

How Maritime Vision 2030 is steering India's shipbuilding industry, explains Vivek Merchant | EXCLUSIVE

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Updated Nov 8, 2024 13:09 IST



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Historically, shipbuilding sectors in Japan, Korea, and China have enjoyed cost advantages through a combination of government subsidies, low-interest financing, tax incentives, and direct bailouts. (Image: Swan's Pipavav Shipyard/ETNOW.in)

Indian shipbuilding sector needs to bridge the technology gap and strengthen [infrastructure](#) development initiatives. Speaking to [ETNOW.in](#), Vivek Merchant - Director, of Swan Group Shipyard Division shares his insights on the [Maritime Vision 2030](#) and the Indian [Shipping industry](#).

What key technological upgrades and infrastructure improvements are required to make India's shipbuilding and shipping sector future-ready, particularly to compete with global players in offshore and commercial vessels?

Leading shipbuilding nations such as Japan, Korea, and China have maintained a competitive advantage due to continuous investments in advanced technologies such as automation and digitization, as well as infrastructural upgrades to develop cutting-edge facilities. To capture the emerging opportunities and growth potential, the Indian shipbuilding sector needs to bridge the technology gap and strengthen infrastructure development initiatives. Key areas of focus could include:

Adoption of Green Technologies: As the world moves towards green shipping, Indian shipyards must adopt eco-friendly technologies, such as:

- Energy-efficient designs to reduce fuel consumption and emissions.
- Emission control technologies, including scrubbers and ballast water treatment systems.
- Alternative fuels (e.g., methanol, ammonia, and hydrogen) to help reach net-zero carbon emissions in shipping.

Digital Shipbuilding and Automation: Indian shipyards need to actively integrate digital technologies, including:

- Automation in fabrication and assembly processes to improve precision and efficiency, along with vessel navigation and port calls for the new build of autonomous vessels.
- 3D modeling and simulation tools for ship design and project planning, reducing errors and lead times.
- Robotics for welding, painting, and other labor-intensive tasks.
- Internet of Things (IoT) for live emissions monitoring, real time traceability, dynamic energy management, etc.
- Artificial Intelligence (AI) for predictive maintenance and fuel optimization, among others.

Improved adoption and usage of new-age manufacturing techniques and materials such as:

- **Additive manufacturing:** Significant application in odd sizes and spare parts. It also presents use cases in manufacturing one-off equipment. For example, Damen built a propeller through 3D printing.
- Lightweight aluminum and composite walls can lead to weight savings of up to 30%, leading to reduced fuel consumption. Other examples of low-carbon materials for new ships include lightweight high-tensile steel, reinforced polymers (FRP) composite structures, non-metallic lightweight structures, and green steel.

For India's shipbuilding sector and Pipavav Shipyard to be future-ready and competitive on a global scale, it is imperative to focus on adopting green technologies, integrating automation and digital shipbuilding tools, and using advanced manufacturing techniques. These advancements will enhance productivity, improve environmental sustainability, and enable Pipavav as well as other Indian shipyards to close the technology gap with leading shipbuilding nations.

Can you elaborate on the cost advantages India offers, particularly in terms of labor costs, compared to countries like China, the Philippines, Korea, and Japan?

Historically, shipbuilding sectors in Japan, Korea, and China have enjoyed cost advantages through a combination of government subsidies, low-interest financing, tax incentives, and direct bailouts. For example, in South Korea, Export Credit Agencies (ECA) provided shipbuilding financing through 2 state-owned export credit agencies namely, K-Sure and Export-Import Bank of Korea. This level of government support has been a key factor in maintaining their dominance in the global shipbuilding market.

However, India is increasingly becoming a viable option for shipowners who need timely, efficient, and cost-effective shipbuilding services. This is evident from the current orderbook of 75+ export vessels being built across shipyards.

India continues to provide a cost-effective labor force, with labor rates significantly lower than those in the Philippines, Korea, and Japan—by as much as 2x to 4x. India also benefits from a vast pool of skilled and semi-skilled labor due to its large population and growing technical education sector.

The Indian Government, amongst other incentives, is actively supporting this growth with the Shipbuilding Financial Assistance Policy (SBFAP). SBFAP offers up to 14% of the shipbuilding contract/fair price as financial assistance in FY24-25 and 11% in FY25-26, with higher financial assistance for specialized vessels such as wind farm installation vessels. The government is also evaluating revising the same as the current policy expires in 2026.

The proposed development of maritime clusters in India as part of [Maritime India Vision 2030](#) will also attract several equipment OEMs to establish manufacturing facilities that can serve both Indian and Global markets. This will boost the supply chain efficiency and further help manage costs for Indian shipbuilders. Additionally, a Maritime Development Fund proposed by India will potentially offer Indian shipyards access to low-cost, long-term financing, which is critical in an industry where capital requirements are high, and payback periods can be long.

Additionally, Indian shipyards like Pipavav located in Special Economic Zones (SEZ) also enjoy additional advantages, including exemption from duties and GST, which help reduce working capital requirements and finance costs.

In conclusion, while costs are important in determining globally competitive prices, India should also focus on high quality production, a skilled workforce, and precision and complex designs, which will attract clients seeking reliable, long-lasting vessels that meet stringent regulatory requirements.

Maritime Vision 2030 is a key policy initiative for India's shipbuilding industry. How are government policies, particularly under this vision, shaping the future of the sector and enhancing India's position in the global market?

