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# NIPA Weekly Issue Report — Intelligent Safe Distribution Platform based on Blockchain and AI Technology



Leadpoint System · Following

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## I. Please introduce your company and your products.

Leadpoint System, Inc. is a company specializing in blockchain solutions and intelligent artificial intelligence (platform development) and has accumulated know-how through IT business since 2008. Since 2017, it has established itself as a blockchain and AI specialist company, providing the best technology in this field.

The company has its own blockchain platform software quality 1st grade, selected as Korea's top 5 blockchain company by APAC CIO Outlook, acquired TI-1 grade in NICE investment technology evaluation, and carries out various projects in financial, public, and manufacturing fields using blockchain and AI technology.

## Leadpoint System product introduction

## **(1) FuNet (TaaS)v1.0**

FuNet(FuNet Future Network) is a private mainnet(hybrid model) that applies non-competitive consensus algorithm technology to ensure uninterrupted block creation without mining, rewards, or forks.

In addition, it is a mainnet model optimized for token securities specialized in security and failure response and has infinite market expandability in various real asset areas such as real estate, artwork, music, movies, and copyright.

## **(2) NeuralBlock (BaaS)v1.0**

NeuralBlockv1.0 is a blockchain platform that applies distributed consensus technology. Distributed consensus technology is a decentralized PoN (Proof of Nonce) non-competitive consensus algorithm that guarantees fair participation opportunities for all nodes, ensuring security, scalability, and stability.

## **(3) BioTrack (SaaS)v2.0**

BioTrackv2.0 supports efficient and reliable logistics and distribution services through distribution history information collected by sensors for drug management, and measures quality changes during the distribution process in real time through a drug quality management algorithm. This is a platform that enables proactive response to distribution accidents by predicting them.

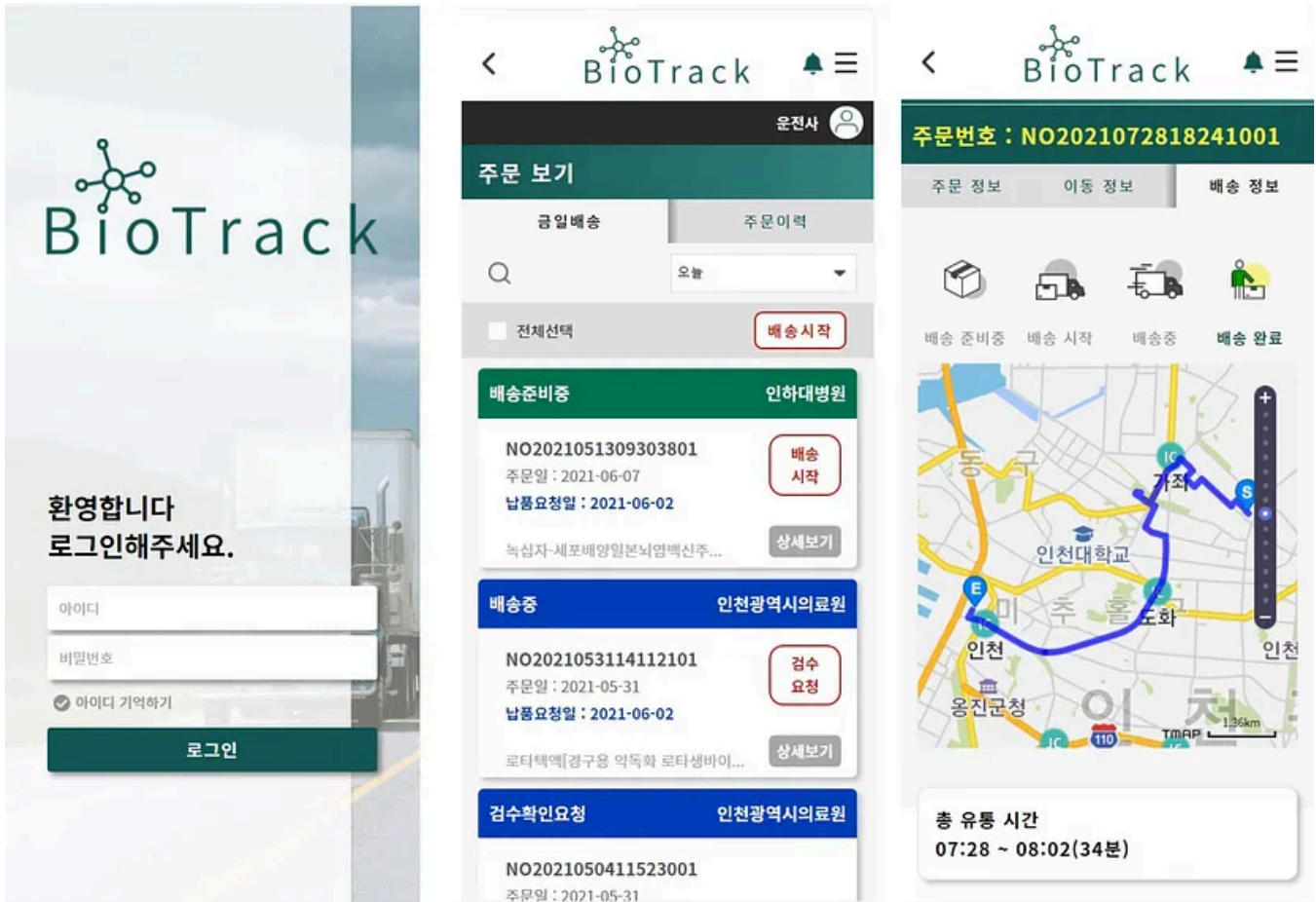
BioTrack, an intelligent safety distribution platform, is a safety distribution platform composed of Neural Block, our blockchain platform, KSB artificial intelligence edge platform technology, and industrial Internet of Things (IoT) multi-purpose sensing device technology.

