

# Outlook Paper Port of Stade

Management Summary



Cuxhaven



Stade

**Commissioned by**

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## Introduction

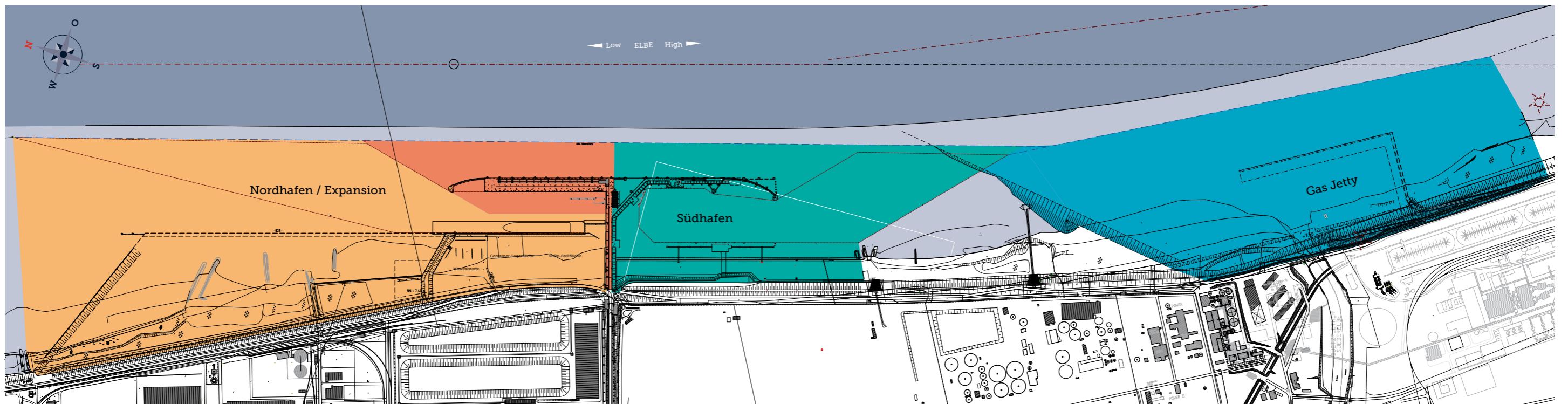
This allround port is situated in the northern part of Niedersachsen on the sea ship navigable waters of the River Elbe, between Hamburg and Cuxhaven. On land, a great infrastructure connects to the Elbe-Weser region and the metropolitan region of Hamburg. Measured by cargo handling volume, it is the third largest port in Niedersachsen. The vast majority of cargo handling is performed by locally-based companies. There are a total of approximately 2,700 employees in this port area.

In recent years, sea freight and barge transshipments have continuously increased to some 7 million metric tons, and bauxite and chemical commodities are dominating the product spectrum.

The outlook paper for the Port of Stade pursues the goal of confirming the successful development of the port location and to promote such development with appropriate measures. To accomplish this, the port is divided into four plan sections. Development paths are sketched for each section, and adequate recommendations for action are deduced.

### Legend

- Plan Area 1 – Nordpier (North Pier)
- Plan Area 2 – Nordhafen (Northern Port) / Expansion
- Plan Area 3 – Südhafen (Southern Port)
- Plan Area 4 – Gas Jetty

