

DTONIC CORPORATION

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We will bring Your Data to New Value through our Engine like Tonic!



Let's Tonic Data

DTONIC CORPORATION

02

TO THE

ACCELERATE BIG DATA PROCESSING
ACROSS SMART-X INDUSTRIES

03

DATA-DRIVEN

To support the development of various services and solutions at the forefront of future industries driven by big data and AI

WORLD

ABOUT US

Dtonic is a big data platform technology company based in South Korea with offices in the US, the Middle East, and South East Asia. Since our spin-off from Hyundai Motor Company in 2014, we have helped our clients to achieve more value from their data with our powerful big data infrastructure technology.

Company	Dtonic
CEO	Yong-Joo Jun
Establishment	1st July 2014
Employees	82 persons (June, '23)
Homepage	www.dtonic.io
2020	US\$ 2M
2021	US\$ 9M
2022	US\$ 13M

GLOBAL

04

DTONIC
Seattle, WA Branch



117%

Company Value Growth
2021 2022

+100

Customers

DTONIC

05

DTONIC
Abu Dhabi, UAE Branch



DTONIC
HCM, Vietnam Branch



DTONIC
South Korea

HQ



1

One Technology

Geo-Hiker

3

Two Solutions

D.Hub | D.EView | D.Edge

3

Three Offices

Global Offices

GOOD TO GREAT

DTONIC MISSION

VALUES

- COMMUNICATION
- TRUST
- TALENT
- SYSTEM

TEAM

Your big data needs are in safe hands with Dtonic. Our leadership has over 20 years of experience in developing big data and machine learning systems in both the private and public sectors. With strong established connections with domestic and global universities, we continue investing in R&D to ensure our technology is continuously upgraded.

We believe in investing in people. We foster a work environment based on equal opportunities, diversity, and inclusion. By motivating and nurturing young talent, Dtonic is able to stay agile and provide a positive impact on the world.



CERTIFICATIONS

16 Patents Registered

30 Software Copyrights

11 Published Journal Articles

Four-time Recipient of
Hankook Ilbo's Korea
Excellent Patent Award
2019-2022

- 2022 — Silver Tower Order of Industrial Service Merit
- 2022 — G-PASS (Government Performance Assured Company) Certification
- 2022 — Innovative Technology SME Certification (Inno-Biz)
- 2022 — Innovative Management SME Certification (Main-Biz)
- 2021 — Geo-Hiker v1.0 GS (Good Software) Accreditation 1st Grade
- 2021 — Commendation Award from the Minister of Science and ICT
- 2021 — Promising Export SME Certification (Ministry of SMEs and Startups)
- 2021 — Global ICT Future Unicorn Certification (Ministry of Science and ICT)
- 2021 — Top 1000 National Innovative Enterprise Certification (Ministry of Land, Infrastructure and Transport)
- 2020 — Commendation Award from the Minister of Land, Infrastructure and Transport
- 2020 — Commendation Award from the Minister of Science and ICT



Dtonic's technology is certified with 16 registered patents and 30 software copyrights

TRACTION

PROJECT HIGHLIGHTS

Type	Industry	Project	Client
Private	Smart Factory	KAI IWP (Intelligent Work Platform) Design enhancement and development	Korea Airspace Industries
 Public	Smart City	Smart Parking Service based on Smart City Data Hub	City of Santander, Spain
R&D	Smart City	Smart City Data Hub	Ministry of Land, Infrastructure and Transport (MOLIT)
Private	Smart Office	D.EView for hospital	Samsung Seoul Hospital
Private	Smart Retail	D.EView for electronics retail (800+ stores)	LG Best Shop
Private	Smart Retail	D.EView for beauty retailer	CJ Olive Young
Public	Future Mobility	Mobility Data Market Platform Development	Ministry of Science and ICT
Public	Smart City	COVID-19 Epidemiological Investigation Support System	Korea Centers for Disease Control and Prevention(KCDC)
Public	Future Mobility	Drone image real-time big data processing system	Korea Aerospace Research Institute
 R&D	Future Mobility	Development of a big data machine learning platform technology for production road weather information	7 countries, 24 institutions (Korea Institute for Advancement of Technology(KIAT), Eureka R&D)
Private	Smart City	Korea Airport Corporation's big data platform enhancement	Korea Airports Corporation
 R&D	Future Mobility	Korea-France cooperation project of development of multi-channel V2X communication data processing technology for autonomous vehicles	Korea Institute for Advancement of Technology(KIAT), BPI France
Public	Smart Retail	Development of an across-the-board business life cycle intelligent marketing support platform	Ministry of Science and ICT
Public	Future Mobility	Traffic accident investigation and consulting system	Korea Transportation Safety Authority(TS)
Private	Future Mobility	Navigation system big data analysis pilot	Hyundai Autoever
Private	Future Mobility	Proof of concept for North American Hyundai Motors probe car fleet	Hyundai Motors

CLIENT

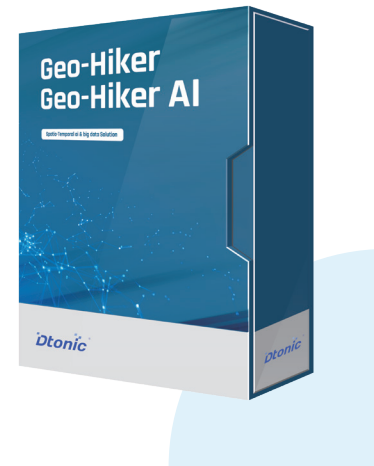


PARTNERS



Geo-Hiker

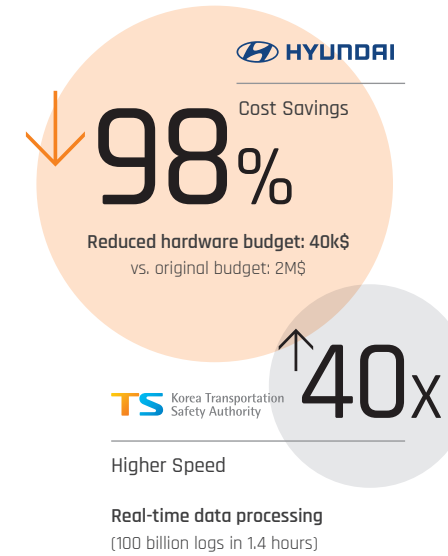
SPATIO-TEMPORAL
BIG DATA
PROCESSING



WHAT IS GEO-HIKER?

