



GREEN SHIPBUILDING

SECTOR DEFINITION

The shipbuilding industry refers to activities related to the production of large vessels intended for merchant fleet (cargo or passenger transport), the off-shore energy industry and military purposes, as well as products and services needed for the building, conversion and maintenance of the ships.

The activities involved in the shipbuilding industry includes:

- Design & Engineering**
Identification of constraints, defining solutions, creating prototypes, testing and delivering a final vessel architecture and blue prints for simulation and construction
- Simulation & Planning**
Defining and fine-tuning the production/construction process, which includes management of logistics, human resources and raw materials
- Construction**
Activities associated with the actual production and construction of the vessels
- Service, Maintenance & Support**
Activities related to the maintenance of the ships, as well as the on-board services during the day to day operation of the ships

WHY IS IT IMPORTANT FOR BLUE ECONOMY?

The European shipbuilding industry is the global leader in the construction of complex vessels. Combined with maritime equipment manufacture, this sector employs more than 500.000 people and has an average annual turnover of approx. €72 billion. Europe has around 300 shipyards conducting civil, naval, new building and repair activities. 80% of these are small to mid-sized, and the remaining 20% as large. These shipyards employ 120.000 people.

Shipping's strong links to major industries such as transport, security, energy, research and the environment make developments in this sector strategic, both from an economic and social perspective. However, carbon emissions from the shipping industry also accounts for 3% of global greenhouse gas values, and its activities are known to contribute to ocean pollution. If unchecked, this will continue to have a significantly adverse impact on ocean health.

EU PRIORITY ACTIONS

Greening the shipping industry

- 40-50% reduction of CO2 emissions from the shipping industry by 2050
- Initiatives to promote increasing energy efficiency, development of alternative fuels, circular technologies for ship recycling, port waste reception facilities, anti-fouling systems and management of ballast water quality
- CO2 emissions monitoring, reporting and verification (MRV) of EU ships and in EU ports
- Market-based measures

Employment and skills

- Restructuring (managing transition and easing the social impact of structural adjustment on employment)
- Image and Career Path
- New skills and lifelong learning
- Harmonisation of Certificates and Mobility

Improving Market Access and Fair Market Conditions

- OECD Working Party on Shipbuilding
- World Trade Organisation
- International Labour Organisation
- Public Procurement
- Intellectual Property Rights

Access to Finance

- Improving Liquidity in the Market
- Providing Suitable Guarantees
- Financing Environmental Improvements
- 'Blue' Public Private Partnership
- Use of Funds from Market Based Measures (MBM)

Research, Development and Innovation

- Exploiting New Market Opportunities
- Stimulating Research, Development and Demonstration
- Stimulating Innovation
- Strengthening Relations throughout the Innovation and Supply Chain and Linking Maritime RDI through Instruments of EU Cohesion Policy

Source: LeaderSHIP 2020. The Sea, New Opportunities for the Future. <http://www.emsa.europa.eu/>

BUSINESS OPPORTUNITIES & AREAS OF INNOVATION

Investments into new innovations and efficiency-driven shipping technologies are high, given its strategic and economic importance. There remains strong demand for sustainable and smart solutions in this sector, that would help ports, shipyards and shipping companies comply with new maritime regulations, promote the EU's GHG reduction targets, and strengthen Europe's competitiveness.

Digitalisation of the shipping industry

- Virtual shipyard solutions
- Usage of big data to optimise logistics and operations of the shipping industry and port activities

Solutions to reduce emissions

- In light of IMO2020 regulation put into effect as of 1 January 2020 requiring vessels to use lower-sulphur bunkering fuel, new solutions to help current ship owners to transition towards the new standards are in high demand
- Solutions that can help reduce the reliance on fossil fuels (alternative fuels)
- Solutions that can optimise fuel consumption

Solutions to reduce the carbon foot print in the construction process

- Technologies that can optimise the ship-breaking industry and increase the reuse and recycling of the materials
- Digital solutions that can simulate and optimise the workplace and resource management
- New materials that are environmentally friendly

