CM

PREDICTIVE
INTELLIGENCE
PLATFORM
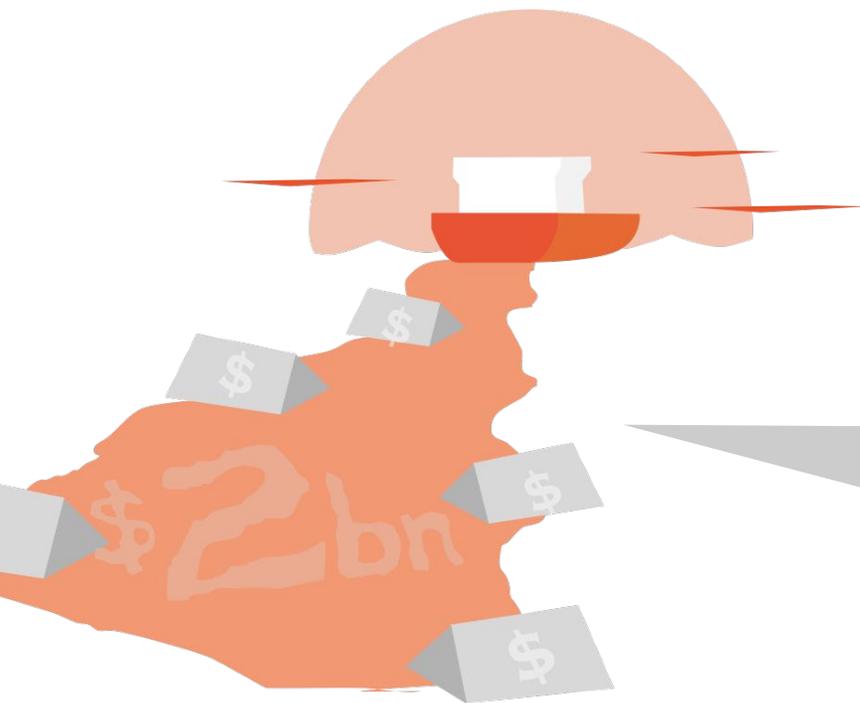
clearmetal

INSIGHT PAPER:

21st Century Carrier

Growing Challenges

Container-shipping has seen a meteoric rise since the '50's, supporting the ever increasing demands of the global economy. But the carriers who should be credited with driving worldwide trade face uncertain futures despite impressive adaptation. New complexities must be understood and conquered to drive profitability and build the profile of a 21st century carrier-- a technology-enabled, data-driven carrier that uses Predictive Intelligence to create true asset efficiency.
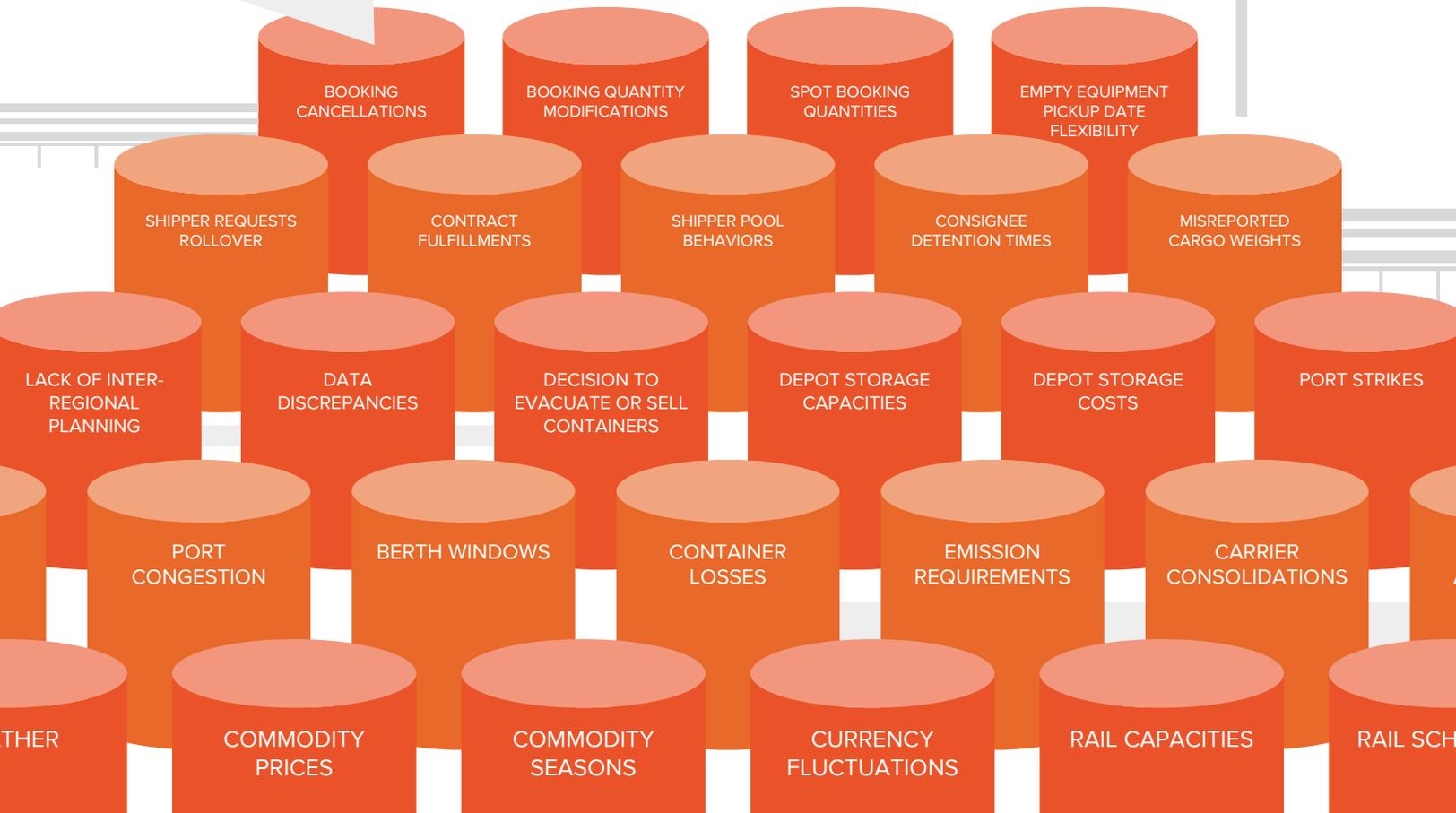
Carriers who set the bar in global trade are discovering that these new challenges are unlike any of the past. Today's market volatility, operational complexity, and customer unpredictability make efficient operations nearly impossible.

ClearMetal estimates more than $2B is left on the table by the industry annually due to container costs, repositioning, missed revenue, and vessel inefficiencies.

Becoming An Optimal Carrier

The only way to conquer shipping complexity and drive true efficiency is with an entirely different approach. Carriers will need to focus on the underlying flow of commodities, customer behaviors, market movements-- and not only embrace this complexity but leverage the mountain of data that results.

If you can understand every bit of data ... the thousands of possibilities for every container event-- by day, facility, and voyage-- then can you best layer on the assets, allocating containers and vessels most efficiently.