Dtonic's AI-based spatiotemporal boosting engine 'Geo-Hiker' is a core engine technology that efficiently processes and analyzes large-scale multi-dimensional spatiotemporal big data.

Achieve greater utility and performance with Geo-Hiker technology.



PRODUCT SPEC

- **Basic/Complex Geometries support**
Point, Polygon, LineString, Multi-Point, etc.
- **Spatio-Temporal Index support**
R-Tree, Quad-Tree, etc.
- **Spatio-Temporal SQL support**
- **80+ Spatio-Temporal processing functions**
Geometry Constructors, Spatial Relationships, etc.
(OGC standards applied)
- **Various store support**
Paquet, HBase, etc.
- **Spatial operating function support for large quantity spatial data**
- **Coordinate Reference System support**
Spatial Reference System Transformation

BENEFITS OF GEO-HIKER

EFFICIENCY

Intelligent Indexing technology and optimized input of over 50 machine-learning algorithms enable higher processing speed compared to existing big data systems

SAVE COSTS

Save system operation resources and improve performance by applying high-speed data processing

EASY INTEGRATION

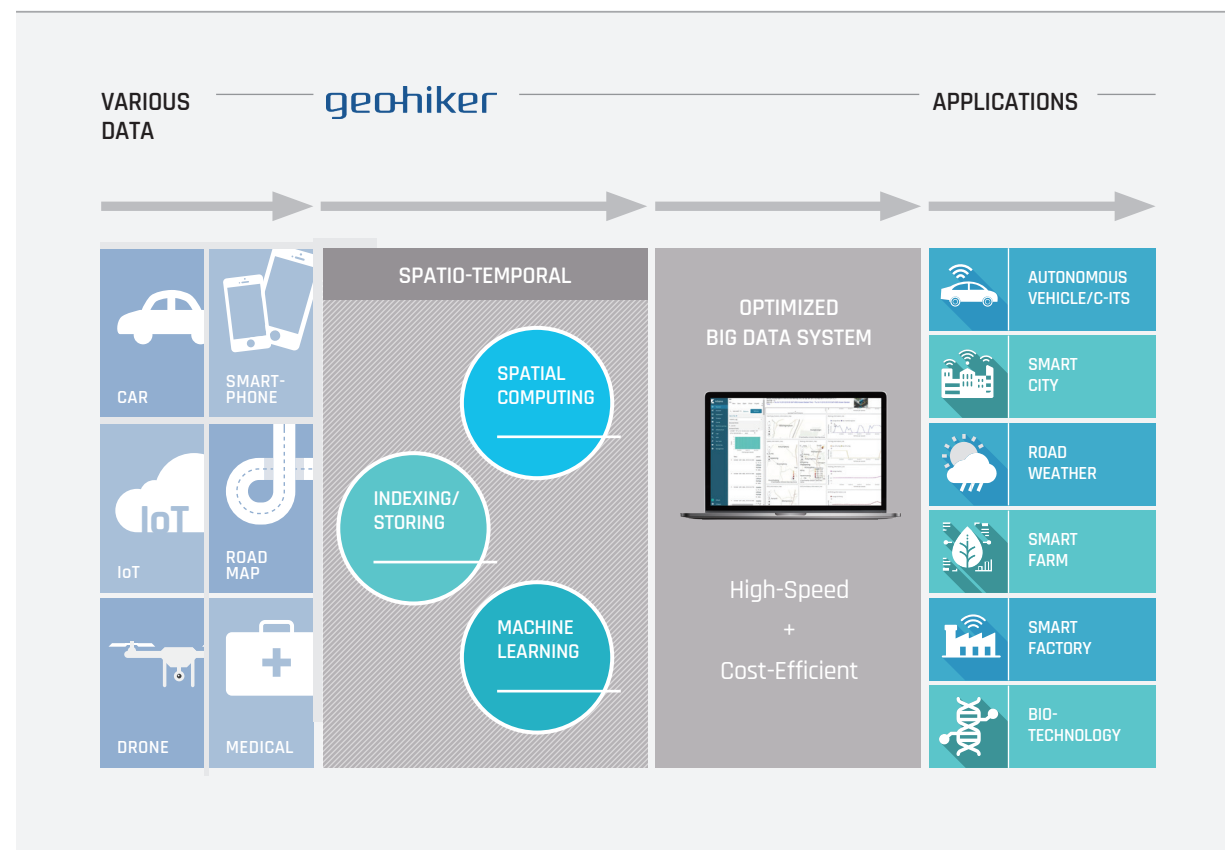
Drivers (Rest API, xJDBC, etc.) provided for easy integration to an existing system/RDBMS with minimal migration

SCALABILITY

If client's existing system is based on Hadoop Ecosystem, Spark, etc., Geo-Hiker can be applied no matter what other big data platforms or domains are in use.

GUARANTEED RELIABILITY

This software has been certified by an authorized governing body and is already in use by various companies, including government departments.



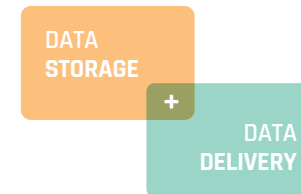
D.Hub

DATA
PLATFORM



D.HUB

A single platform to control and manage fragmented data flow processes from data sources all the way to the end-users



D.Hub

DATA PLATFORM

SOLUTION INTRODUCTION

D.Hub is a data platform that unifies data storage and data delivery. With applied core Geo-Hiker technology, D.Hub allows for the same data to be accessed in real-time by multiple applications at the same time with full data integrity.

D.Hub shatters legacy infrastructure barriers where applications were given their own silos and replicated data sets.

Beyond Smart Cities, D.Hub works in all industries where fragmented data needs to be solidified.

