

CASE STUDY

# Flexivan Transforms Fleet Logistics with Real-Time Predictive Data Intelligence

Flexivan operates one of North America's largest intermodal chassis fleets, coordinating thousands of assets across ports and depots. Real-time visibility enables proactive decisions and faster operational responses in complex logistics networks.

Research shows that digital supply chains with end-to-end visibility and real-time analytics improve planning, execution, and forecasting accuracy. To address legacy reporting limitations, Flexivan partnered with Data-Sleek to build a cloud-native platform supporting predictive logistics, real-time insights, and measurable operational gains.

## Challenge: Visibility and Forecasting Gaps

Flexivan's large intermodal chassis operations faced fragmented data and limited real-time visibility, causing hours of daily manual reconciliation and slower redeployment decisions. Key challenges included:

- **Fragmented Operational Data:**  
Multiple systems created inconsistencies, forcing daily manual reconciliation and delaying redeployment across hundreds of locations.
- **Financial Inefficiency:**  
Idle assets and process delays reduced fleet utilization and increased costs.
- **Customer Service Delays:**  
Teams lacked real-time insights, slowing responses and frustrating clients.
- **Forecasting Limitations:**  
Siloed reporting made demand planning difficult, sometimes causing under- or over-deployment.
- **Strategic & Operational Risk:**  
Lack of a governed platform constrained scaling and reduced leadership confidence.

## The Solution:

A Phased, Data-Driven Approach

### Discovery & Assessment

Data-Sleek conducted workshops with operations, planning, and technical teams to assess ERP, IoT, and port datasets. Integration gaps, reporting delays, and forecasting limitations were validated. Key pain points and high-priority predictive use cases were identified, ensuring alignment with Flexivan's strategic goals.

### Strategy & Roadmap

A phased roadmap prioritized predictive logistics, operational visibility, and dashboards. A pilot POC tested predictive chassis deployment models, demonstrating early improvements in forecast accuracy and asset redeployment before full rollout, minimizing risk and optimizing investment.

### Technology Implementation

A Snowflake-based data warehouse unified ERP, IoT, and operational datasets into a single, governed source of truth. ML models analyzed historical and real-time data to predict chassis demand. IoT sensors tracked assets across ports and depots, feeding dashboards with real-time insights. Modular architecture enabled future scalability without major rework.

### Governance & Data Reliability

Ownership of operational and telemetry data was clearly defined. Automated validation and alerting mechanisms ensured data accuracy. Dashboards and ML outputs were monitored continuously, building trust among planners and customer service teams.

### Change Management & Enablement

Data-Sleek trained operators and analysts to use dashboards and ML insights independently, accelerating adoption. Teams gained confidence in decision-making, improving operational efficiency and customer responsiveness.

### Key Outcome of Approach

The phased implementation allowed Flexivan to move from fragmented manual reporting to predictive, real-time operations. Early POC results improved forecast accuracy and asset deployment, addressing visibility, forecasting, and efficiency challenges.

## Key Outcomes:

### Measurable Business and Operational Impact

#### 1. Operational Efficiency

- **95% reduction in manual data reconciliation:**  
Unified data pipelines replaced spreadsheets, freeing analysts to focus on higher-value tasks.
- **3x faster inventory visibility:**  
Real-time tracking across ports and depots improved operational agility and reduced delays in asset redeployment.
- **30% improvement in operational efficiency:**  
Streamlined processes and predictive insights reduced delays and optimized resource utilization across the fleet.
- **60% reduction in data engineering effort:**  
Modular, scalable architecture minimized maintenance and enabled teams to focus on insights and predictive modeling.

## 2. Forecasting & Predictive Performance

- **80%** improvement in chassis demand forecast accuracy: ML models and historical + real-time data allowed planners to optimize fleet deployment.
- **12+** predictive KPIs: These included chassis demand forecast accuracy, asset redeployment speed, customer SLA compliance, data reliability, and fleet utilization. Collectively, they enabled proactive operational planning and decision-making.

## 3. Customer & Service Impact

- **50%** faster customer service response: Dashboards provided instant insight into chassis availability, accelerating issue resolution and improving SLA adherence.
- **<30-** second SLA for critical queries: Frontline teams gained near real-time access to operational data for time-sensitive decisions.

## 4. Technical Reliability & Data Coverage

- **Expanded telemetry coverage:** IoT integration delivered full visibility across assets, supporting real-time monitoring and predictive insights.
- **50%** increase in data reliability: Standardized data models eliminated inconsistencies and improved trust in dashboards and analytics outputs.

## 4. Technical Reliability & Data Coverage

- **\$3M** projected annual cost savings: Optimized predictive logistics minimized underutilized assets and reduced operational waste.

### The Impact:

#### Measurable Transformation and Strategic Advantage

Flexivan's modernized data infrastructure, powered by cloud technology, IoT, and machine learning, enabled predictive visibility across the entire fleet. Key impacts include:

## 1. Business Value Realized

- Faster, more confident decision-making through predictive insights into chassis demand and redeployment
- Reduced operational inefficiencies, improving fleet utilization and lowering cost exposure
- SLA compliance improved thanks to real-time operational dashboards

## 2. Operational Improvements

- Inventory and asset management became proactive rather than reactive, reducing dwell times at ports and depots
- Predictive KPIs enabled optimized routing, maintenance scheduling, and resource allocation

## 3. Strategic Advantage

- Predictive analytics empowered Flexivan to anticipate demand, scale operations, and integrate future acquisitions seamlessly
- Modular architecture supports ongoing growth without costly infrastructure changes

## 4. Cultural and Organizational Adoption

- Teams were trained to self-serve dashboards and insights, accelerating adoption of predictive workflows
- Data-literate culture improved cross-team collaboration and operational agility

## 5. Long-Term Sustainability

- Governance and standardized models ensure ongoing data reliability, operational transparency, and risk compliance
- Continuous monitoring and alerting maintain confidence in dashboards and predictive outputs

### Conclusion:

#### Turn Data into Competitive Advantage

Data-Sleek helped Flexivan move from fragmented reporting to a unified, predictive, and scalable analytics platform. Organizations can benefit from Data-Sleek's structured approach, including:

- End-to-end advisory and implementation for cloud, IoT, and ML integration.
- Predictive dashboards that enable faster, data-driven operational and strategic decisions.
- Governance frameworks ensuring long-term reliability and compliance.

## About Data-Sleek

Data-Sleek® is a consulting agency and a leading provider of comprehensive data management solutions. We specialize in data transformation, data migration, data integration, data architecture, data warehousing, and database consulting. Our commitment to client satisfaction empowers organizations of all sizes to unlock the full potential of their data assets. Data-Sleek is a trusted partner of Fortune 500 companies, dedicated to innovating and revolutionizing the way businesses operate.

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