

Success Story

Modernizing a freight intelligence portal for a maritime logistics research firm



Client:

London-based leading maritime insights provider

Industry:

Supply Chain Logistics

Country:

United Kingdom

Our Role:

Product Engineering

About the Client

Established in 1970, the London-based leading maritime research company assists senior stakeholders in the fields of maritime finance, shipping, and logistics to make informed decisions.

Over 3,000 clients across 100+ countries trust the firm for its independent solutions for market insights & forecasts, ocean freight intelligence, and related services.

Key Facts

2X

faster decision making

30%

reduction in data redundancy

20x

faster freight costing calculations

Services Used

 Product Engineering

Technology Stack

-  **Laravel**
-  **python™**
-  **aws**
-  **Apache Airflow**
-  **kubernetes**



The Situation

Companies in the maritime sector possess large volumes of data around freight rates but lack the necessary insights to sense market changes and drive decisions in a timely manner. To help these companies ensure competitive freight rates, the maritime research firm developed a Freight Intelligence Portal (FIP) that could accumulate freight rate data to draw comparisons.

The freight rate data on the FIP had been gathered from shippers and forwarders to set up cost benchmarks, and also produce actionable market insights, and forecasts. By subscribing to FIP, logistics stakeholders could reduce costs and gain greater market visibility. However, the analytics involved was slow and it would take the FIP a very long time to process all the necessary data from hundreds of shippers and forwarders.

The company decided to use Daffodil's technological expertise to modernize FIP's capabilities because of the latter's successful performance history in versatile digital solutioning for maritime industry stakeholders. Daffodil was tasked with reengineering the FIP in the following ways:

- Vastly reduce the ocean freight data analytics timelines.
- Enhance quality of data and increase precision in eliminating bad data points.
- Provide alternate routes and port-to-port connections to reduce freight costs.
- Optimize rate comparisons by providing customizations relating to outlier data.
- Facilitate the creation of detailed charts, intuitive reporting and analytics to drive faster decision making.

The Solution

Time-bound data analytics is a highly valued need of the maritime logistics industry, particularly in the area of freight cost management. So, when Daffodil set out to reengineer the Freight Intelligence Portal, it took into consideration all the vital data points that maritime logistics stakeholders, independent agents, shippers, and forwarders consider as valuable information.

Daffodil leveraged Laravel to include all the required additional dependencies for the FIP web application and built ETL pipelines in Python for faster data processing. Airflow was used for clear visibility of the pipelines and Kubernetes to manage workloads.

Following a comprehensive revamp by Daffodil, the resultant version of the FIP has the following functionalities and features:

Expedited Benchmarking

Ocean freight rates, i.e., long-term contract rates from shippers and short-term spot rates from forwarders are accumulated to calculate the shipping benchmark rates. While the calculation of the same used to take 7-8 days to process all the received data, the improved FIP can do the same in a matter of mere hours. The ETL pipelines have greatly expedited the task of running benchmarks. Additionally, the calculation of outlier data takes barely a few minutes compared to the 1-2 days it used to take before.

Clear Data Distinction

ETL pipelines also help check data duplication and to extract and transform the exact data formats required for concise calculations. There is a clear distinction between good and bad data. Clear reporting of bad data has been made possible, pinpointing the exact cell where there is an occurrence of aberrant values leading to overall best practices in terms of data handling.

Internal Rate Optimization

By comparing transit rates and port handling charges across ports, clusters, countries, and regions, the cheapest routes are presented to the user. The user can then view transit rates in graphs and charts with the highest, lowest, and average contract rates as well as spot rates. Based on these findings, the most optimum rate can be viewed for comparison with maritime logistics market competitors.

Intuitive Appraisal Suggestions

Clients of the maritime research firm can use the FIP to get suggestions on where they can reduce costs or flatten the curve by slightly increasing handling charges at certain ports. This data is specially calculated by the company's analysts and customized based on the requirements of specific clients. The customized appraisals are based on several factors including container type (dry, reefer, etc.), region, port, and cluster of operations.

Search General Market Overview

An overview of markets is available for users to view as per their requirements. A local search console offers users the option to view the freight costing trends of markets and market clusters across major ports as well as obscure ports. Searches can be filtered on the basis of ports, container equipment types, size of goods, start and end months of shipping. The general market overview module also provides the option of viewing market trends in the form of graphical representations.

The Impact

The maritime research firm is now able to conduct complex calculations for arriving upon freight costing benchmarks over 20 times faster than before with the help of the Daffodil team. Logistics stakeholders subscribing to the firm can make faster decisions leading to better business and ultimately, faster shipping and forwarding with the help of Daffodil's technological prowess.













About Daffodil

For more than 20 years, Daffodil Software has been a trusted software technology partner to organizations across the globe. We take pride in our ability to look beyond technologies & deliver innovative solutions.

Daffodil is a CMMI level 3 accredited organization with innovation, tech agility & process orientation rooted deep within the core. Our team of 1000+ technologists strive to shape the tech industry and help businesses elevate their value proposition through technology.

Technology Partnerships & Certifications

 Silver Application Development partner <hr/>  Silver Collaboration and Content	 Premier Partner	
		
		

Awards & Accolades

GRANDVILLE, USA

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GURGAON, INDIA

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