

# Increasing transparency in maritime supply chains through benchmarking port and vessel performance

Fraunhofer CML's benchmarking service offers a powerful tool for shipping companies, port operators, and public authorities to assess and improve the efficiency of port operations and liner shipping services.

Through an advanced analysis of historical Automatic Identification System (AIS) data, our service identifies key performance metrics such as terminal turnaround times, time spent at berth, and vessel transit efficiency.

By benchmarking these metrics, our clients can make datadriven decisions that lead to better performance, higher reliability, and more efficient supply chains.

# The Fraunhofer CML offers

# **Advanced AIS Data Processing**

Identification of stopping points, vessel round-trips, and transit time analysis.

## **Tailored Reports**

Tailored insights based on client needs, from high-level overviews to detailed breakdowns.

# **Proven Methodology**

Our process has been successfully applied to a variety of datasets, such as local analysis in specific ports aswell as to a global dataset, benchmarking port and vessel performance.



# Benchmarking for terminals worldwide, providing actionable insights specific to ship types and sizes

Fraunhofer CML offers an unparalleled benchmarking service that spans all significant terminals across the globe. Leveraging a unique algorithmic solution, we generate detailed reports at the terminal level, offering insights that are specific to different vessel types and sizes.

This allows clients to identify inefficiencies, improve vessel turnaround times, and optimize port selection, ultimately reducing costs and enhancing operational efficiency and reliability.

Additionally, by gaining insights specific to ship sizes and types, companies can better align their fleet operations with terminal capabilities, improving overall service quality and customer satisfaction.

# Who can benefit

## **Shipping companies**

Enhance operational efficiency and reliability by understanding vessel performance at specific terminals.

## Port operators and terminal managers

Benchmark your services against competitors, identify bottlenecks, and improve terminal throughput.

# **Freight forwarders**

Select the most reliable shipping partners and optimize supply chain resilience.

#### **Public authorities and regulators**

Evaluate the performance of ports under your jurisdiction and guide infrastructure development.

# Your need for global benchmarking

In a competitive maritime market, having access to detailed, global benchmarking data at the terminal level is critical to making informed decisions.

Whether you are a shipping company looking to optimize routes, a port operator seeking to improve terminal efficiency, or a freight forwarder aiming to choose the best partners, Fraunhofer CML's benchmarking service provides the data and insights you need.

# Our approach: Provide immediate, reliable and actionable insights

# **Terminal-Level Insights**

Our service goes beyond general port statistics, offering detailed insights at the terminal level. This allows stakeholders to compare specific terminals by their performance for different ship types and sizes, making it possible to identify the best-performing facilities for particular needs.

#### **Global Coverage**

Our benchmarking service spans every significant terminal worldwide, providing a truly global view of terminal performance. This unparalleled scope means our clients can benchmark against not just local or regional competitors, but on a global scale, offering a clear strategic advantage.

# Cutting-edge Methodology

We discretize AIS data to capture vessel movements, calculate turnaround times, and assess terminal congestion. The result is a benchmarking report that is precise, comprehensive, and actionable, offering insights that were previously unavailable in the market.

## Contact

# M.Sc Julius Küchle

Ports and Transport Markets Phone: +49 40 271 6461 - 1301 E-Mail: julius.kuechle@cml.fraunhofer.de

## M.Sc Manfred Constapel

Maritime Informatics Phone: +49 40 271 6461 - 1502

E-Mail: manfred.constapel@cml.fraunhofer.de







Fraunhofer-Center for Maritime Logistics and Services CML Blohmstr. 32 21079 Hamburg Germany

Phone: +49 40 271 6461 - 1260 E-Mail: info@cml.fraunhofer.de www.cml.fraunhofer.de