



**ibsoftware**

# Material Logistics by Marine Vessels, Trucks & Drones

Deliver on-time at low cost and low emissions

**i**logistics  
MATERIAL

## Key Benefits

- On-time, safe & cost effective delivery
- Reduced NPT on waiting for materials
- Early rental equipment returns
- Collaborative asset sharing
- End-to-end supply chain visibility
- Optimal routing & ESG compliance

**iLogistics Material Logistics Module** helps to ensure on-time, safe, cost effective and low carbon-intensive delivery of supplies to work sites via supply vessels, trucks, helicopter flights and drones. Drive productivity and visibility across the material supply chain with long term demand planning, tonnage capacity forecasting, material ordering, multi-level packing, containerization, lift planning, IMDG compliance, vessel route optimization, deck planning, bulk cargo planning, dispatching, e-manifesting and electronic vessel logging (captain's log) along with out of the box integrations with ERP and AIS marine vessel tracking systems.

### Collaborative Vessel Sharing

Enable collaborative vessel sharing among regional operators to optimize load consolidation and enhance productive utilization of vessels while improving marine safety, reliability and efficiency parameters. Improve deck and tank utilization by facilitating vessel sharing among multiple projects and assets.

## Optimized Vessel Routing

Determine the optimal vessel and route timings that minimize carbon emissions and cost while maximizing demand fulfillment under a complex set of operational constraints including weather, swell height and winds. Mathematical modelling algorithms and easy to use graphical interface enable planners to generate optimal daily vessel plans and simulate deck loading plans (considering deck space, tonnage, loading sequence, number of lifts and other operational constraints) overcoming harsh weather conditions and rough seas.

## Reduced Green House Gas Emissions

Keep track of Green House Gas (GHG) emissions and optimize the vessel routing using mathematical modelling algorithms. Improve fuel efficiency of vessel operations with real-time monitoring of economic speed. AI driven recommendations on transport mode selection (helicopter vs drone vs boat) support sustainability efforts and help to achieve net-zero supply chain. Accelerate marine fleet electrification and ensure optimal utilization of charging kiosks to reduce emissions from marine operations.

## Reduced Non Productive Time (NPT)

Eliminate NPT of drilling rigs, production fields and wind turbine installations caused by material delays. Optimize your marine spend by avoiding costly spot hires and ensuring effective space management, visibility of deck and tank inventory. Collaborate effectively with material suppliers to ensure materials are delivered on the right time.

## Demand Planning & Capacity Forecasting

Material look ahead capabilities enable long term material demand planning and effective engagement with suppliers. Seamless integration with Integrated Activity Planning (IAP) and ERP systems provides early visibility to material demand. Optimization algorithms enable long term forecasting of cargo carrying units (CCU), vessel & trucking requirements and run what-if scenarios to identify optimal capacity.

## Safe & Efficient Vessel Operations

Achieve marine safety, reliability and efficiency (MSRE) improvements with IMDG standards, UN HAZMAT rules, vessel route optimization, deck load planning, bulk material planning, dispatching, e-manifesting and electronic vessel logging (captain's log) along with out of the box integrations for real time marine asset tracking. Offline electronic captain logs & synchronization reduces nonproductive time of vessel operations. Added capability to request for additional asset requirements like berths, forklifts, cranes and security boats thus ensuring safe, compliant vessel operations.

## Backloads And Waste Management

Reverse logistics and waste management features allow effective planning of backloads aligned with vessel delivery schedules. Enable safe handling, storage, transportation & disposal of waste and timely return of equipments.

## Timely Rental Returns

Reduce rental costs with real-time tracking of rental equipments utilizing RFID/NFC/QR code integration. Keep track of daily rental costs with configurable warning alerts and ensure timely return of high cost rental equipments.

## Manage Bulk Remaining On Board (ROB)

Real time tracking and loading/unloading history of below deck materials on board including fuel, methanol, drill water, fresh water, liquid mud and dry bulk, provides operational visibility to offshore & onshore stakeholders.

## Cost Allocations

Flexible marine cost allocation models enable vessel time & cost apportionment to cost centers of projects, departments and partner companies. Rest based APIs enable automated month end chargeback to ERP systems.

## Real-time Vessel Tracking

Interactive AIS integrated map based tracking supports dynamic operational decision making, push alerts on deviations from planned route and optimal speeds. Vessel fuel consumption tracking and business intelligence driven dashboards enables compliance to marine safety, reliability and efficiency performance parameters. The tracking data is displayed on google, ArcGIS or any custom map.

## Intelligent Trucking Operations

Achieve operational excellence with ground transportation of drilling rigs and materials, in particular cargo baskets, tubular loads, fabricated units, oversized loads and bulk materials (water, chemicals, condensate, mud, fuel) supporting multiple business models of private fleet, outsourced fleet, third party logistics (3PL) operations and fourth-party logistics (4PL) operations.

## Last Mile Delivery With Drones

iLogistics offers an intelligent cargo logistics technology platform with automated transport mode selection among drones, helicopters, trucks and supply vessels, considering cargo specification, fleet availability, costs and other operational constraints including hazardous nature & weather. The technology platform supports cargo demand planning, load consolidation, automated transport mode allocation, logistics optimization, drone scheduling, drone run optimization and performance monitoring.

## Logistics Control Tower

iLogistics offers a centralised dispatching and monitoring hub combining people, process, data and organization to monitor logistics activities. The control tower enables real time decision making by providing end to end visibility, deeper insights on potential disruptions and translating data into insights using predictive analytics.



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