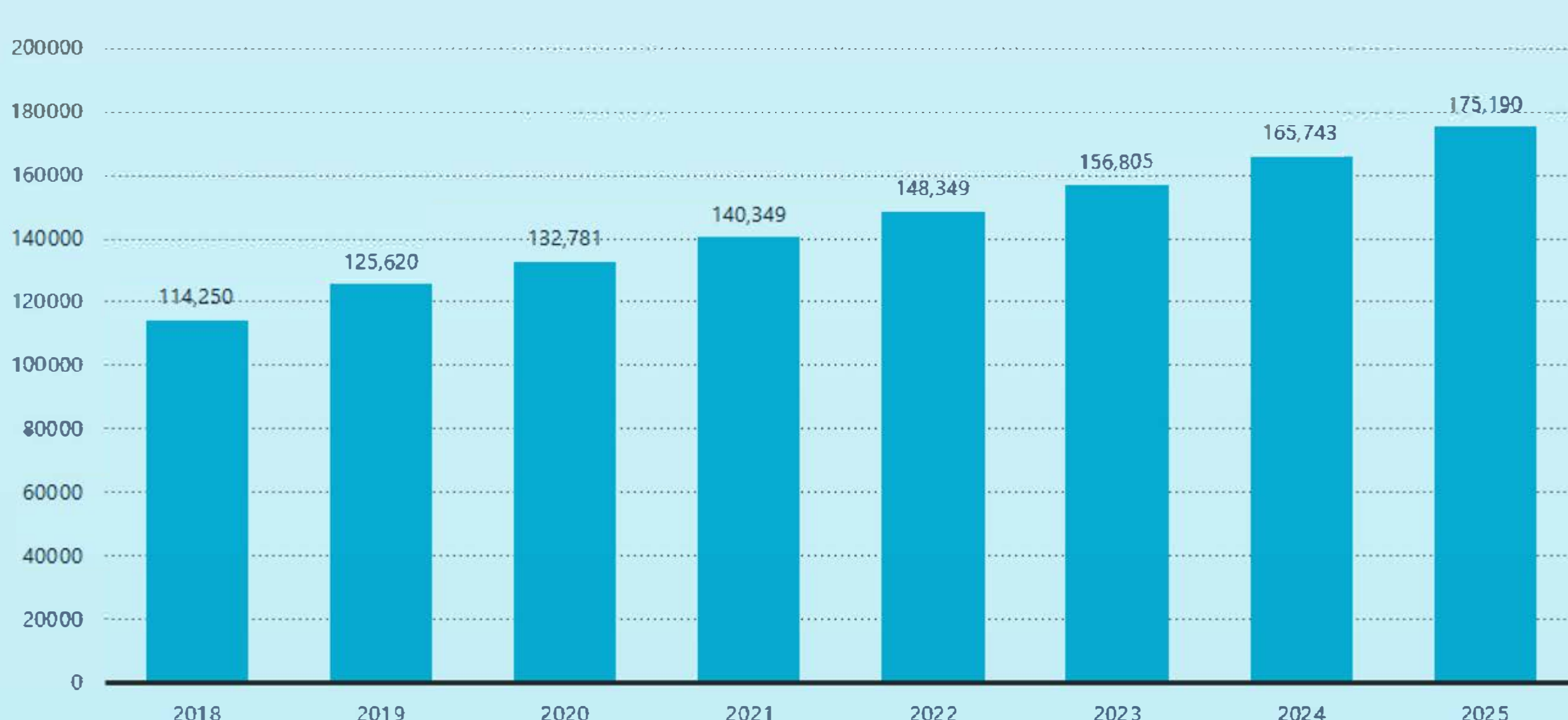
Other innovations

- Solutions to help educate, train and upskill the workforce
- Port Reception Facilities
- Anti-fouling Systems
- Ballast Water

