FORTUNA
GLOBAL SUPPLY CHAIN SYSTEMS

FORTUNA
DemandSense
AI DEMAND & INVENTORY OPTIMIZER

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"The Future of Enterprise Intelligence."

▦ Company Overview

Fortuna Global Supply Chain Systems is a next-generation enterprise technology company revolutionizing the global logistics and supply chain landscape.
With a vision to create **intelligent, transparent, and connected ecosystems**, Fortuna blends innovation, data intelligence, and automation to help businesses achieve supply chain excellence.

Established with the belief that **efficiency is the new currency**, Fortuna empowers organizations to manage operations smarter — from demand planning to last-mile delivery — through real-time insights and seamless digital integration.

We are not just a technology provider; we are **partners in transformation** — driving global supply chain optimization with precision, performance, and predictive intelligence.

Fortuna Demand Sense- AI Overview

"Fortuna –Demand sense" is an AI-driven demand and inventory optimization system designed to forecast, balance, and synchronize supply chain operations with real-time market data. It leverages machine learning, predictive analytics, and IoT-enabled inputs to help enterprises maintain the perfect balance between demand and supply — reducing stockouts, minimizing overstock, and improving working capital efficiency.

"DemandSense transforms uncertainty into predictability — turning every data point into a decision."

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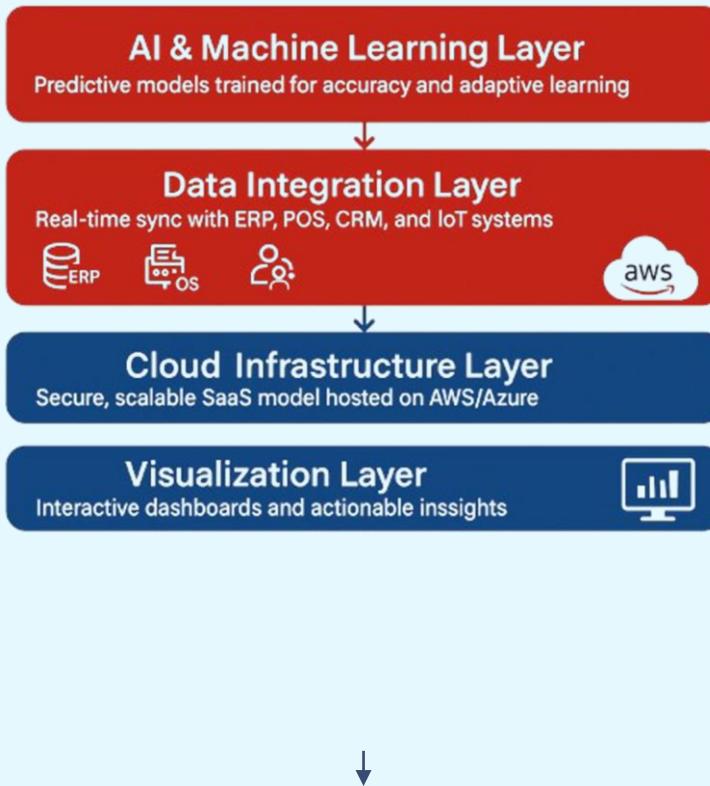AI DEMAND & INVENTORY OPTIMIZER

Purpose & Vision :

Modern supply chains face one consistent challenge — **demand volatility**.

Fortuna DemandSense eliminates the guesswork by applying **AI-powered forecasting models** that continuously learn from sales history, seasonality, pricing trends, and external market signals.

⚙ System Architecture

"**Fortuna Demand sense**" operates on a 3-layer architecture: runs on the *Fortuna Intelligent Cloud Platform*, comprising:

1 **AI & Machine Learning Layer** – Predictive models trained for accuracy and adaptive learning.
2 **Data Integration Layer** – Real-time sync with ERP, POS, CRM, and IoT systems.
3 **Cloud Infrastructure Layer** – Secure, scalable SaaS model hosted on AWS/Azure.
4 **Visualization Layer** – Interactive dashboards and actionable insights.

Product Modules, Sub-Modules & Operational Functionality

1. Demand Forecasting Engine

📖 Submodules:

- **Historical Data Modelling** – Learns from past sales, promotions, and seasonal behaviour.
- **AI Forecast Generator** – Produces short-term, mid-term, and long-term forecasts.
- **External Signal Integration** – Considers weather, events, and market indexes.
- **Forecast Accuracy Tracker** – Monitors prediction reliability using MAPE & RMSE.

⚙ Operational Functionality:

- Automatically collects and cleans data from ERP/POS systems.
- Generates rolling forecasts updated daily or weekly.
- Uses deep learning algorithms to detect new demand trends.
- Provides scenario simulations ("what-if" analysis).

