Trends in Marine Supplies Industries

Industry Dimension
Industry Structure
Demand Patterns

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Global Maritime Technology Market Dimension

**Ausrüstung, Material, Dienstleistungen**

- Schiffsneubau: 10% (50,4 Mrd. USD)
- Reparatur, Retrofitting: 10% (50,4 Mrd. USD)
- Marine (Neu und Rep): 10% (50,4 Mrd. USD)
- Fixed Offshore Structures: 15% (50,4 Mrd. USD)
- Bootsbau: 12,5% (50,4 Mrd. USD)
- Offshore Wind: 9,6% (50,4 Mrd. USD)
- Offshore Subsea: 7% (50,4 Mrd. USD)
- Port Equipment: 11,5% (50,4 Mrd. USD)
- Maritime Überwachungs- und Sicherheitstechnik: 33% (50,4 Mrd. USD)
- Other: 20% (50,4 Mrd. USD)

**Systemintegration, Werften, Projektentwickler**

- Schiffsneubau (incl. Floating Offshore): 13,7% (197 Mrd. USD)
- Reparatur, Retrofitting: 11,5% (197 Mrd. USD)
- Marine (Neu, Instandhaltung): 11,5% (197 Mrd. USD)
- Fixed Offshore Structures: 48,3% (197 Mrd. USD)
- Bootsbau <500GT: 21,5% (197 Mrd. USD)
- Offshore Wind: 20% (197 Mrd. USD)

**Customers:**
- Shipping Companies, Offshore-Operators, Navies, Private Customers, Energy Firms, Authorities
World Shipbuilding Model by Value (Shipyards + Suppliers)

Annual average production values (2010-2014) of the shipbuilding value chain
Top 10 countries - Total World "Production Value" 482,5 Mrd Euro

- Production value Shipbuilding; Boatbuilding and Repair
- Production value of maritime supplies (1st tier)
- Total domestic production volume 2nd tier suppliers

86% of World Production Value

Value Chain Comparison (2010 – 2014)

Source: Eurostat, OECD
BALance calculations

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Global Trade Balance marine supplies (2010 – 2014)

Note: trade balance of 1st and 2nd tier suppliers without intra EU import/export

Source: Eurostat, OECD, National sources, BAlance calculations
Swap of manufacturing from Europe to Asia is obvious

EU Marine Equipment Directive

Source: BALance Analytics, MarED 11/2019
Swap of manufacturing from Europe to Asia is obvious – Driving Countries

EU Marine Equipment Directive

Source: BALance Analytics, MarED 11/2019
Globally >11,500 marine supplies companies exist based on analysis of certificates.
Industry Structure
Basic Marine Supplies Structure

1. External services and subcontracts - engineering, design and consulting services
2. Materials – Steel (half raw materials, subassemblies)
3. Materials – Pipes and Ducts (half raw materials, subassemblies)
4. Materials – Paint, Coating (paints, painting services)
5. Systems/Equipment – Ship Operation (steering gear, anchor, deck machinery, life saving equipment, MARPOL equipment, general outfitting components)
6. Systems/Equipment - Cargo Handling Equipment and Special Cargo Plants
7. Systems/Equipment – Accommodation (cabins, public rooms, functional rooms)
9. Systems/Equipment - Auxiliary Systems
Horizontal and vertical co-operation of shipyards and suppliers

Vertical, pyramidal co-operation

horizontal co-operation

“market level”

Shipyard A

Horizontal co-operation

Shipyard B, module factory

“1st tier supplier”

Supplier

Subcontractor

Material

Component

Systems

Manufacturing

Design

“2nd tier supplier”

Supplier

Subcontractor

Material

Component

Systems

Manufacturing

Assembly

Engineering

Design

vertical, pyramidal co-operation

Supplier

Subcontractor

Material

Component

Systems

Manufacturing

Assembly

Engineering

Design

Supplier

Subcontractor

Material

Component

Systems

Manufacturing

Assembly

Engineering

Design

Supplier

Subcontractor

Material

Component

Systems

Manufacturing

Assembly

Engineering

Design
Pattern of Supply Chains changing

![Graph showing the change in purchase value and production value for Korea, Japan, Italy, and Germany from 2000 to 2014.](image)

Source: Eurostat, OECD, National sources, BAlance calculations

Material Suppliers
Steel/Pipes/Paint...