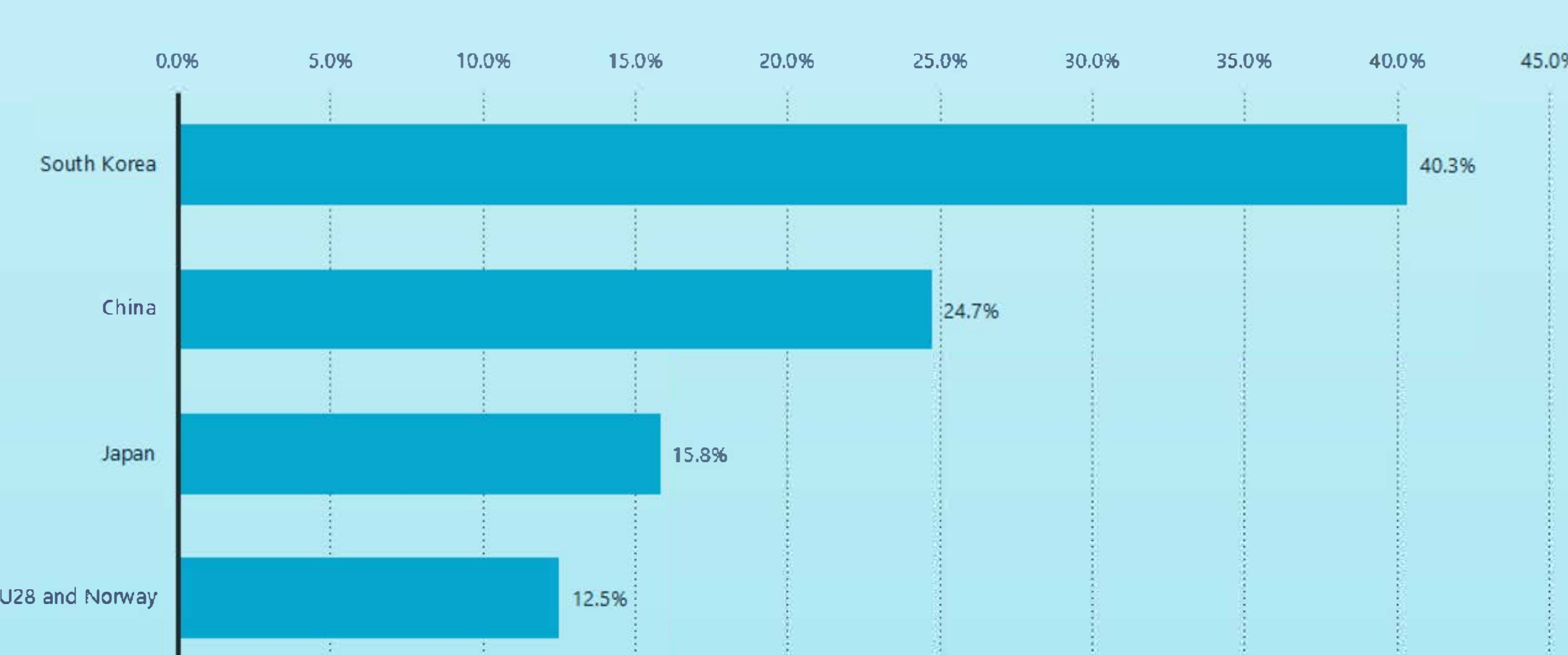
INVESTMENT LANDSCAPE

The global shipbuilding market is expected to reach a market value of €160 billion in 2025. Europe accounts for 12.5% of the global shipping market, making it the world's 4th largest market.

Size of the global shipbuilding market in 2018 with a forecast for 2019 to 2025 (in million U.S. dollars)



Regional breakdown of the global shipbuilding market in 2018, based on orders



Source: Statista

In 2019, almost €20 billion of capital has been invested in European shipbuilding, shipyards, and marine transportation solutions. Between 2016-2020 around 1338 deals were made.



Source: Pitchbook

Some European investors whose funds are dedicated to shipbuilding:



BlueWaterEnergy

PORTXL
World's 1st Port & Maritime Accelerator

WHY BLUEINVEST?

The BlueInvest platform supports investment readiness and access to finance for early-stage businesses, SMEs and scale-ups in the blue economy.

Platform features:

- BlueInvest Readiness Assistance
- BlueInvest Community
- BlueInvest Fund
- BlueInvest Grants
- BlueInvest Events
- BlueInvest Project Pipeline

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