In 2022, we succeeded in commercializing Software as a Service through the NIPA Core Industry Cloud Flagship Project, providing the following functions.

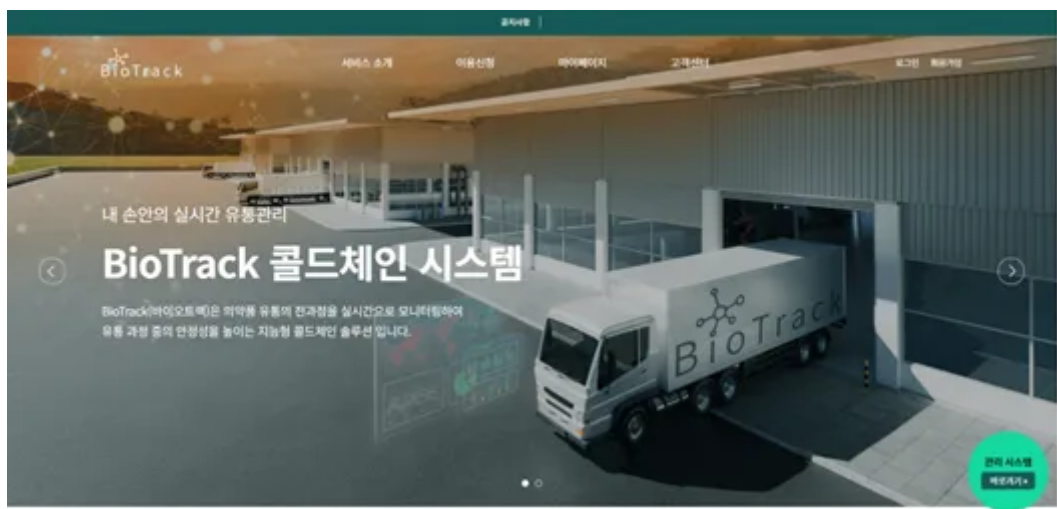
**Provides real-time dashboard of fresh logistics distribution status.**

- Providing risk prediction services using intelligent algorithm technology
- Providing real-time data collection and analysis data through linkage with IoT technology

- Providing delivery route and temperature and humidity information provided by the manufacturer to the consumer.
- Records and forgery verification of genuine product distribution history quality information using blockchain technology.



[Image 1] BioTrack Mobile Application



[Image 2] BioTrack Portal(<https://biotrack.co.kr/>)

## **II. I am curious about the background of the intelligent safety distribution platform industry based on blockchain and AI technology and why you chose this industry.**

As a result of comparing and analyzing the growth rate between medicines that require cold chain and medicines that do not require it (non-cold chain), the growth rate of all medicines was 33%, while the growth rate of cold chain medicines was twice that of medicines. It reached close to 60%. Accordingly, advanced overseas countries have focused on logistics as a next-generation core industry and have already promoted various response strategies, and Leadpoint System has also developed a safety logistics platform in line with this trend and succeeded in commercializing SaaS.

The Leadpoint System provides technology that allows customers to check the history of counterfeit medicines quickly and easily through NFT (Non-fungible token) authentication of products stored in the blockchain. In addition, the purpose is to develop safe logistics management technology to safely manage and monitor status information of cargo containing pharmaceuticals in order to minimize losses to public health and companies due to deterioration or damage of pharmaceuticals.