Subcontractor
Sub-Assembly/Service

System/Component
Suppliers
Manufacturer

Shipyards

Subcontractor
Design/Engineering

+/− 30%

+/− 30%

+/− 40%
Increasing Globalisation of Supply Chains

The sum of all national shipyard production values is building the total value of the global shipbuilding value chain. Since the national shipyard production value contains imported purchasing values and does not contain export values of the national supplies industry, it does not represent the value added by the national shipbuilding value chain.
Increasing Globalisation of Supply Chains

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Can have a big meaning for the Value of national maritime industries!
Supplies have different impact on supply chains and products

- Critical Products (Bottleneck)
  - High Impact to Product Quality and/or Production Performance
  - Low Impact on Cost or Profit
  - Strategies towards more co-operative working

- Strategic Products
  - High Impact to Product Quality and/or Production Performance
  - High Impact on Cost or Profit

- General Products
  - Low Impact to Product Quality and/or Production Performance
  - Low Impact on Cost or Profit

- Critical Products (Price)
  - Low Impact to Product Quality and/or Production Performance
  - High Impact on Cost or Profit
  - Strategies towards more effective purchasing
Meaning of supplies varies, Shiptype values show significant differences

 Bubble Size = relatively market volume in USD
 Colours of bubbles = market saturation against 10 year forecast red: > 60%
 Yellow: 30% - 60%
 Green: < 30%

Merchant Shipbuilding forecast 2016-2025, BALance Analytics 2017
Meaning of supplies varies, Shiptype values show significant differences.

More sophisticated
More systems
More trades
More quality
More players
More data
More Integration

Merchant Shipbuilding forecast 2016-2025, BALance Analytics 2017

Demand Patterns
World market for marine supplies – merchant shipbuilding only

Marine Supplies Market 2016-2025
567 bn USD - Distribution to Trades

Marine Supplies Market 2016-2025
567 bn USD - Demand from Regions

Merchant Shipbuilding forecast 2016-2025, BALance Analytics 2015
World Market Marine Supplies (Forecast 2016-2025)
World Market Marine Supplies (Forecast 2016-2025)

Forecast 2016-2025
Marine Supply Demand per Trade

Merchant Shipbuilding forecast 2016-2025, BALance Analytics 2015

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Marine supplies are differently critical – depending on shiptypes

Merchant Shipbuilding forecast 2016-2025, BALance Analytics 2015
Europe and Japan are strong in critical and strategic supplies, but have to follow markets.

Note: dark blue = strong position of suppliers in these supplies classes.
Korea is good at critical supplies but has shortcomings in some strategic supplies

Note: dark red = strong position of suppliers in these supplies classes
China has shortcomings in strategic and critical supplies and has to create attractive market conditions.

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China has shortcomings in strategic and critical supplies and has to create attractive market conditions


Quotes

Targets for the next decade

By 2020 a world class level of marine component industry shall be achieved in respect of power system, deck machinery, navigation/communication system, IT technology for marine application. The ratio of localisation of marine components shall be more than 80% for conventional vessels such as tanker, bulker and container vessel.

Note: dark red = strong position of suppliers in these supplies classes
Technological challenges will bring new kids on the block

Markets for Supplies
Shipbuilding
Boatbuilding
Repair + Retrofitting
Offshore Wind/Energy
Offshore Oil & Gas
Offshore Minerals
Shipping
Harbours
Navies
Fishing
Mariculture
Marine Sciences
Sovereign Tasks
...

- Autonomie
- Leichtbau
- Energie-effiziez
- Power to G&L
- Digitalisierung
- Maritime Sicherheit
- Verkehrs-Steuerung
- Umwelt Klima Monitoring
- Life Cycle Management
- Unterwasserotechnik
- Offshore Rückbau
- Polar technik
- Integrierte Logistik
- Offshore Renewable Energy
- E+Navigation
- Zukunfts-schiff

global – smart - green
Future Trends influencing supplies and supply chains

- Consolidation of suppliers – from components to systems and multi systems suppliers
- Digitalisation – all ship systems have an IT dimensions – sensors and networks – new regulatory regime required including certification and classification
- Sustainability – zero emission vessels - new ships with new technologies
- Autonomous sustainable ships as ultimate (long term?) challenge
- Digitalisation – ships to become integral parts of logistical supply chain
- World fleet decarbonisation - increasing demand of retrofitting
- Faster retrofitting cycles in order to cope with regulatory updating – advanced life cycle management with suppliers and new services involved
- 3D-Printing – Central design and marketing - local manufacturing and certification
Advanced Marine Supplies are a vital element for innovative global shipbuilding

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