



CASE STUDY



# Saving millions of dollars in logistics optimization and contingency management

See how a leading transportation and logistics company reduced port re-routing decisions from 6 hours to 60 seconds



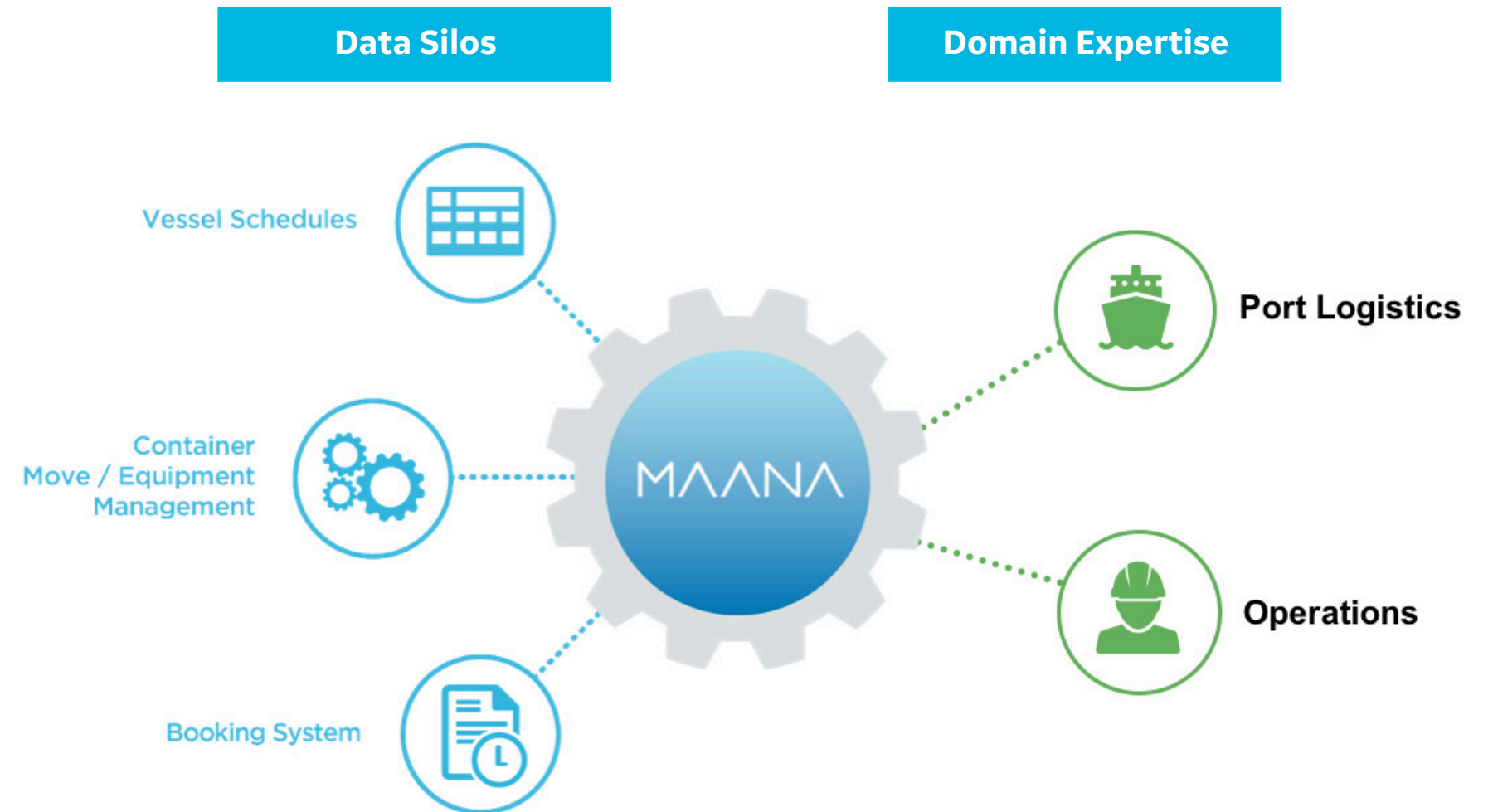


# Challenge

For a logistics and transportation company operating hundreds of vessels around the globe, every port omission can cost the company over \$300,000. By digitizing the port-omission decision flow, the operations and logistics experts can now recommend the best port re-routing option in one minute versus six hours.