TRANSPORTATION SERVICE

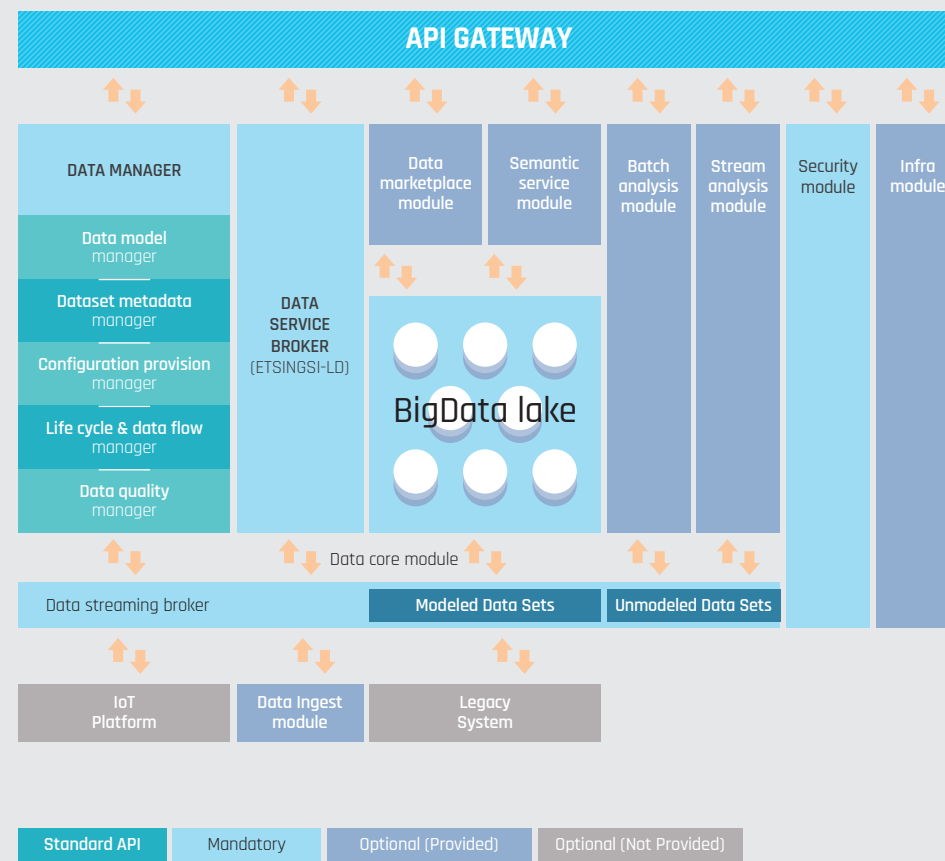
DATA

ENVIRONMENTAL SERVICE

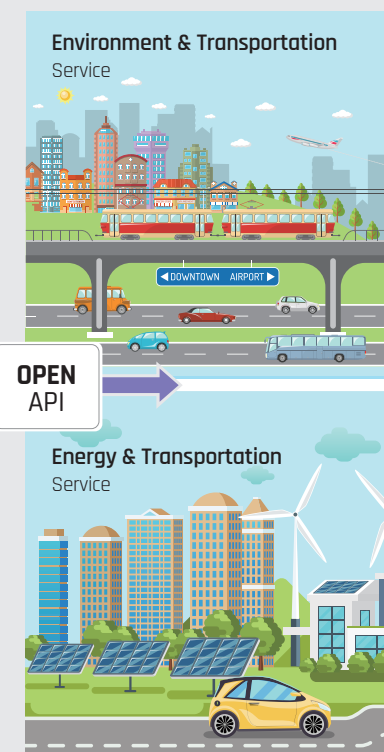
DATA

ENERGY SERVICE

DATA



CONVERGED SERVICES



BENEFITS OF D.HUB

DATA CONNECTIVITY

Combine all of your data silos into a single, unified interface to process, store, and converge various collected source data

DATA ACCESSIBILITY

Visibility and accessibility across all data with cloud infrastructure facilitation and management via API gateway source data

INTERFACE

A single interface provides easy management of stored data and integration with additional 3rd party end-user services

STREAMLINED

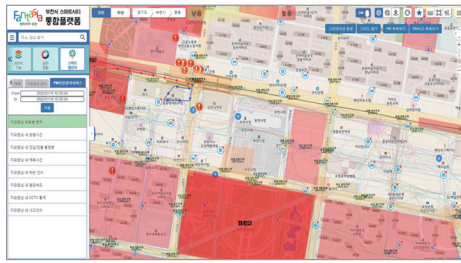
Provided data pipeline has a high throughput rate, performance, and functions to manage the stored data in D.Hub, including data models, data set management, storage, delivery, life cycle management, and access control.

SECURITY

Manage user information and administrator information separately to enhance security and issue access tokens to enable internal hub module APIs

D.Hub

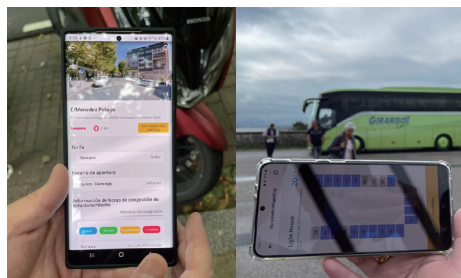
USE CASES



Geo-fencing functions for PM management



Monitoring through Intelligent CCTV



Mobile app for parking information and prediction



Successful global D.Hub implementation for Smart Parking System

PERSONAL MOBILITY SAFETY SERVICE

KOREA

PERSONAL MOBILITY SAFETY SERVICE

was developed to solve urban problems (traffic accidents, improper parking of e-scooters, etc.) caused by the rapid increase in personal mobility.

- (1) Decrease in accidents involving e-scooters
- (2) Risk area analysis with geo-fencing
- (3) Easy data management for city officials

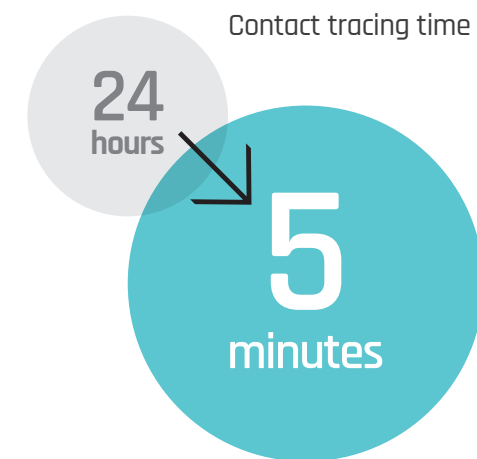
SMART PARKING SERVICE

SPAIN

SMART PARKING SERVICE

was developed and applied for city of Santander, Spain. Smart Parking Service collects parking data and provides forecast information via mobile app by utilizing the deep learning functions of D.Hub.