BOOKING CANCELLATIONS

BOOKING QUANTITY MODIFICATIONS

SPOT BOOKING QUANTITIES

EMPTY EQUIPMENT PICKUP DATE FLEXIBILITY

SHIPPER REQUESTS ROLLOVER

CONTRACT FULFILLMENTS

SHIPPER POOL BEHAVIORS

CONSIGNEE DETENTION TIMES

MISREPORTED CARGO WEIGHTS

LACK OF INTER-REGIONAL PLANNING

DATA DISCREPANCIES

DECISION TO EVACUATE OR SELL CONTAINERS

DEPOT STORAGE CAPACITIES

DEPOT STORAGE COSTS

PORT STRIKES

PORT CONGESTION

BERTH WINDOWS

CONTAINER LOSSES

EMISSION REQUIREMENTS

CARRIER CONSOLIDATIONS

...THER

COMMODITY PRICES

COMMODITY SEASONS

CURRENCY FLUCTUATIONS

RAIL CAPACITIES

RAIL SCH...
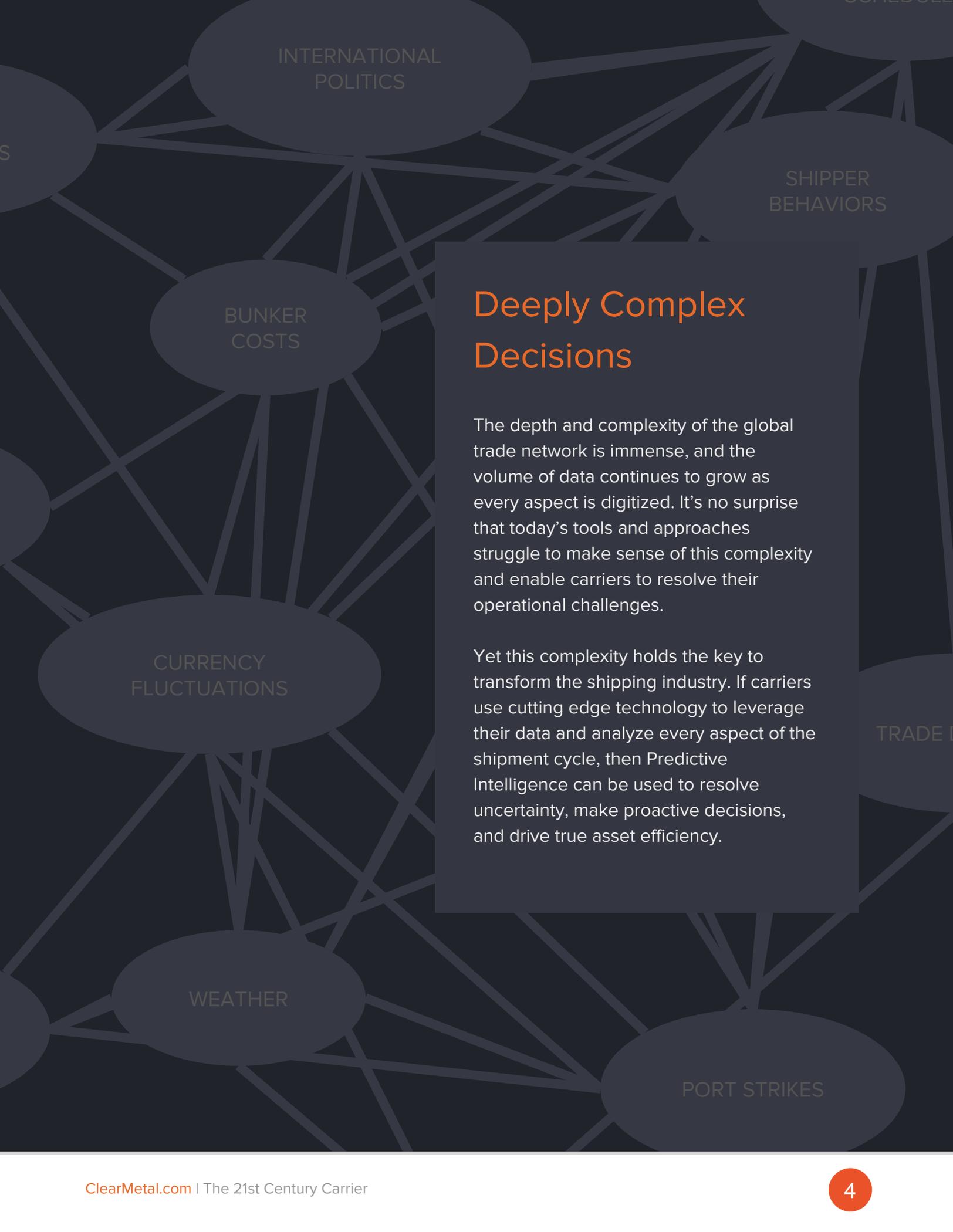
The Dependencies
Of Asset Efficiency