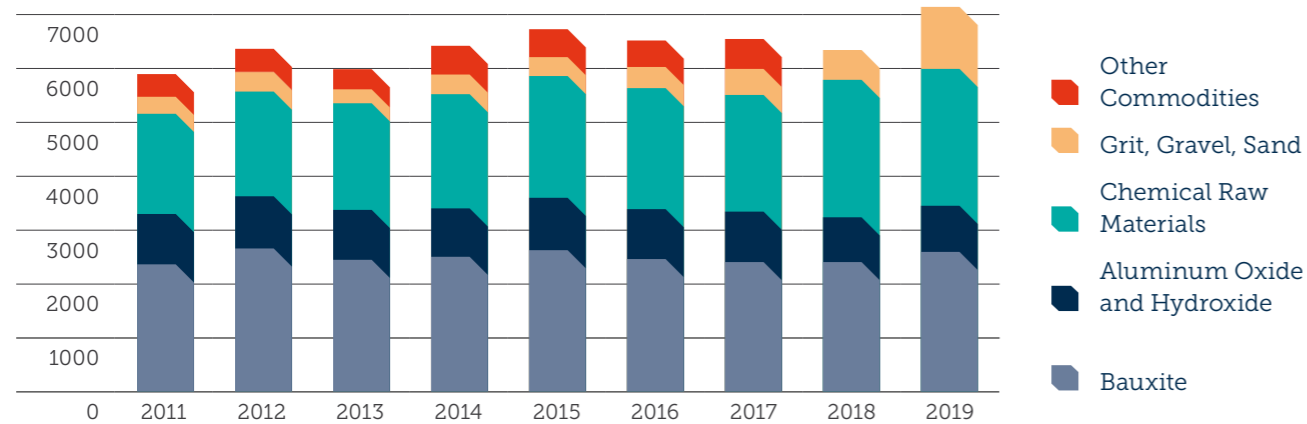


# Cargo Handling

Between 2011 and 2019, the sea freight and barge transshipments of the Port of Stade increased from 5.9 million to 7 million metric tons. In Stade, the cargo handling of sea freight is dominated by bauxite, ores, and chlorine chemical products, such as propylene oxide, propylene glycol, solvents, tetrachloroethylene, polyurethanes, and soda lye.

Cargo handling in the barge sector in Stade is clearly dominated by the export (shipping) of aluminum oxide and hydroxide. Since 2011, the volumes have been above 700 thousand metric tons.

Sea Freight Handling in Thousand Metric Tons



## Forecast

Based on the:

- › Sea Shipping Forecast in the Federal Transport Infrastructure Roadmap (BVWP) 2030
- › Development of gross domestic product (OECD)