- (1) Parking space availability prediction service for citizens
- (2) Efficient infrastructure for city managers to control economic and social aspects of parking
- (3) Decreased complaints by citizens regarding public parking spaces

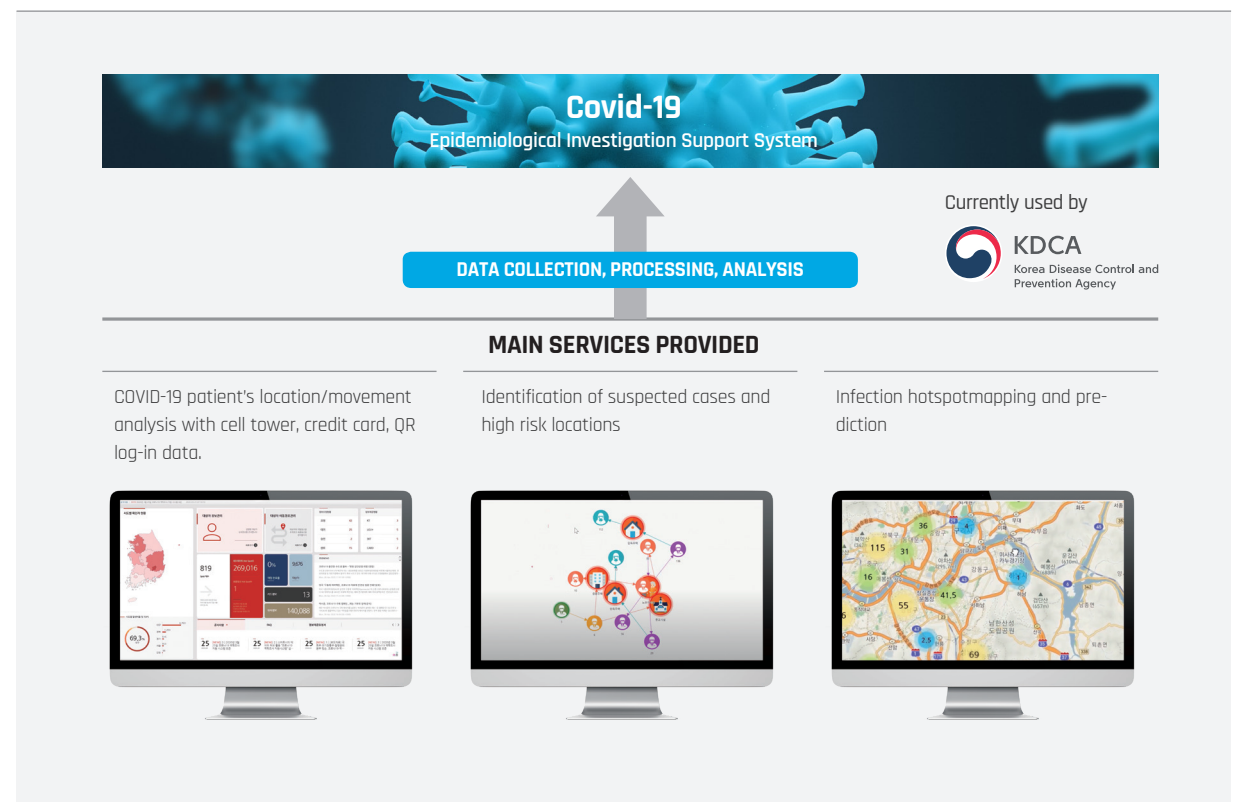


EPIDEMIOLOGICAL INVESTIGATION SUPPORT SYSTEM

KOREA

First developed for Korea Disease Control and Prevention Agency to tackle the COVID-19 pandemic, Epidemiological Investigation Support System (EISS), provides a powerful tool for governments around the world to tackle any future infectious diseases.

Powered by D.Hub technology, EISS is able to accurately and quickly pinpoint infection pathways and hotspots to control infectious diseases.



DTONIC CORPORATION

D.EView

ESL-UTILIZING
INTELLIGENT
SERVICE PLATFORM



WHAT IS D.EVIEW?

D.EView is a customizable intelligent service platform that applies D.Hub technology to effectively manage and analyze big data generated through Electronic Smart Label (ESL) operation and legacy system connection.

Unlike other ESL providers, Dtonic develops additional value-added services just right for your business needs by linking existing legacy system data with D.EView.

Thanks to its easy cloud infrastructure management functions and integrated security environment, D.EView is easily installed to improve your business' profitability by offering various applications, promotions and loyalty programs.

