TECH OFFER

AI-Powered Logistics Management & Fulfilment Platform for Global Operations

KEY INFORMATION

TECHNOLOGY CATEGORY:
Infocomm - Artificial Intelligence

TECHNOLOGY READINESS LEVEL (TRL): **TRL8**
COUNTRY: **SOUTH KOREA**
ID NUMBER: **TO175440**

OVERVIEW

This technology is an AI-powered logistics orchestration platform designed to optimize warehouse management, order fulfilment, and transportation across distributed networks. It integrates advanced algorithms for demand forecasting, route optimization, and real-time inventory visibility. By connecting multiple warehouse operators and transportation providers into a unified system, the platform enables businesses to access flexible, on-demand logistics capacity without the need for owning physical assets.

The system is built with modular APIs, allowing seamless integration with e-commerce platforms, ERP systems, and third-party logistics providers. Its scalable architecture supports rapid deployment in diverse market environments, making it suitable for businesses facing seasonal demand fluctuations or seeking cross-border operational efficiency.

TECHNOLOGY FEATURES & SPECIFICATIONS

- AI-Driven Forecasting: Machine learning models analyze historical sales, promotions, and market trends to predict demand with high accuracy.

- Dynamic Fulfilment Routing: Automated allocation of orders to optimal fulfilment centers based on location, capacity, and cost parameters.

- Real-Time Inventory Synchronization: Continuous data updates across multiple warehouses to maintain accurate stock levels.

- Multi-Modal Transport Coordination: Integration with domestic and cross-border carriers, enabling flexible transport modes (road, air, sea).

- API-First Architecture: Supports plug-and-play integration with ERP, WMS, OMS, and e-commerce platforms.

- Scalable Cloud Infrastructure: Handles high transaction volumes with robust uptime and disaster recovery protocols.

- Analytics Dashboard: Centralized interface for monitoring KPIs, delivery performance, and operational bottlenecks.

POTENTIAL APPLICATIONS

- E-commerce fulfilment for domestic and cross-border markets

- Omnichannel retail distribution networks

- 3PL coordination platforms

- Reverse logistics and returns management

- SME access to on-demand warehousing capacity

MARKET TRENDS & OPPORTUNITIES

This technology delivers asset-light, AI-driven logistics orchestration that enables businesses to flexibly access and optimize warehouse and transportation resources across a distributed network—without owning physical assets. Key differentiators include:

1. Network-Orchestrator Model – Connects multiple independent logistics providers into a unified, real-time network.

2. Dynamic, AI-Powered Allocation – Routes orders to optimal fulfilment centers and transport modes based on cost, location, and capacity.

3. Seamless API Integration – Designed to integrate quickly with ERP, WMS, OMS, and e-commerce platforms, reducing deployment time and IT overhead.

4. Scalable, Pay-Per-Use Structure – Allows businesses to expand or contract logistics capacity instantly, ideal for seasonal demand or market entry strategies.

5. Border Capability – Built for both domestic and cross-border trade, supporting multi-modal transport coordination and customs-ready workflows.

UNIQUE VALUE PROPOSITION

Unlike conventional warehouse or transport management systems, this platform acts as a logistics network orchestrator, enabling businesses to dynamically access, allocate, and optimize logistics resources across multiple independent providers. It eliminates the need for fixed contracts or owned facilities, offering a pay-per-use model supported by AI-driven decision-making.

This ensures cost efficiency, operational flexibility, and scalability—critical factors for fast-moving consumer industries and global trade players.