Maritime India Vision 2030, published by the Hon'ble Prime Minister in 2019, envisions India as one of the Top 10 Shipbuilding and Ship Repair nations. To achieve this vision, India's share of the Global Shipbuilding market needs to increase multi-fold from the current levels of sub-1%.

The targets set under MIV 2030 include:

1. Gross tonnage of ships built in India to increase from 27k GT to 500k GT
2. Size of the Indian ship repair industry to increase from 3.5-4k Cr to 12-15k Cr.
3. Gross tonnage of scrap through ship recycling increased from 6.4 Mn GT to 54 Mn GT.

Key initiatives under MIV 2030 that will shape the future of the sector are as follows:

Channelizing domestic demand for Indian Shipbuilding by leveraging Atmanirbhar PPP provisions and RoFR rules efficiently is estimated to add INR 12k+ Cr. to GDP and 50k+ employment over 2020-25.

1. Developing a common platform for ancillaries: Creating a shared platform for ancillary manufacturers to showcase products will streamline access to local components, strengthen the domestic supply chain, and reduce reliance on imports for Indian shipbuilding, thus enhancing efficiency and cost competitiveness.
2. Creating a common database of standard-vessel basic designs: Establishing a database of pre-approved vessel designs by the Indian Register of Shipping (IRS) will drive standardization, simplify the design process, reduce lead times, and leverage economies of scale, resulting in lower costs and faster production cycles.
3. Development of maritime clusters: The geographic concentrations of shipyards, suppliers, service providers, and educational institutions will enable better collaboration and coordination among industry players, increase efficiency, and attract foreign investment.
4. Channelizing domestic demand for Indian Ship repair: Leveraging Atmanirbhar Bharat's PPP provisions and RoFR rules will prioritize Indian shipyards for repair contracts. This will have an estimated INR 4-5k Cr. potential cumulative impact to GDP over 2020-25 and an additional annual employment potential of 30-35k.
5. Enhancing ship repair yard capacity: India's location along key international shipping routes will favor it to become a global hub for ship repair and maintenance, particularly in regions like the Andaman & Nicobar Islands and Lakshadweep. Further, easing Free Trade Depots norms and the development of floating drydocks will help improve the turnaround time, which is the most crucial for commercial vessels.
6. Developing Centers of Excellence (CoE) for Ship repair in India: This will promote collaborations with global institutions and investments in training programs for advanced manufacturing and repair techniques.

If implemented meticulously, MIV 2030 will be a needle mover for the shipbuilding and repair sectors by focusing on enhancing domestic demand, developing infrastructure and clusters, promoting sustainability, and fostering collaboration to drive growth. The resurgence of large private shipyards like Pipavav will only help in bolstering the progress towards the achievement of MIV 2030.

Pipavav's proximity to Europe is cited as a competitive advantage for offshore and commercial vessel markets. How does this geographic positioning reduce transportation costs and boost competitiveness for ship owners and operators?

Pipavav shipyard is ideally located to access global trade routes connecting to the USA, EU, China, Korea, Gulf, and Africa. Its proximity to one of the world's busiest maritime hubs in Dubai is an added advantage.

Situated in India's manufacturing hub with 38,000+ operational factories and with access to ~6Mn+ industrial laborers in Gujarat, Pipavav shipyard is well placed compared to its Indian peers.

The yard's proximity to Europe is beneficial for three key reasons when compared to shipyards further east in China, Japan and Korea:

- **Reduced costs:** Pipavav shipyard is well linked with global shipping routes leading to Europe, the Middle East, and Africa. Shorter voyages result in lower fuel consumption and operational costs, which allow competitive pricing.
- **Strategic hub for Offshore Energy markets:** Pipavav's proximity to the Middle East, one of the largest offshore oil and gas markets, makes it an attractive option for building and servicing offshore support vessels (OSVs) and other specialized vessels for European companies operating in the Middle East.
- **Better turnaround time for repairs:** Given access to the robust industrial ecosystem, availability of spare parts, skilled labor, and equipment will help optimize turnaround times for ship repairs.

Pipavav Shipyard's \$500 million investment has been directed towards modernization and sustainability. Can you elaborate on how this investment is transforming the yard's capabilities?

Our shipyard at Pipavav has a globally leading capacity, with a dry dock size of 662m x 65m and a fabrication capacity of 144,000 Tn per year. Our semi-automatic fabrication line can produce complex and high-quality block structures. In addition, the shipyard also has a very large offshore fabrication facility of 750m X 265m with a floor strength of over 25 Tn/m² – which enables us to seamlessly produce offshore structures for sectors such as wind, oil and gas etc. Considering the global supply constraints, we plan to ramp up our shipbuilding and offshore fabrication capabilities and are focused on both restoring the yard and further upgrading the equipment to make them 'future ready'.

We are specifically working on critical infrastructure such as the dry dock and goliath crane, as well as obtaining necessary certifications to ensure that the shipyard is fully compliant with industry standards. We have also been working closely with the OEMs for health assessments and repairs of the machinery at our workshops.

Additionally, we are strengthening our workforce by recruiting top talent while retaining our experienced staff, creating a balanced and capable team. We have a 1100+ strong workforce already on the ground, deployed on various stages of shipyard operations. We are committed to employee well-being and are developing township facilities to ensure a safe and sustainable work environment.

As part of our modernization efforts, we have investments planned for both capacity and capability augmentation.

It is our endeavor to make Pipavav Shipyard one of the globally reputed shipyards that can further elevate India's position among the top shipbuilding nations of the world. To realize this ambition, we will continue to invest in building a best-in-class infrastructure and robust team with global experience across both commercial and defence vessels.