To the Data-Driven World

SMART RETAIL

- Retail stores
- Beauty
- Grocery

SMART FACTORY

- Manufacturing factory
- 3PL service warehouse

SMART SPACES

- Office
- Golf club
- Hospital

BENEFITS OF D.EVIEW

CUSTOMIZATION

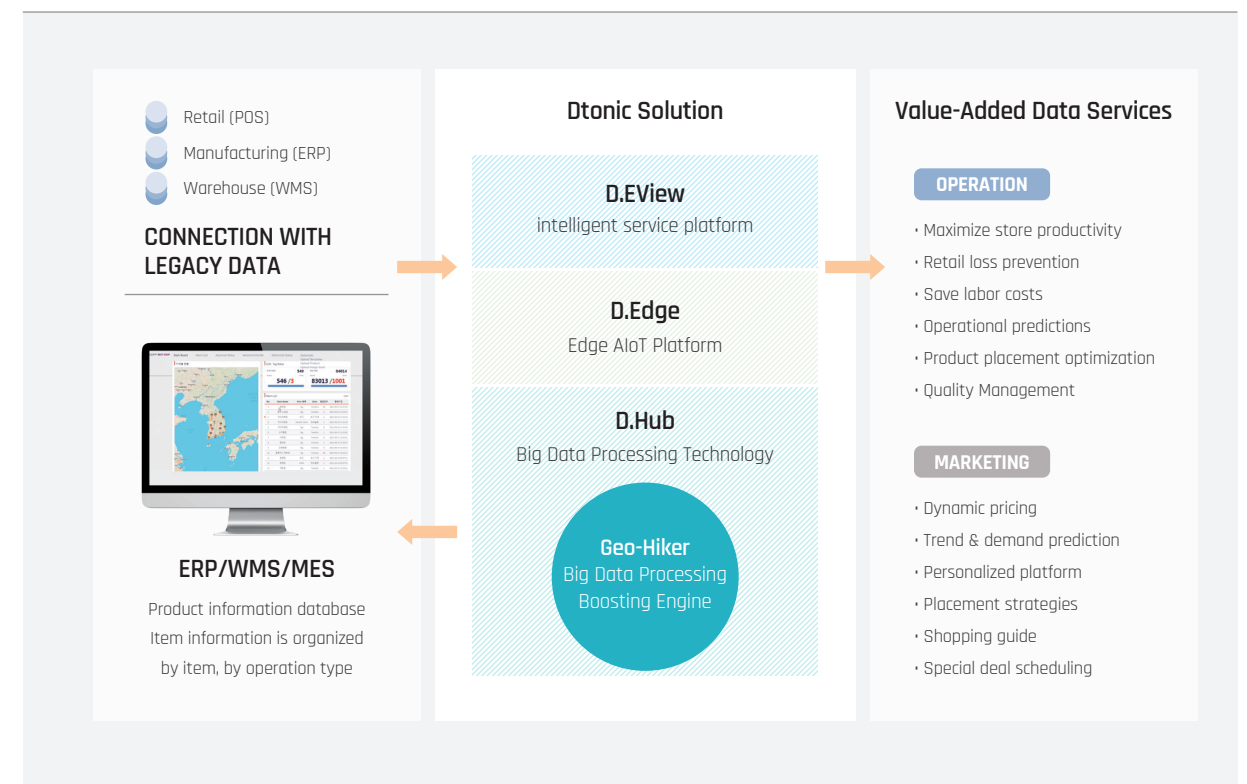
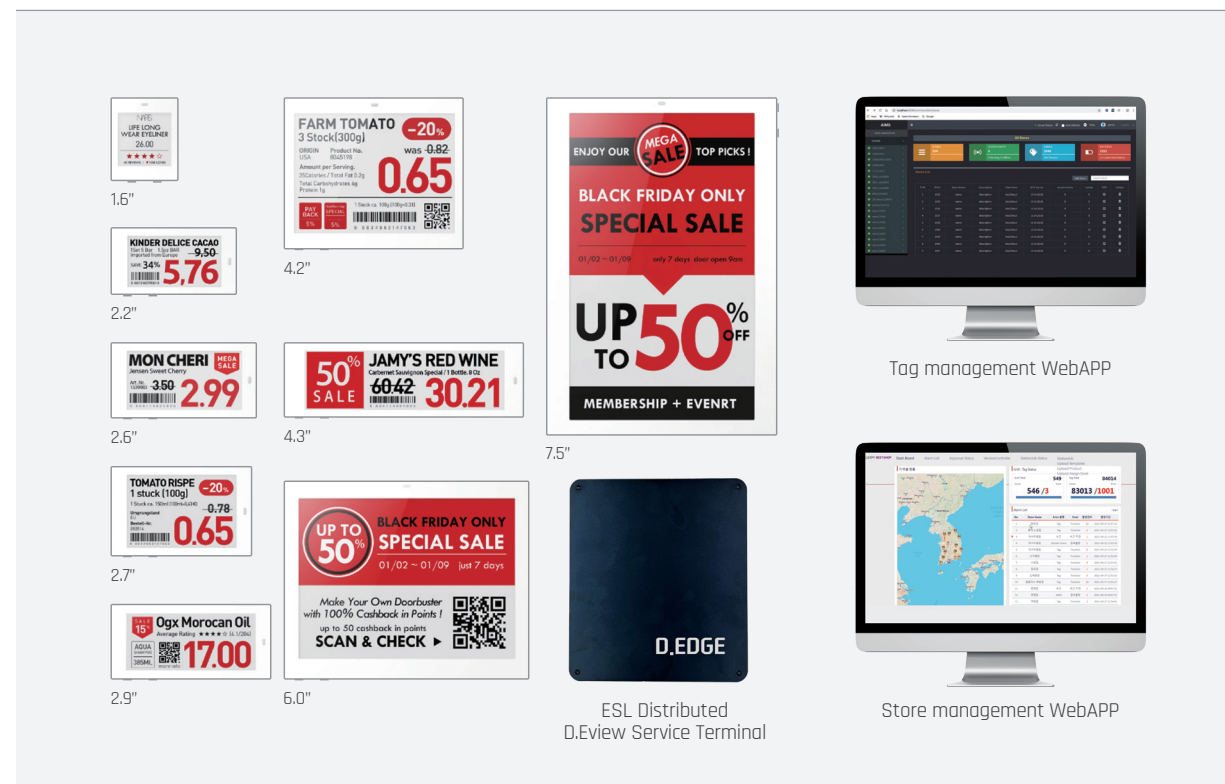
Established UI builder enables data-driven personalized functions and luxurious tag layouts to increase productivity (pick by light, etc.), and upscale company image

