



Elane Inc. Company Introduction

March 2025



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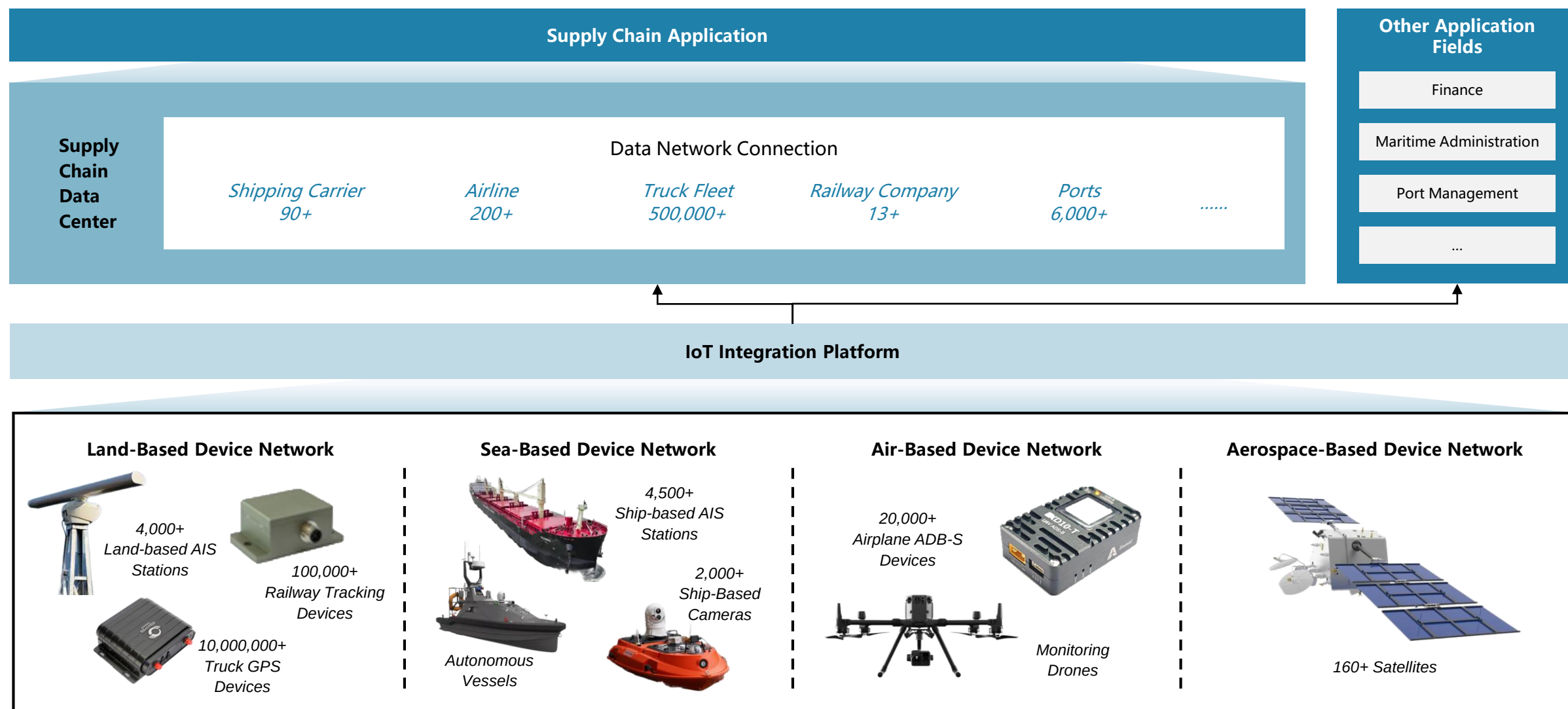
1. Core Competitive Architecture



3. Technological Innovation



A vast network of devices, powerful technological capabilities, and extensive data applications are Elane's core competitiveness in the field of big data



Elane drives continuous technological innovation as a strategic imperative, expanding our diversified service portfolio to deliver enhanced intelligence solutions for global clients

Machine Learning & Strategy Algorithms

GBDT Models

Used for **forged signal detection, vessel voyage duration prediction, and port operation time forecasting**

Stacking Framework

Predicts vessel destination ports using Random Forest and LSTM as base models, with logistic regression as meta-model to fuse probabilities and output destination rankings

Multi-Model Business Strategy Framework

Predicts ETA for container ship destinations by integrating linear models, DNNs, GBDTs, Transformers, and ST-GCN. Balances rapid response in simple scenarios with high accuracy in complex scenarios

Bayesian Networks

Assess ship accident risks via probabilistic modeling

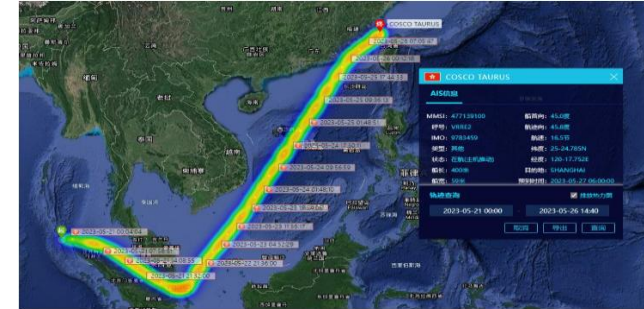
Complex Network Analysis

Identifies **container ship communities, key vessels, and structurally similar ships**

Super Learner Meta-Learning Framework

Optimizes port scheduling using XGBoost/LSTM (prediction), NSGA-II/DQN (optimization), rule engines (rules), and neural network fusion (meta-model) to **generate optimal scheduling commands**.

Sustainability / Carbon



Combine the motion state and trajectory of the ship to calculate and form the **carbon emission trajectory** of the ship

AI



Deploy DeepSeek LLM model to build the enterprise level local **privatization knowledge management base**



Thank You

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