To efficiently allocate assets, you must first understand all the uncertainties, map every contingency, accurately predict all outcomes, and use data to determine the best course of action. **In short, pay attention to the data, not the metal.**

But understanding one element of data is required before utilizing the next. This chain of data dependencies creates a need to comprehend and resolve all challenges before allocating container and vessel assets more efficiently.

The Necessary Order
Of Challenges

1st Predict Market & Shipper Behavior

2nd Accurately Forecast Inventory

3rd Optimize Container Positioning

4th Maximize Vessel Utilization

To fully maximize vessel space, you must first optimize at the smallest unit level: the container (and the data beneath it).

INTERNATIONAL
POLITICS

SHIPPER
BEHAVIORS

BUNKER
COSTS

CURRENCY
FLUCTUATIONS

TRADE

WEATHER

PORT STRIKES

Deeply Complex Decisions

The depth and complexity of the global trade network is immense, and the volume of data continues to grow as every aspect is digitized. It's no surprise that today's tools and approaches struggle to make sense of this complexity and enable carriers to resolve their operational challenges.

Yet this complexity holds the key to transform the shipping industry. If carriers use cutting edge technology to leverage their data and analyze every aspect of the shipment cycle, then Predictive Intelligence can be used to resolve uncertainty, make proactive decisions, and drive true asset efficiency.

Data Science & Predictive Intelligence:
New Approach, Only Solution

The only way to drive true efficiency is with a new approach. The 21st century carrier will focus on the enormous volume of underlying event data to inform every operational decision. Data Science will be needed to manage that process. Data Science is the practice of analyzing systems to extract knowledge, and has been used to conquer challenges in internet search, DNA sequencing, and financial speculation. Predictive Intelligence uses Data Science to forecast the future and enable decision making with assurity.

By leveraging the underlying data of customer behavior, market movements, and operational contingencies at the daily, facility, and container level, Predictive Intelligence has been proven by leading carriers to dramatically improve forecast accuracy and range.