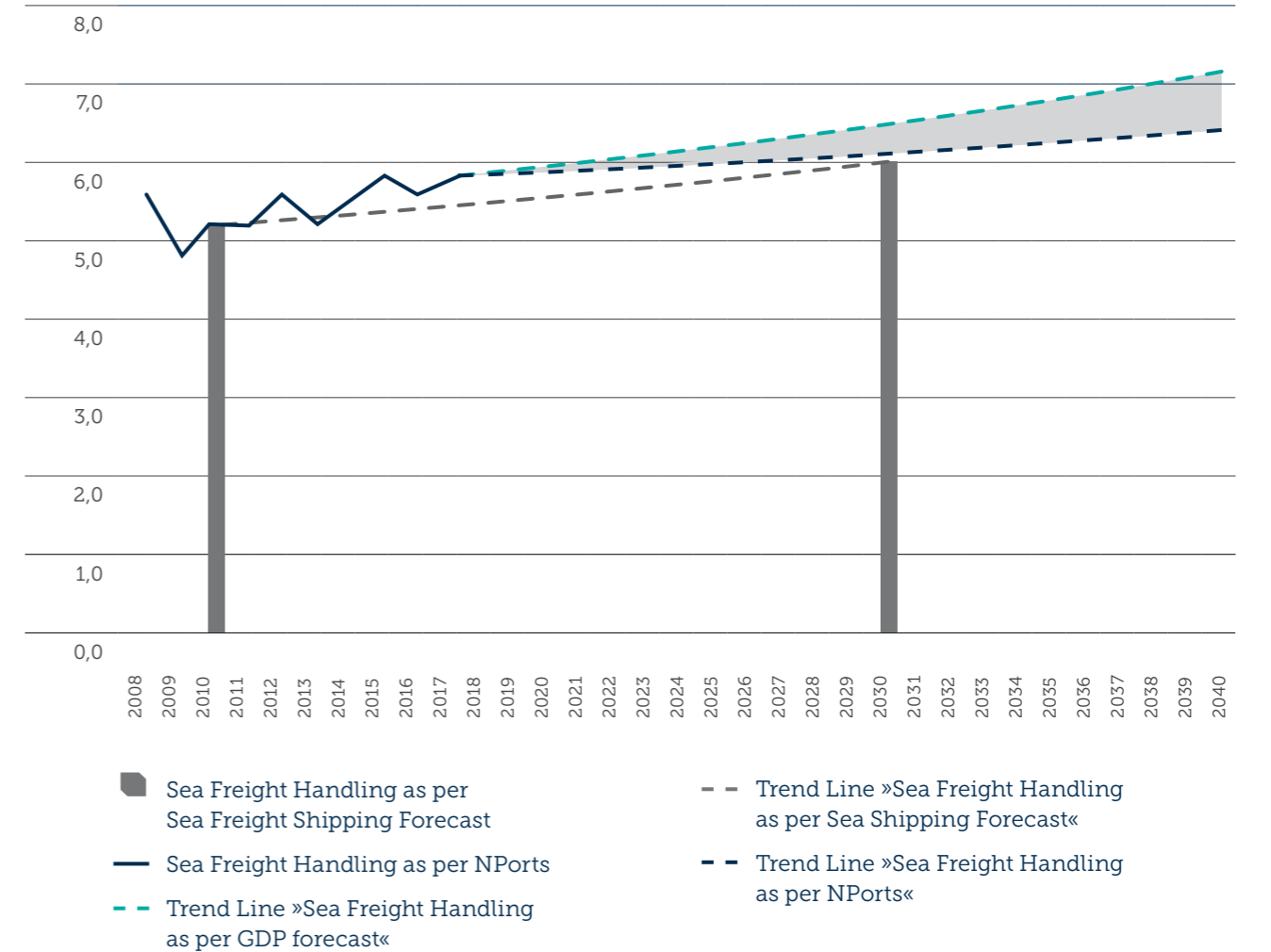
- › Analysis of the cargo handling statistics (trend projection)
- › Results from the survey of the economic participant in the port industry

## Results

The development bandwidth for the future sea freight handling until 2040 will be at a value between 6.4 million and 7.15 million metric tons, plus some 1.2 million

on tons in barge transshipments. Even in the future, such cargo handling will continue to be dominated by bauxite and chemical products.

Sea Freight Handling in Million Tons



## Potential of the LNG Market

### Potential of the Site Stade

- › Creation of an alternative energy source through the LNG terminal on site
- › Import/onward shipping of LNG supports the local and domestic energy supply
- › Potential for the handling of other liquefied gases, such as hydrogen, propylene, ethylene
- › For a significant contribution to security of supply and diversification of sources of supply:
- › Natural gas volume of 5 billion cubic meters as the lower limit,
- › An annual capacity of up to 15 billion cubic meters is conceivable
- › Establishment in the German LNG market without significant competitive pressure conceivable, even with market participation of other sites