One of the largest logistics and transportation companies in the world, operates an extraordinarily complex, global logistics infrastructure. One of the most important logistics decisions the company faces over 1000 times per year is when a port doesn't allow a cargo ship to dock, due to labor strikes or other unpredictable circumstances. These port omissions cost the company \$300 M per year.

To address this important logistics operation, this company wanted its port operations experts to make better and faster ship rerouting decisions based on all available information in the shortest possible time – as a delay of even an hour can have expensive, cascading effects in their global logistics business.

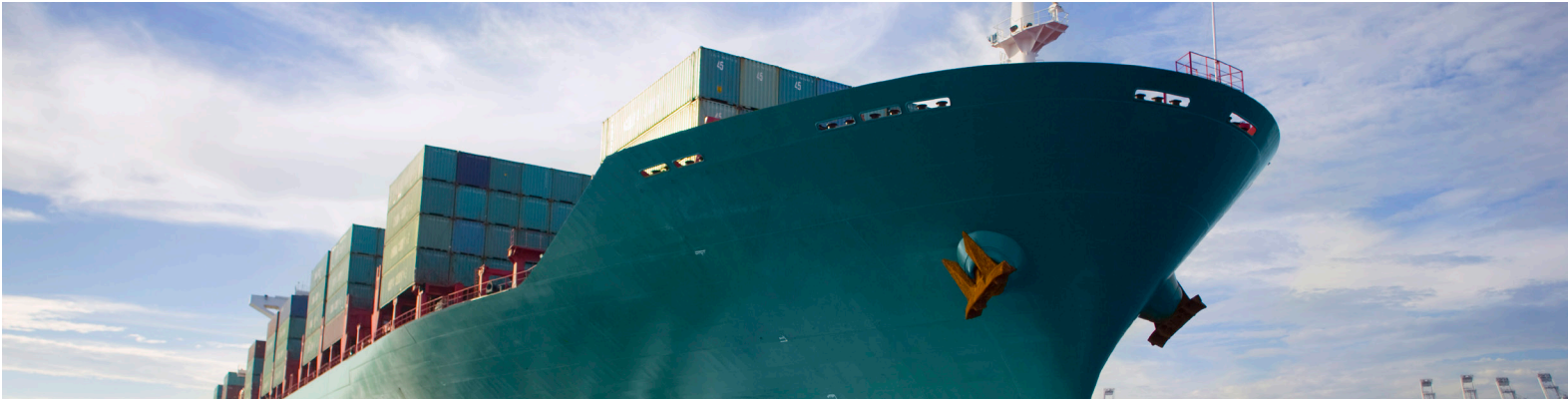


# Solution

Using Maana’s Knowledge Platform(TM) to capture and combine the expertise of port logistics operators with data from various systems, subject-matter experts created a simulation model that recommends the best alternative port based on key customer satisfaction and cost ranking.

The Maana Knowledge Platform was used to mathematically model the port-omission decision process, as well as model data from key systems such as vessel schedules, container moves, equipment management, and bookings. These models developed in less than three months, provide realtime calculations into a simulation model, that score all possible re-routing options based on time and cost and generate recommendations based on the most optimized shipping re-route.

The Maana Knowledge Platform offers a unified view of multiple data sets and enables faster decision making. As more data inputs are added to the models, the Maana Knowledge Graph(TM) grows, learns and adapts, enabling it to support new simulations for cargo to be discharged. For example, logistics experts can now determine the costs of different decisions given various constraints (such as commercial, regulatory, and cargo).



**To enable this simulation model, the Maana Knowledge Platform:**

- Crawled, extracted, parsed, and indexed core entities and data elements from key data systems (such as cargo, ship, vessel, port, and priority) for the port re-routing decision process
- Created a simulation model using variables with different weights, such as perishability of the cargo or cargo classification (for example, military or a premium customer)
- Illustrated the time and cost impact of each re-routing decision using the simulation model
- Listed all recommended contingency re-routing options within the simulation model
- Ranked contingency options by their business impact score
- Calculated the time and cost impact of each re-routing decision