EASY MAINTENANCE

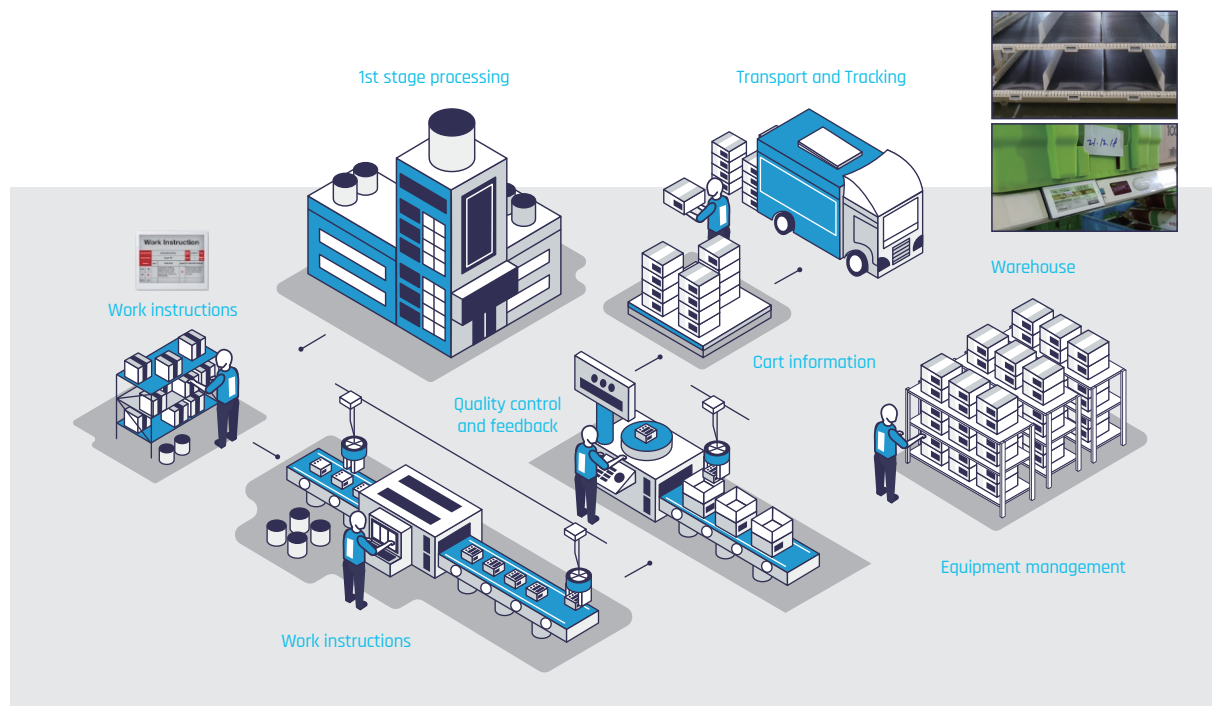
D.EView's cloud-as-a-service software (SAAS) delivers applications to end users via Internet browser without the need for costly back-office software or additional server infrastructure.

SERVICE TECHNOLOGY OF THE FUTURE

D.EView's support for stores of the future with dynamic pricing, Vision AI for unmanned stores, and Edge computing for efficient data processing.



D.EView



SMART FACTORY/WAREHOUSE

Delivering equipment and tool management information

Communicate work orders (including manuals), quality information, and processes

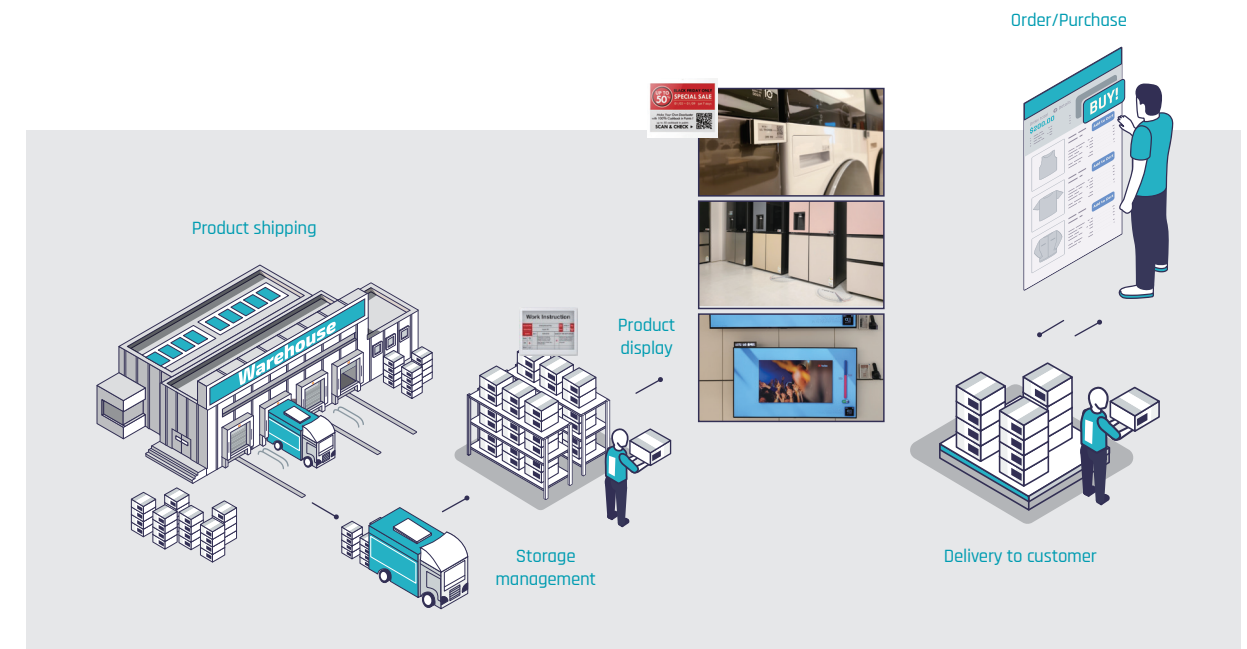
Tracking information for intermediate goods and cart movement

D.EVIEW INSTALLATION IN A FACTORY

VIETNAM



USE CASES



SMART RETAIL

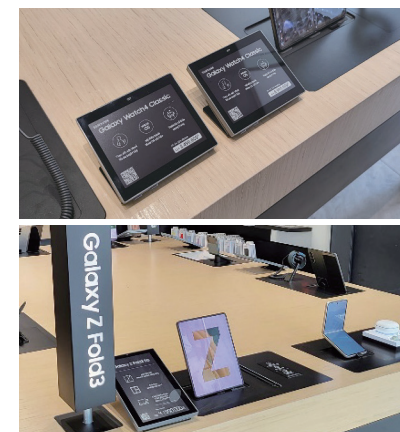
Analyze product in-/output information in storage

