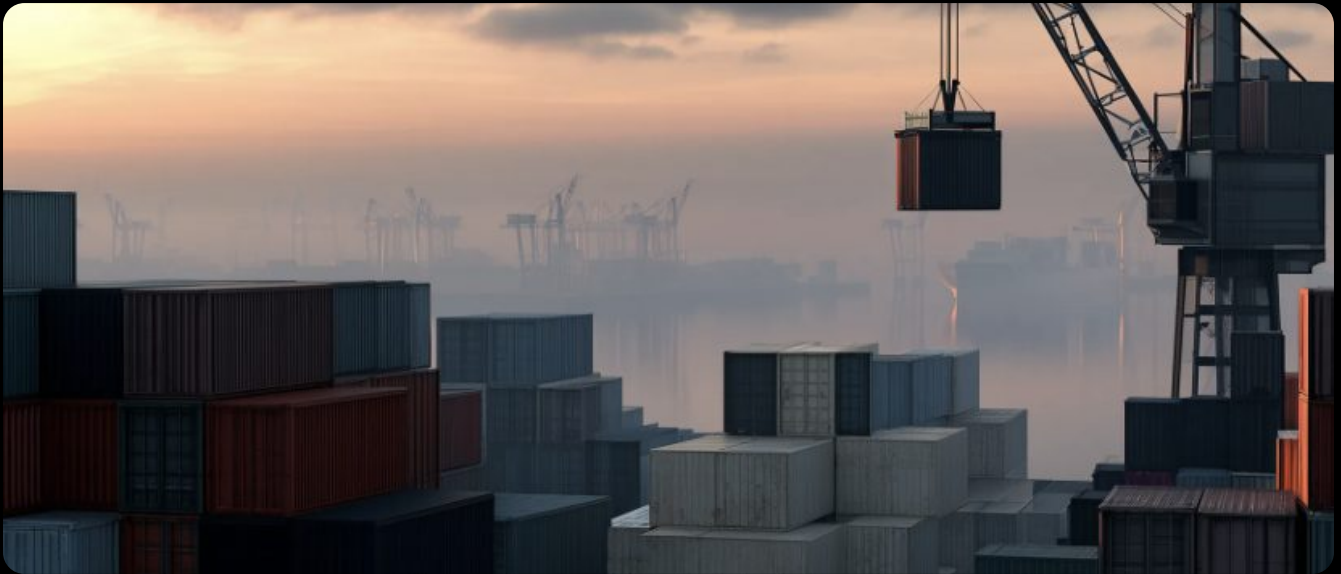




MARITIME & LOGISTICS · SUPPLY CHAIN & LOGISTICS

Container Balancer for Empty Repositioning

A multi-port container network used Quantum One to plan empty container moves ahead of demand, cutting repositioning and storage costs.

IMPACT

**Lower repositioning
and storage costs**

**Shortages and
over-accumulation
prevented in advance**

**4 / 8 / 12
weeks**

Planning horizons supported

CLIENT PROFILE

CLIENT

A container shipping operator

COMPANY TYPE

Container shipping and port operations

INDUSTRY

Maritime & Logistics

SCENARIO

Supply chain & logistics

CHALLENGES

- Demand volatility, long repositioning cycles, and limited visibility into future shortages lead to excessive storage, handling, and repositioning costs.
- Manual planning struggles to anticipate shortages across ports and time horizons.

APPROACH

The Container Balancer leverages historical container movements, demand forecasts, and cost data to optimize empty container allocation across the network.

It predicts future container demand and accumulation by port and container type, then recommends the repositioning actions that minimize total logistics cost.

BENEFITS

- Demand and supply forecasting by port and container type
- Multiple planning horizons: 4, 8 and 12 weeks
- Repositioning actions chosen to minimize total logistics cost
- Storage, handling and transportation trade-offs balanced in one model
- Faster, data-driven planning cycles

MVP FUNCTIONALITY

- Service setup view allowing users to configure available vessel slots per TEU across active services before running the optimization.
- Inventory dashboard showing empty container gaps by port, equipment type, expected releases and demand, with baseline cost and net profit summary.
- Optimization results view showing recommended empty container repositioning moves by service, vessel, port pair and voyage, with cost, revenue and net profit impact.

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

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