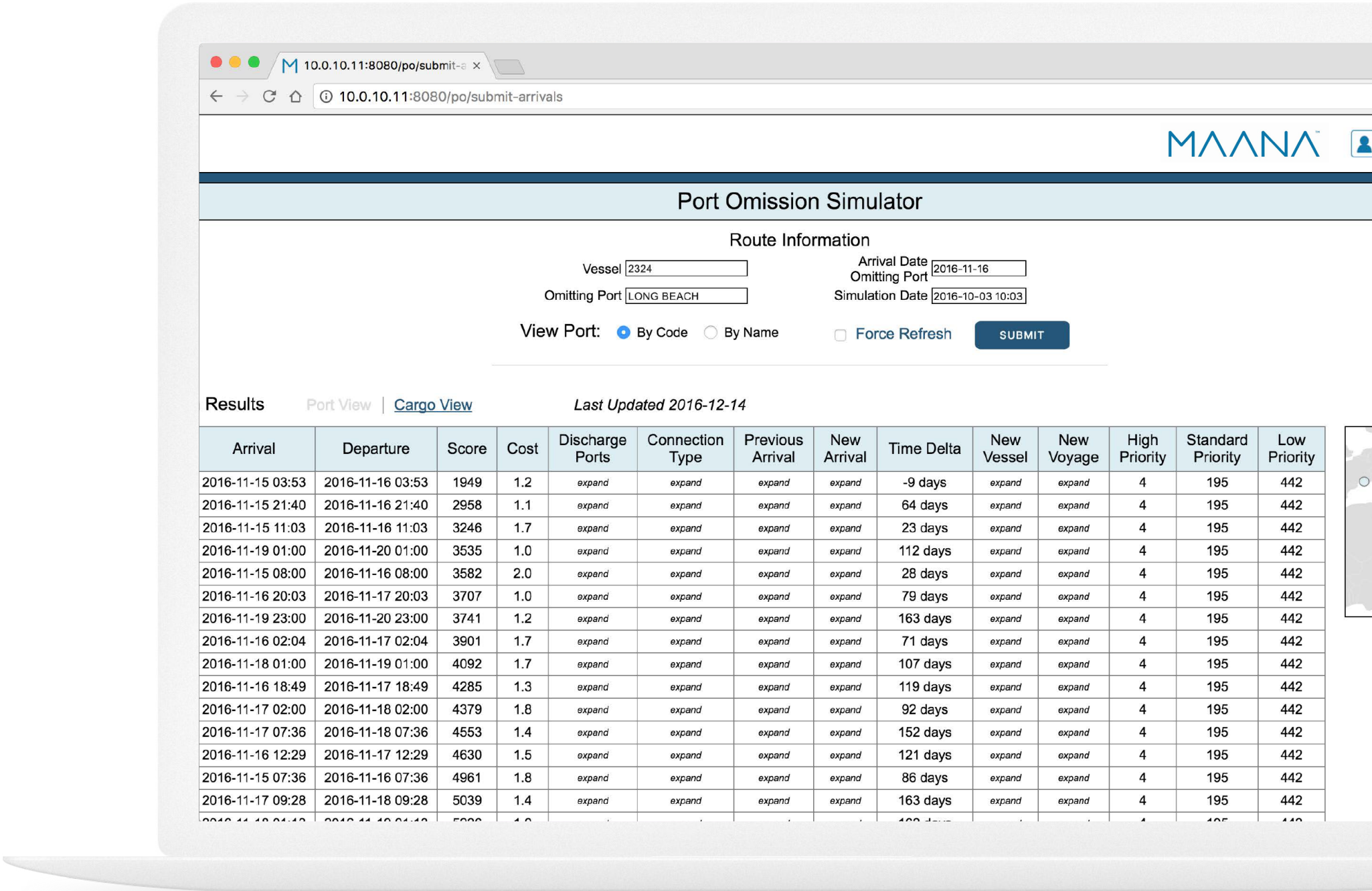
# Results

The company's logistics and port operations experts can now make accurate rerouting decisions far more quickly than before, typically in 60 seconds instead of the six hours such decisions used to take. Such an improvement translates directly into customer satisfaction with faster cargo delivery, as well as at least \$100 M per year in reduced operating costs from less time in port, minimized fuel consumption, and more efficient routing overall.

## About Manna

The Maana Knowledge Platform™ turns human expertise and data from silos into digital knowledge for employees to make better and faster decisions. Enterprises using Predix with Maana dramatically accelerate the speed at which they can create Digital Twins.

[www.maana.io](http://www.maana.io)





## About GE

GE (NYSE: GE) is the world's Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the "GE Store," through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services, technology and scale, GE delivers better outcomes for customers by speaking the language of industry.

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