📑 2. Inventory Optimization

📖 Submodules:

- **Stock Balancing Engine –** Calculates optimal reorder levels and stock placement.
- **Safety Stock Calculator –** AI-based buffer computation based on demand volatility.
- **Multi-Location Sync –** Tracks stock movement across warehouses and retail points.
- **Replenishment Recommendation System –** Suggests automated restock triggers.

⚙ Operational Functionality:

- Analyzes SKU-level performance to prevent overstock or understock.
- Uses AI to recommend ideal safety stock levels.
- Syncs with Fortuna SIMS for real-time replenishment actions.
- Generates daily replenishment lists for procurement automation.

📈 3: Sales & Market Intelligence

📕 Submodules:

- **Market Demand Signals –** Captures patterns from sales trends and promotions.
- **Pricing Sensitivity Analysis –** Correlates price changes with demand fluctuations.
- **Customer Behaviour Modelling –** AI-driven segmentation by purchasing habits.
- **Competitor & External Data Feed –** Integrates APIs for external trend monitoring.

⚙ Operational Functionality:

- Detects upcoming demand surges or slowdowns using live data feeds.
- Recommends pricing or promotional adjustments.
- Correlates marketing spend with demand lift.
- Forecasts category-wise growth trends across locations.

⊕ 4. Procurement & Supply Synchronization

📚 Submodules:

- **Procurement Alignment Engine –** Links demand forecast with supplier capacity.
- **Lead Time Analyzer –** Calculates dynamic lead times based on supplier reliability.
- **Supplier Collaboration Portal –** Real-time visibility for vendors.
- **AI Supply Planner –** Suggests reorder timing and quantity automatically.

⚙ Operational Functionality:

- Converts forecasted demand into purchase plans.
- Tracks supply constraints and vendor delays.
- Optimizes supplier selection based on cost, speed, and reliability.
- Generates real-time alerts for order synchronization.

💼 5. AI Analytics & Insights

📚 Submodules:

- **Forecast Accuracy Dashboard –** Measures actual vs predicted demand.
- **Inventory Turnover Analytics –** Visualizes stock movement efficiency.
- **Cost Optimization Reports –** Tracks savings from optimized planning.
- **Performance Scorecards –** Evaluates planners, suppliers, and regional results.

⚙ Operational Functionality:

- Interactive dashboards built on Fortuna BI Suite.
- AI recommendations for continuous improvement.
- Configurable KPI boards for management review.
- Exportable reports for finance and operations teams.

📚 Submodules:

- **ERP Integration API –** Two-way data sync with SAP, Oracle, Tally, and Fortuna SIMS.
- **IoT Integration Gateway –** Connects warehouse sensors and sales devices.
- **Automation Bot Engine –** Executes forecast-to-order actions automatically.

⚙ Operational Functionality:

- API-based integration with minimal configuration.
- Real-time push/pull data between systems.
- Role-based access control with audit trail.
- Secure data flow between AI Engine, Cloud, and User Interface.

A. Demand Planning Cycle

1. Data Collection
2. AI Forecast Generation
3. Validation & Accuracy Check
4. Supply Synchronization
5. Inventory Replenishment

B. Forecast Optimization Cycle

1. AI Learning from Historical Data
2. Model Training & Tuning
3. Forecast Adjustment
4. Accuracy Feedback Loop

Fortuna Demand Sense Advantages

Feature	Business Value
AI driven Fore casting	30–50% improvement in forecast accuracy
Automated Replenishment	Reduces manual planning time
Real-Time Visibility	Enhances coordination across teams
Cost Optimization	Reduces excess stock and wastage
Integrated Intelligence	Seamless link with SIMS, TMS & ERP
Continuous Learning	Forecasts improve automatically over time

🏭 Industries Served

Automotive & Industrial Manufacturing

FGSCM - supports the automotive sector with advanced logistics planning, vendor coordination, and predictive maintenance scheduling. From global parts movement to plant-level production support, our systems reduce lead times and enhance supply chain agility

Ports & Logistics

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Food & Beverage Distribution

Freshness and safety are at the heart of Food & Beverage -supply chains. We enable end-to-end visibility with IoT-driven tracking, automated quality checks, and predictive demand planning—ensuring traceability from farm to fork.

Fashion & Retail Industry

With High seasonal demand & agile supply chain Planning, Fortuna will empowers retailers with faster replenishment & reduces stock outs

Pharma & Healthcare

Medical safety and regulatory compliance are non-negotiable. We provide automated solutions for cold chain logistics, product traceability, and compliance monitoring—ensuring life-saving medicines and healthcare products reach destinations safely and efficiently.

E-Commerce & Distributional Channels

In a fast-moving E-Com world, speed and efficiency are critical. Our platforms enable automated order management, demand forecasting, and last-mile delivery optimization—ensuring customers receive the right products, at the right time, every time.

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