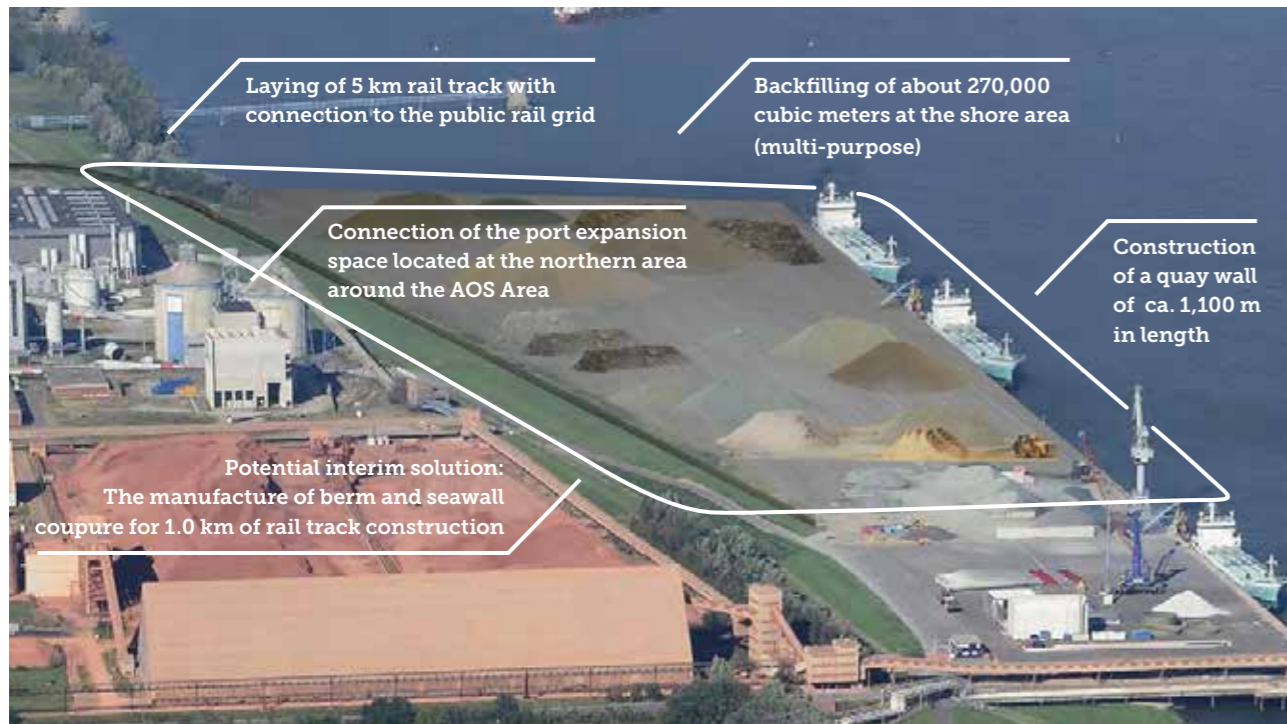


## Demand for Development and Variants

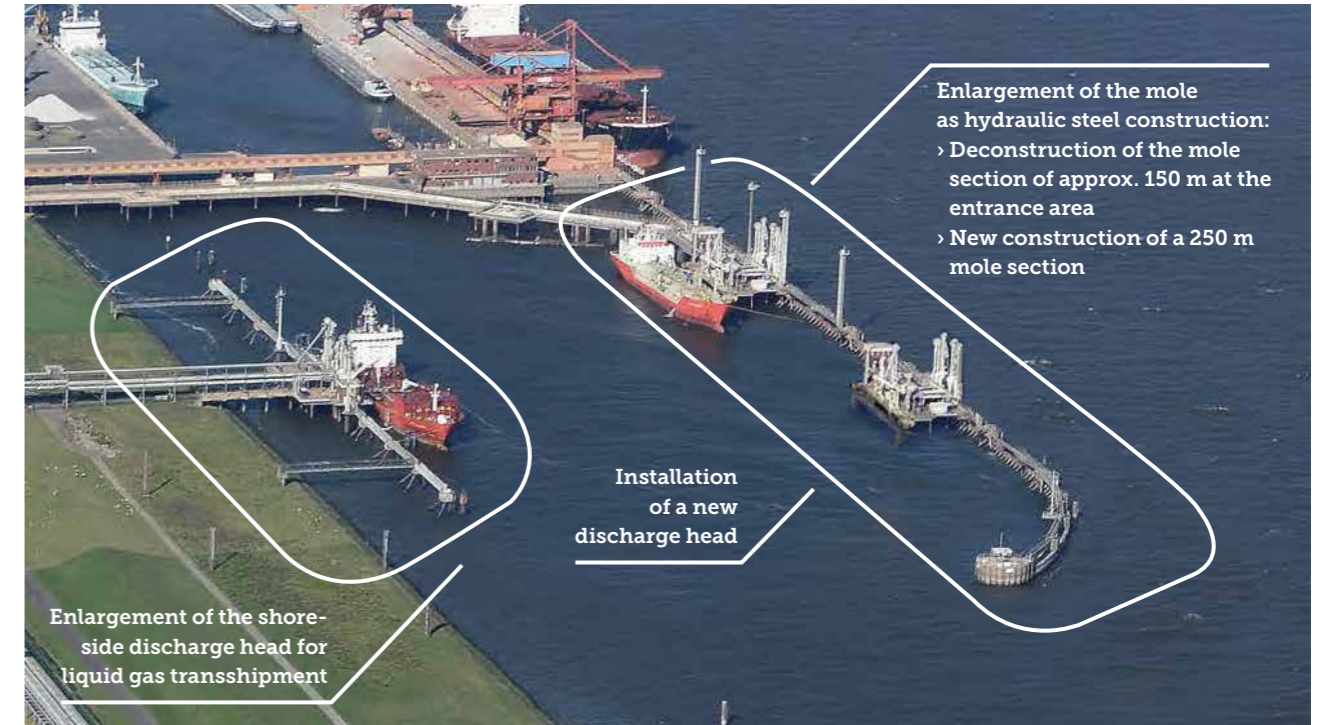
### Plan Area 1: Nordpier



### Plan Area 2: Nordhafen / Expansion



### Plan Area 3: Südhafen



### Plan Area 4: Jetty for Liquefied Gases







## Conclusion

### Stade is

- › With some 6.5 million tons of cargo handling each year the third largest transshipment location in Niedersachsen
- › An inland shipping and maritime port,
- › A location for major companies, such as DOW, OLIN, Trinseo, and FMC, as well as the aluminum oxide and hydroxide manufacturer AOS.

### Stade offers

- › A location for local production with a very high value-added density,
- › Advantages, such as an existing connection to the German natural gas grid, synergies with the Stade chem-coast park and close vicinity to the Hanseatic City of Hamburg.

### Stade expects

- › A successful expansion of our market position,
- › A demand-oriented further development of the supply structure of the port.

### Stade achieves its goals by

- › Continuously maintaining and adapting the Nordpier (North Pier),
- › Carefully developing the facilities at the Südhafen (Southern Port)
- › Expanding the space of the Nordhafen (Northern Port) and providing the appropriate connection to the rail grid,
- › Providing a new jetty for the import and onward shipping of LNG and additional liquid gases,
- › Expanding the hinterland connections with the requisite infrastructure in a demand-driven manner.