## **III. I am curious about the current status of the cold chain market at home and abroad.**

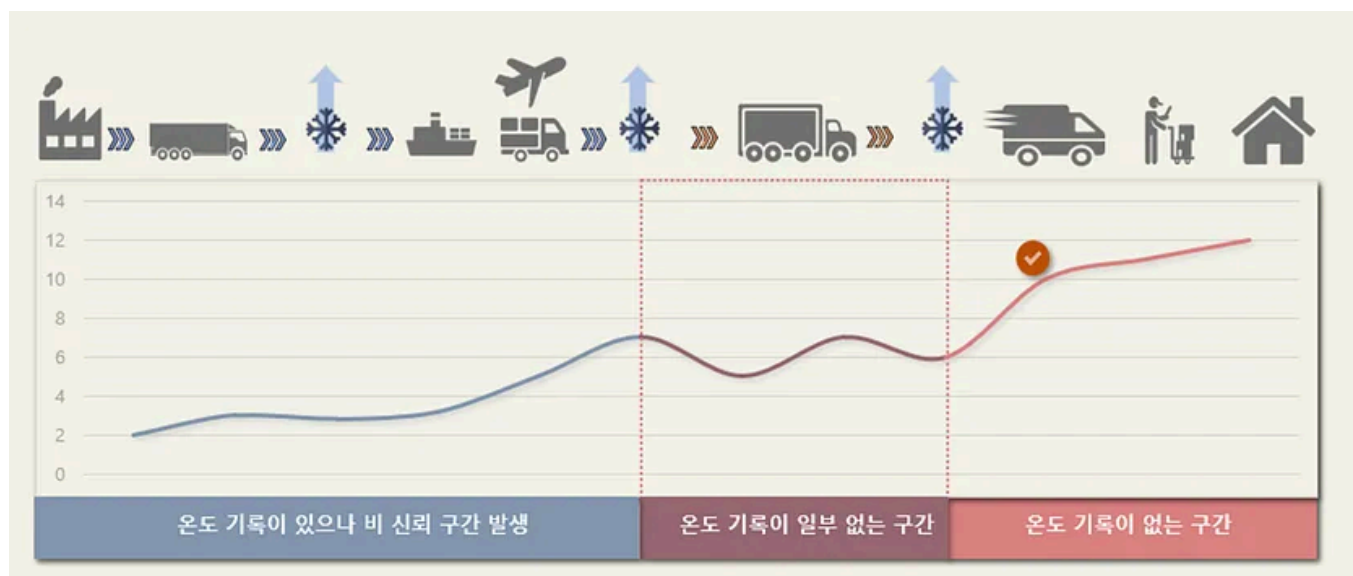
The cold chain market is divided into refrigerated storage and refrigerated transportation depending on the type of service. The size of Korea's food cold chain market calculated through this field is a total of KRW 1.5821 trillion as of 2018, with the refrigerated storage market size being KRW 536.3 billion. The size of the refrigerated transportation market recorded KRW 1.0458 trillion. As of 2016, the size of the domestic biopharmaceutical logistics market is KRW 350 billion and is increasing by 30% every year. In addition, domestic logistics companies have recently entered the pharmaceutical logistics market through mergers and acquisitions, quality certification, and organizational expansion.

According to the 'Global Health Industry Trends' report published by the Korea Health Industry Development Institute in 2023, the size of the cold chain pharmaceutical service market will increase from USD 20.4 billion (approximately KRW 27.3258 trillion) in 2022 to USD 24.4 billion (approximately KRW 32 trillion) in 2027. It is expected to grow to KRW 683.8 billion). In addition, an official from the

Korea Health Industry Development Institute said that with recent innovations in medicine and treatment technology, biopharmaceuticals have become a major driving force in increasing spending in the global pharmaceutical market, and as new drug research and development and biopharmaceutical sales increase, It was revealed that the pharmaceutical cold chain service market is also expanding in size.

#### IV. I am curious about the problems occurring in the current cold chain process.

Temperature management in the cold chain process is carried out at all stages from manufacturers to distributors, but there is a problem where temperature records are partially or completely absent, i.e., unreliable intervals, and temperature records do not appear in the supply chain.



[Image 3] Number of issues occurring in the cold chain logistics process.

#### V. I am curious about the implications of the intelligent safety distribution platform market based on blockchain AI technology.

BioTrack technology enables rapid and accurate data collection in terms of temperature management in the logistics distribution process, contributing to strengthening cooperation between manufacturers and distributors and minimizing unreliability intervals. Safe storage and sharing of temperature records using blockchain and NFT technology can be the basis for preventing and responding to problems that may occur in the logistics process.

Additionally, real-time monitoring and tracking of products using BioTrack provides logistics managers with the opportunity to quickly identify temperature changes

and condition abnormalities and take action. This ensures the quality and safety of the product and can further increase the company's brand image and customer trust.

Governments and regulatory agencies need to encourage the use of ICT convergence technologies such as BioTrack and thereby promote data transparency related to temperature management in the logistics process. A high level of temperature management and data protection must be ensured through the establishment of logistics industry standards and strengthening of regulations.

Policies and programs that promote cooperation between stakeholders within the logistics industry must be continuously developed, and information sharing and cooperation between each party, such as distributors, manufacturers, and logistics managers, must be promoted to address temperature management issues more effectively in the logistics process. We need to be able to resolve it.

Reference: <https://www.globalict.kr/news/trend/global.do?menuCode=010300&knwldNo=143890>

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