhancing ROK-U.S. Shipbuilding Cooperation: Focusing on Institutional Cooperation in the Naval Vessel Sector* (in Korean) (Seoul: Korea Institute for Defense Analyses (KIDA), 2025 (forthcoming)).

⁹ The conclusion of an RDP-A could serve as a catalyst for expanding shipbuilding cooperation. For example, in the case of Australia—which has concluded an RDP Memorandum of Understanding with the U.S.—products manufactured by the U.S. subsidiary of Austal are recognized as U.S.-origin and U.S.-manufactured, enabling the exclusion or waiver of higher standards or certain international regulations. However, in cases involving modular construction approaches or cooperation through direct procurement, additional waiver measures may be required, and the absence of an RDP-A could make such exemptions significantly more difficult to obtain. Gregory Sanders, "Exploring the Potential of an RDP-A for ROK-U.S. Cooperation in 2025 and Beyond," CSIS, November 15, 2024.

¹⁰ Audrey Aldisert and Cynthia R. Cook, "Improving Arms Sales, Technology Transfer, and Defense Industrial Cooperation with Allies and Partners," CSIS, June 2025.

understanding of these mechanisms. Furthermore, given the current condition of U.S. naval vessels, it is necessary to assess whether the '50:50 Rule' imposes undue constraints and if so, whether viable workarounds should be considered.¹¹

Above all, close and sustained attention to ITAR is essential for comprehensive ROK-U.S. cooperation. A study by CSIS notes that ship design falls under ITAR regulation, suggesting that additional ITAR exemptions may be required for communication between the military and private companies in order to comply with the unique standards and procedures of the U.S. Navy.¹² Another study¹³ confirms that even countries that have concluded RDP agreements with the U.S. continue to perceive ITAR as the most significant obstacle to defense industrial cooperation. Moreover, based on Australia's experience of remaining excluded from exemption regarding sensitive military technologies despite membership in AUKUS,¹⁴ South Korea should pursue a multifaceted approach to ease ITAR constraints, in addition to exploring participation in AUKUS Pillar II.

2. Establishing Domestic and International Cooperation Frameworks

At present, discussions involving relevant institutions from both countries tend to be conducted in a somewhat fragmented manner. Reflecting the structural separation within the ROK military between acquisition on the one hand and operations and maintenance on the other, it is necessary to seize this opportunity and establish a comprehensive framework for ROK-U.S. cooperation in the naval vessel sector. To ensure integrated and efficient cooperation at the government-level while promoting continuous progress, there needs to be a multi-layered domestic and international cooperation structure involving personnel from relevant institutions, as illustrated in <Figure 1>.

Under this framework, a planning team based in both South Korea and the U.S. would first convey issues arising during project implementation to a domestic consultative body for deliberation. The outcomes of these consultations would then be relayed back to the planning team for execution on the ground. Major decision-making issues would be discussed at a ROK-U.S. Naval Shipbuilding and MRO Consultative Group, composed of division director-level officials, with matters requiring higher-level decisions being elevated to a senior consultative mechanism. The purpose of establishing these new

¹¹ The "50:50 Rule," designed to preserve military maintenance capabilities, limits the proportion of depot-level maintenance funding that may be outsourced by the DoD or military-related agencies to no more than 50 percent.

