



MARITIME & LOGISTICS · SUPPLY CHAIN & LOGISTICS

Just-in-Time Voyage Planning for a Container Vessel Operator

A container vessel operator used Quantum One to plan arrivals against berth availability, reducing anchorage waiting and improving ETA accuracy.

IMPACT

**Reduced vessel
turnaround time**

**Lower fuel costs
through optimized
speed profiles**

**Improved schedule
adherence and
predictability**

CLIENT PROFILE

CLIENT

Container Vessel Operator

REGION

Global network

SCENARIO

Supply chain & logistics

INDUSTRY

Maritime & Logistics

COMPANY TYPE

Container vessel operator

CHALLENGES

- Vessel operations are affected by volatile weather, port congestion and uncertainty over berth availability.
- Suboptimal speed decisions increase fuel consumption, anchorage delays and vessel turnaround time.
- Timely, data-driven speed and ETA optimization is what balances fuel efficiency, schedule reliability and port readiness.

APPROACH

We developed a vessel voyage optimization solution that combines vessel coordinates, weather data, port congestion signals, and optimization models.

The platform recommends optimal vessel speed profiles to reduce anchorage waiting, improve ETA accuracy, and balance fuel efficiency with schedule reliability.

BENEFITS

- Optimal speed recommendations for each voyage
- Just-in-time arrival planning based on berth availability
- Weather, route, and port congestion modeling
- Continuous re-optimization as conditions change
- ETA prediction and delay risk indicators
- Scenario comparison: baseline, optimized, and actual voyage

MVP FUNCTIONALITY

- Vessel-level operations map showing active voyages, schedule risk, remaining distance and vessel locations across the global network.
- Port-level congestion dashboard highlighting ports with high delay risk, anchorage queues and average waiting time to support voyage planning decisions.

TIME TO PRODUCTION

Stage	Quantum One	Typical process	
Problem definition	1 week	2–3 weeks	
Proof of concept	2–3 weeks	4–6 weeks	
MVP	4–6 weeks	8–12 weeks	
Scale-up	1–2 months	3–4 months	
Maintenance	Ongoing	—	

TAKE THE NEXT STEP

Speak with our experts to discuss tailored AI solutions for your industry

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