Connect label information to POS system for analysis

Accurate and efficient product delivery

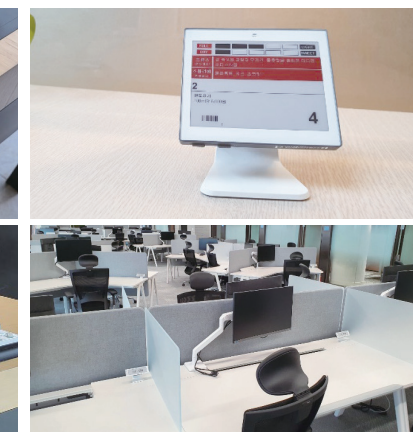
D.EVIEW INSTALLATION IN A RETAIL STORE

VIETNAM



D.EVIEW INSTALLATION IN AN OFFICE

KOREA



D.EVIEW INSTALLATION IN A BEAUTY RETAILER

KOREA



D.Edge

EDGE AIOT PLATFORM



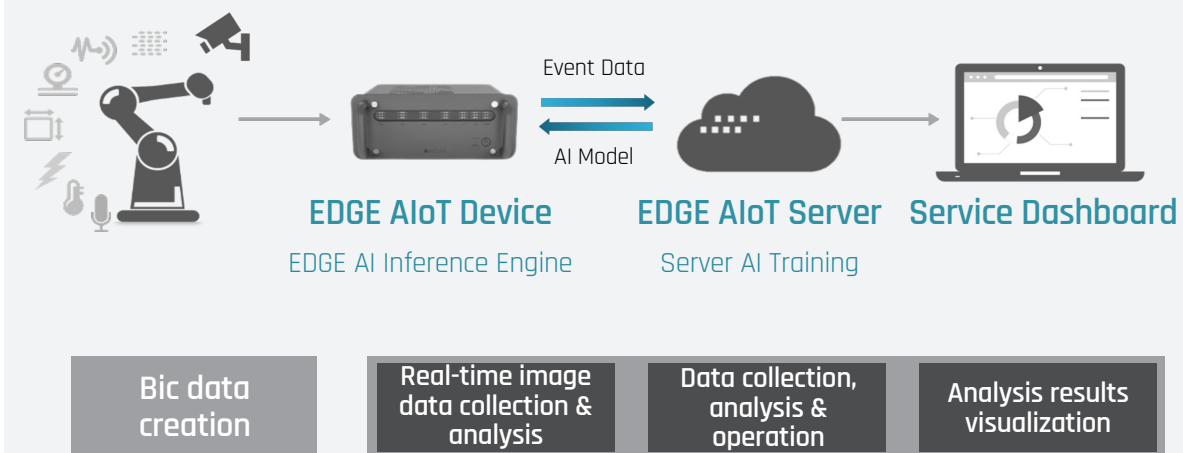
WHAT IS D.EDGE?

Edge computing-based AIoT platform that enables real-time analysis-based services such as smart city, factory, transportation, retail, and logistics by immediately analyzing high-speed and large-capacity data generated in various industrial domains at the site where the data is generated.

Provides EDGE AI hardware for continuously evolving AI algorithms, Services, and optimal EDGE AI software for real-time AI analysis

D.Edge enables expansion into various data-based services according to requirements such as Smart-City, Smart-Factory, and Smart-Retail for Digital Transformation (DX).

Experience a more upgraded real-time analysis service by collecting and analyzing large amounts of data from various domain sites through D.Edge's edge computing-based AIoT platform.



ON-DEVICE AI

AI algorithm operation in embedded devices

EDGE COMPUTING

Real-time large-volume data processing at the data generating site

INTERNET OF THINGS

Collect, store, and analyze data through communication with sensors in various devices

D.EDGE PRODUCTS LINE-UP

REAL-TIME IMAGE DATA COLLECTION & ANALYSIS PRODUCT [EDGE AIoT BOX]

KEY PRODUCTS



FUNCTION

Edge AIoT BOX is equipped with an AI Accelerator for high-speed processing of artificial intelligence algorithms to collect, analyze and respond to CCTV high-definition camera images at the edge of the field.

- High-speed, high-capacity video analysis
- Containers provided for further expansion of services
- IoT capabilities for linking other devices
- Device monitoring capabilities for ongoing operations management
- Durability in the outdoor environment ensured

INDUSTRIAL DATA COLLECTION & ANALYSIS PRODUCT [EDGE PROCESSOR]

KEY PRODUCTS

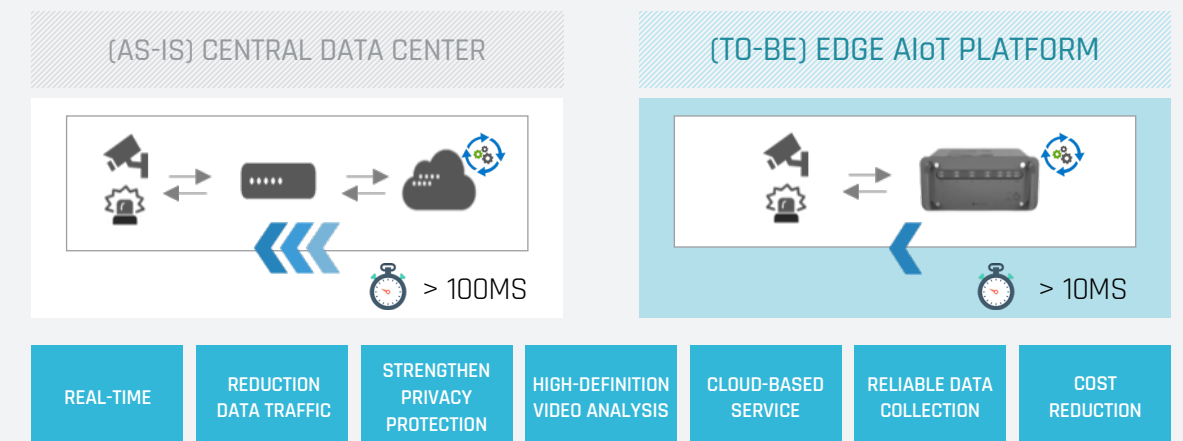


FUNCTION

Edge Processor is an efficient and easy system configuration device by integrating functions of collection, analysis, transmission, and control in one device.