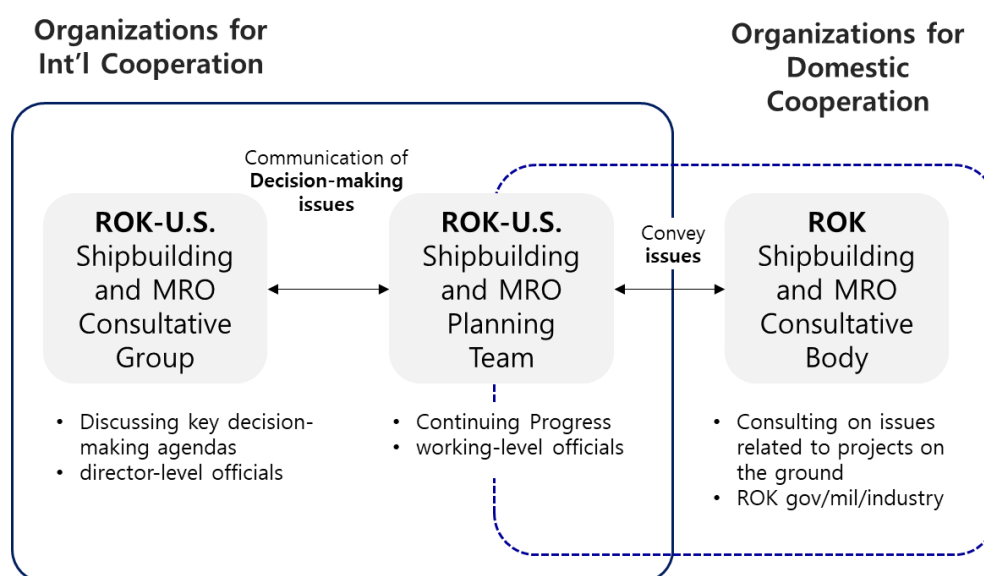
¹² Henry Carroll and Cynthia R. Cook, "Identifying Pathways for US Shipbuilding Cooperation with Northeast Asian Allies," CSIS, May 15, 2025.

¹³ Aldisert and Cook, op. cit.

¹⁴ Jiwoo Lim, "U.S. Expands Military Exports to AUKUS Allies UK and Australia, A Move to Counter China (in Korean)," *Yonhap News*, August 16, 2024

consultative bodies is to facilitate effective information sharing among South Korea and the U.S., as well as among the ROK Ministry of National Defense (MND), the DAPA, the armed forces, and industry. Additionally, it is intended also to enable continuous and substantive discussions that may be constrained when addressed solely as agenda items within existing consultative mechanisms. In particular, a domestic cooperation framework is expected to enable more practical and productive discussions given that the U.S. is considering a diverse range of options involving the South Korean military and industry for cooperation.

Figure 1. Proposal for Establishing a Cooperative Organization for Shipbuilding and MRO



Finally, given the multitude of unresolved challenges facing ROK-U.S. shipbuilding cooperation—including the need to improve mutual perceptions and to revise restrictive legal and regulatory frameworks—the establishment of a high-level consultative body between the two countries is essential.¹⁵ The role of this high-level mechanism is to develop concrete cooperation measures that are mutually beneficial while maintaining a balanced consideration of diplomatic, security, and industrial factors. Domestically, it should also serve to coordinate relationships among relevant stakeholders and to lead whole-of-government cooperation across ministries and agencies.

¹⁵ At the ROK-U.S. summit held in October 2025, the two governments agreed to establish a ROK-U.S. Shipbuilding Cooperation Consultative Body under the National Security Council (NSC).

3. Calling for Operational and Contractual Efforts to Secure Clear Demand Signals

The US DoD (DoW) has emphasized that ‘providing clear demand signals is crucial to incentivize active participation and investment from industry.’¹⁶ Shipbuilding especially requires stable and predictable demand in order to sustain critical infrastructure such as dry docks, skilled labor, and supply chains. In this context, the South Korean government should urge the U.S. Navy to pursue operational and contractual improvements to facilitate cooperation in ship construction and MRO. First, from an operational perspective, the U.S. Navy should be encouraged to share annual ship maintenance schedules with shipbuilders in advance, thereby clarifying the scope of anticipated future cooperative tasks. This would enable firms to develop shipyard operation plans in a proactive and efficient manner.