## Sustainability

Acting sustainably and the commitment to further develop environmental standards within the port operation are things that are implemented by NPorts even today; all activities within this context are consolidated under the hafen+ brand and comprise any economic, social, and environmental measures that lead to the goal of a sustainable port management.

Sustainable action in the port industry generally requires the following measures or requisites:

### Construction

- › Implementation of an energy efficient construction method
  - › Use of sustainable building materials
  - › Resource-conserving use of building materials
- › Consideration of transport distance and the choice of means of transport in the evaluation of tenders for construction material deliveries (e.g. asphalt delivery)

### Operation

- › Continued granting of discounts for environmentally friendly ships that fulfill high environmental standards
- › Electronic traffic guidance systems: Streamlining of transport processes, reduction of waiting times at the gates (reduction of pollutant and noise emissions)
- › Record keeping and proper disposal of ship-generated wastes
- › Use of low-emission handling equipment: Use of electric motors, encapsulation of the motors for soundproofing
- › Use of renewable energies (photovoltaics, wind energy) for the supply of port areas
- › Use of LED technology for lighting

- › Use of environmentally friendly vehicles, such as natural gas or electric vehicles
- › Thermal insulation of buildings
- › Process-driven optimization of the duration of the devices under electric power (e.g. in the conveyor technology)
- › Recycling of process water
- › Work processes within the office building (if necessary)
  - › Utilization of electric devices with low power consumption
  - › Waste separation
  - › Use of recycled paper