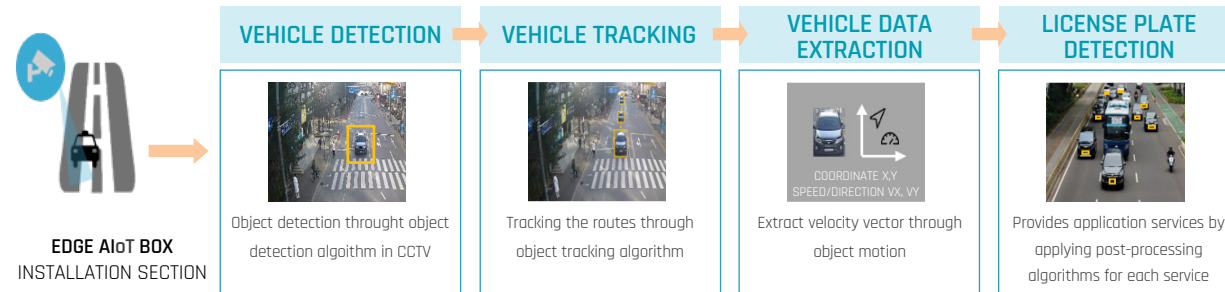
- High-speed, high-resolution sensor data collection/analysis
- Various communication support considering continuous connectivity
- I/O support for industrial sensors
- Multi-channel sensor data acquisition
- Supports various field protocols

BENEFITS OF D.EDGE



D.EDGE-BASED URBAN TRAFFIC INTELLIGENT SYSTEM

D.Edge-based urban traffic intelligence system collects and analyzes vehicle and jaywalkers in real time at city sites to provide information on city traffic flow, traffic movement and emergency situation detection.



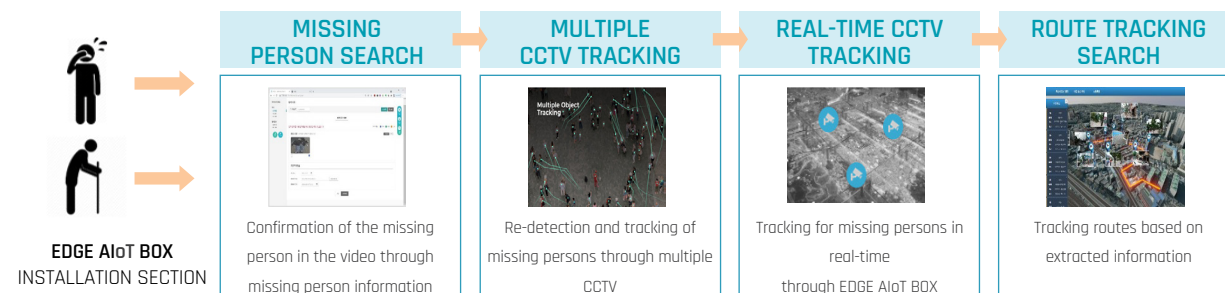
D.EDGE-BASED URBAN SAFETY FENCE SERVICE

Urban safety fence service is provided to pedestrians and drivers by detecting jaywalkers automatically with AI technology. Edge vision AI-based virtual fences are put in places with a high number of unauthorized crossings to detect uncontrolled crossings and alert drivers and pedestrians to dangerous situations using smart displays.



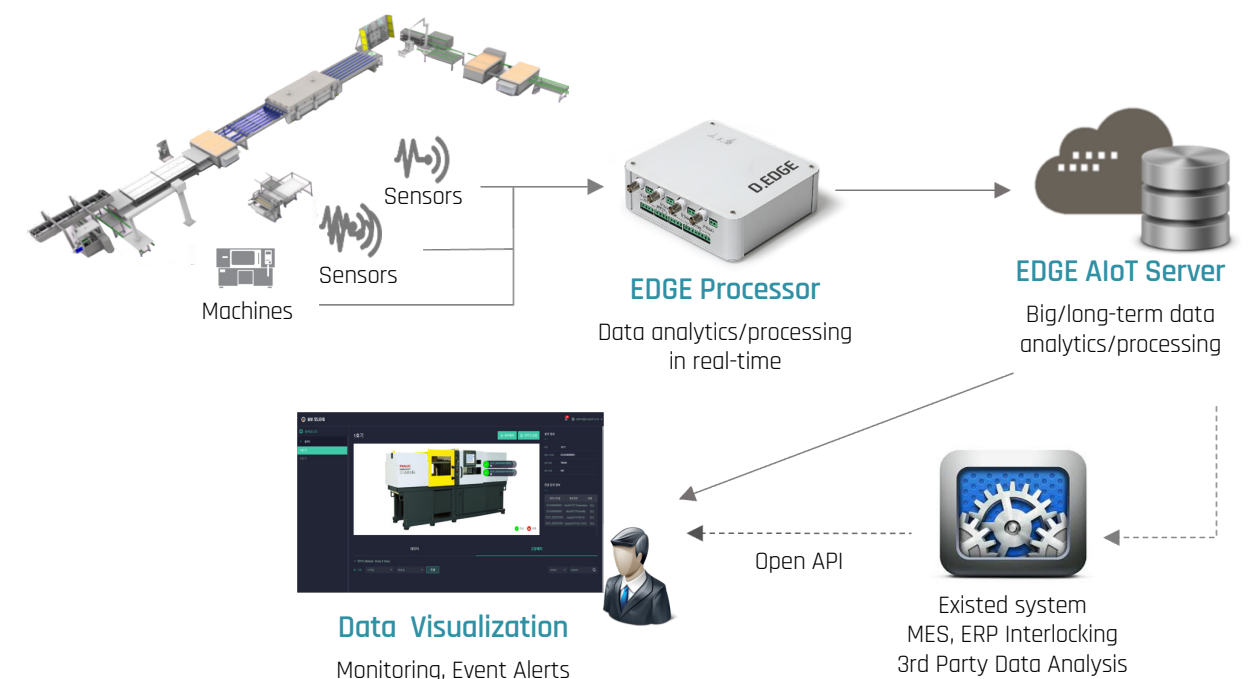
D.EDGE-BASED MISSING PERSON SEARCH SERVICE

Missing person search service In the event of missing persons, social safety net services are offered to automatically track their whereabouts and locate them using AI technology.



D.EDGE-BASED SMART FACTORY SYSTEM

D.Edge-based Smart Factory System that enables companies to create value from data through real-time collection, monitoring, and analysis of large amounts of data generated from major facilities and facilities at industrial sites. It consists of an Edge Processor that quickly processes and analyzes large-capacity streams from on-site sensors and facilities, and an Edge AIoT Server that provides optimal operation information through comprehensive analysis from various facility data, historical data, and environmental data.



LIST OF SUPPORTING EQUIPMENT MANUFACTURERS



LIST OF SUPPORTING SENSORS