Next, from a contractual perspective, South Korea should urge the U.S. to allow multi-year contracts covering multiple vessels, rather than definitive fixed-price contracts for individual maintenance tasks.¹⁷ This approach will not only create an environment conducive to flexible infrastructure utilization by providing clearer demand signals, but can also encourage additional investment aimed at improving productivity. As an initial step to this end, South Korea could propose that the U.S. Navy consolidate MRO contracts for multiple vessels into a single contract. Moreover, given the frequent early retirement of vessels originally scheduled for maintenance, securing multi-year contracts and integrating MRO into large-scale package contracts is essential for the Korean shipbuilding industry. Through integrated contracts, a flexible pipeline can be established, mitigating the risks borne by firms in response to planning changes, which in turn will improve the efficiency of facility and workforce utilization and ultimately enable more timely maintenance of U.S. naval vessels.

In the medium term, based on the demonstration of superior MRO capabilities and through temporary workarounds for shipbuilding, contract negotiations could be pursued to encompass both new vessel construction—such as auxiliary and support ships—and MRO activities, or to integrate ship construction with post-delivery logistics support. Over the longer term, as major issues related to new ship construction (e.g., political agreements, legal amendments, and coordination between acquisition and sustainment budgets) are resolved, contracts could be structured to integrate ship construction and MRO into a single package. Throughout this process, it is essential to recognize that ROK-U.S. shipbuilding cooperation should be oriented toward a long-term partnership rather than short-term engagement.

¹⁶ OASD(S), U.S. Department of Defense, *2024 Regional Sustainment Framework*.

¹⁷ Michael Roberts and Bryan Clark, “Shoring Up the Foundation: Affordable Approaches to Improve U.S. and Allied Shipbuilding and Ship Repair,” Hudson Institute, December 23, 2024.

4. Exploring Areas of Cooperation: Identifying Common Systems

Above all, South Korea and the U.S. must make concerted efforts to identify common components, equipment, and systems across their respective naval vessels. ROK Navy ships already incorporate numerous components that are either common with, or interoperable with, those of the U.S. Navy.¹⁸

In this regard, South Korea may draw lessons from Australia's experience, which has attempted to expand the scope of applicable weapon systems and components while undergoing a pilot MRO cooperation program in the aviation sector with the U.S.¹⁹ In order to identify common core components across their weapon systems, the U.S. and Australia analyzed valid Foreign Military Sales (FMS) cases between the two countries and developed guidelines to assess relevant capabilities. Through this process, the U.S. and Australia ultimately analyzed repair capacities for each identified component to determine repair methods. Drawing on this approach, relevant institutions in South Korea and the United States could review applicable FMS cases between the two countries to identify potential areas of cooperation, and consequently conduct a comprehensive assessment of the infrastructure required to produce and maintain those components, including facilities, equipment, and workforce.

Existing or planned MRO projects for U.S. naval vessels may also contribute to the identification of common systems. Such efforts would help define the scope and direction of future cooperation in the naval vessel sector. Moreover, by reminding the U.S. of the existing record of advanced technology sharing and system commonality between the two countries, these efforts may help alleviate U.S. concerns regarding technology leakage and security risks.

* This article is an abridged and translated version of the "Directions for ROK – U.S. Naval Shipbuilding and MRO Cooperation" published in *Defense Issue & Analyses*, November 24, 2025. It is the author's opinion and does not represent the official position of the Korean Institute for Defense Analyses.

¹⁸ For example, the next-generation Aegis destroyer ROKS Jeongjo the Great, delivered to the ROK Navy by HD Hyundai Heavy Industries in 2024, is reportedly based on the U.S. Navy's DDG-51 Arleigh Burke-class design. The vessel is powered by U.S.-manufactured General Electric gas turbines and is equipped with a wide range of U.S.-origin systems, including Lockheed Martin's Aegis Combat System and AN/SPY-1D radar, RTX's Phalanx Close-In Weapon System, AN/SPG-62 fire control radar, and U.S.-manufactured missiles. In addition, HD Hyundai Heavy Industries is known to be conducting maintenance on certain ROK Navy vessels using parts and equipment supplied by the U.S. through Foreign Military Sales (FMS).

¹⁹ Kim Jin-ho et al., "Directions for the Development of Defense MRO in Response to the US RSF Strategy (in Korean)," *Defense Issues & Analyses*, no. 2014 (Korea Institute for Defense Analyses (KIDA), October 28, 2024).