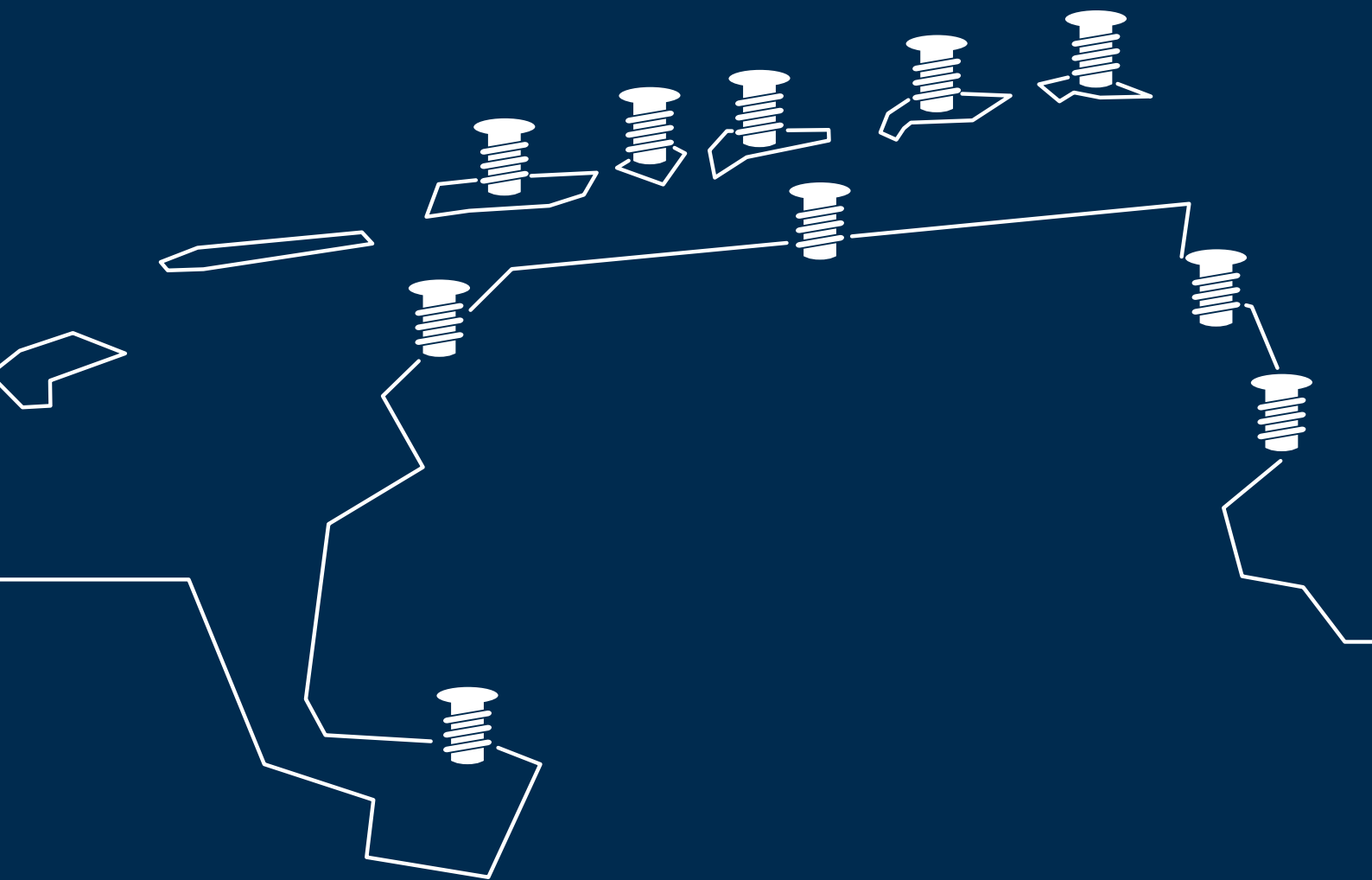
During the assessment of developmental variants, we are identifying primarily those measures from the list above that are best suited to aid in the minimization of environmental pollution within the port areas.

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