IMPROVE EQUIPMENT FORECAST ACCURACY

⇧ **30%**

ENHANCE FORECAST GRANULARITY

FACILITY & DAILY-LEVEL

EXTEND FORECASTS TO

8 WEEKS

Technologies of Data Science

Big Data & Cloud

Process, mine, and analyze immense volumes of data on scalable platforms in on-demand data centers. Leverage the power of global, distributed computing with unprecedented speed, in real-time.
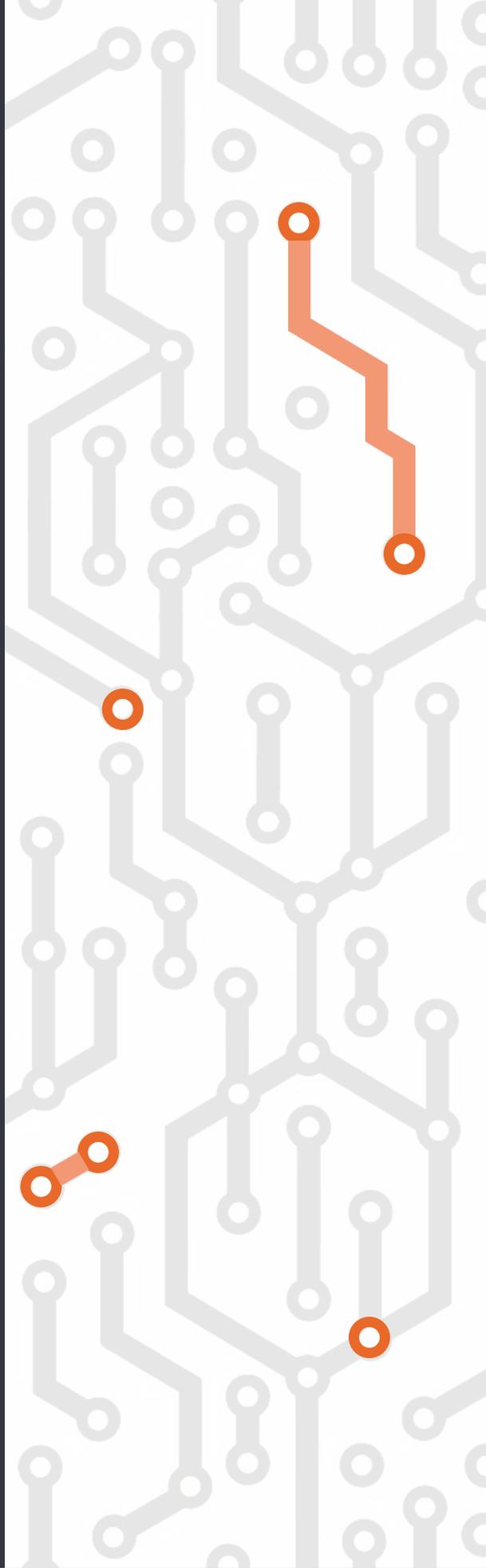
Machine Learning

A set of technologies that enable computers to learn complex patterns without being explicitly programmed. Used for sophisticated prediction, machine learning systems build models from data rather than following predetermined, static algorithms.

Artificial Intelligence

A field of computing that allows intelligent decisions to emerge from complex data sets. By combining big data, machine learning, and cloud computing, automation for continual efficiency improvement is unlocked.

Probability Simulations

The process of modeling a network of events in which each possible contingency is simulated and evaluated to determine the probability of specific outcomes.

Improve Efficiency, Drive Profit

Today's operational complexities can now be conquered. Data Science and Predictive Intelligence are available to carriers. New tools and platforms will transform shipping operations and unlock a new standard for asset efficiency. Despite industry challenges, it is an exciting time because dramatic improvement is possible.

The information in this whitepaper is of special interest to carrier operations leadership. Additional material for a 21st Century Carrier can be found at...

http://www.clearmetal.com/insights

www.clearmetal.com
info@clearmetal.com
+1-415-857-4390

About ClearMetal

ClearMetal is a Predictive Logistics company using data science to unlock unprecedented efficiencies for global trade. Its Predictive Intelligence Platform helps solve the most complex operational problems in container-shipping.

" *ClearMetal's method for solving the equipment and repositioning problem is the next big thing to transform container shipping... It's no surprise the ClearMetal platform has yielded millions of dollars in incremental savings for large carriers and has produced results far superior to any other equipment optimization or business intelligence solution.*

-- Jim Schreitmueller, former Global Head of Sales of Navis and International Asset Systems (IAS)

Solutions & Case Studies

Equipment Management
Equipment teams at top carriers saw a 30-60% reduction in error of forecasting US export demand and inventory supply, with millions in estimated annual storage, gate, chassis and handling cost reduction as well as incremental booking revenue to subsidize repositioning.

Vessel Planning
A carrier noticed having to massively overbook a vessel in order to maximize slot utilization. By accurately predicting both the count and weight of empty and laden cargo, a top carrier predicted ClearMetal could deliver $12M in annual US value from more fully profiled vessels.

Sales & Trade
Forecasting container inventories within a handful of containers by facility, at the daily level and up to 8 weeks ahead, ClearMetal gives Sales a much clearer picture of what to sell, driving millions in annual revenue from additional export bookings and improved customer service levels.

Business Intelligence
Through data visibility, insight and real-time analytics, Liner Business Process, IT and Management can track KPIs, visualize trends, and pull custom reports in minutes with Predictive Intelligence at their fingertips.