4IND
포인드㈜

THE COMPANY INTRODUCTION

BOM
PLATFORM
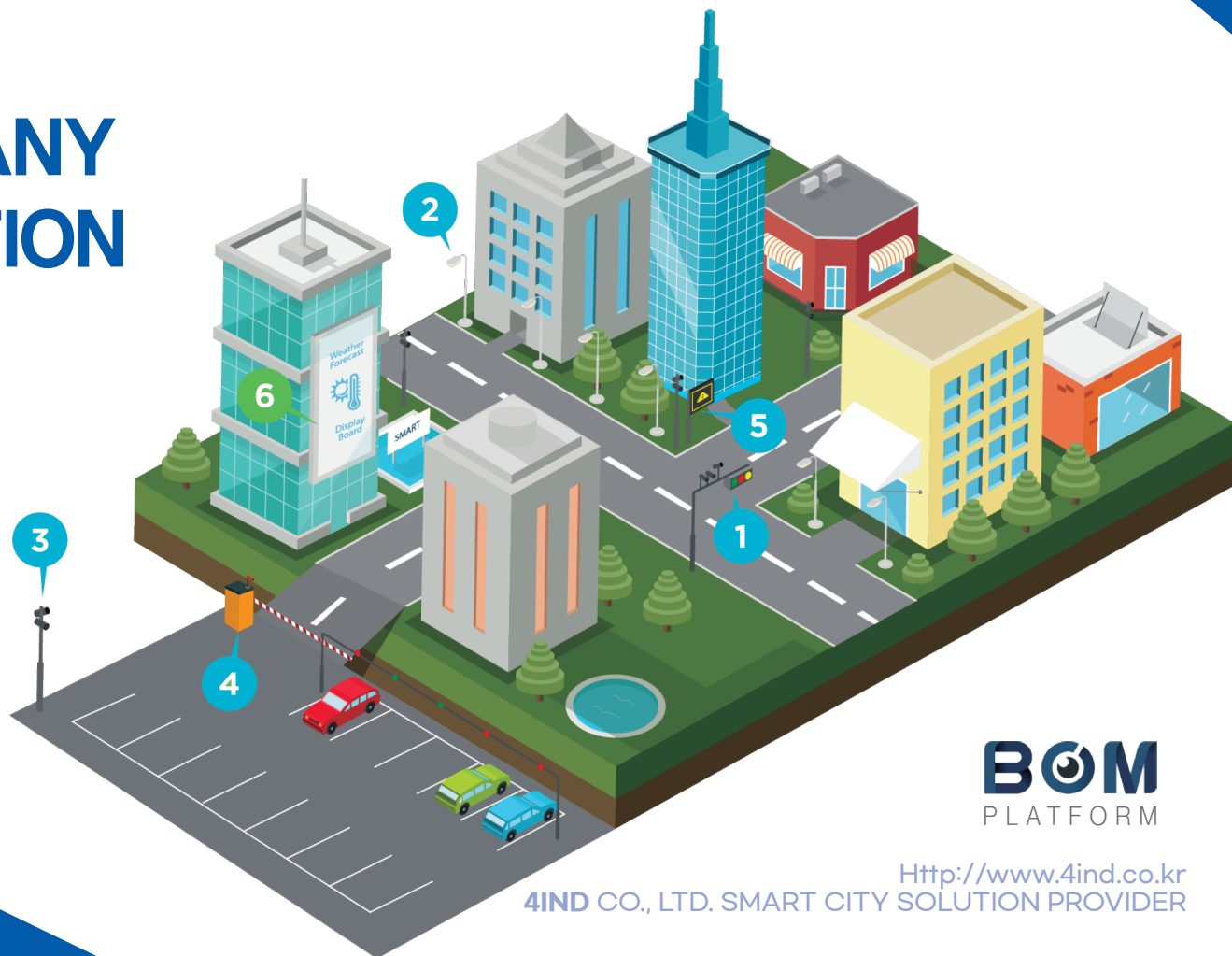
SUMMARY

General Information

2017	→	2018	→	2019	→	2020	→	2021
▸Corporation established		▸Qualified as Startup Company Awarded "Exellent" startup in Gyeongbuk ICT/SW sector		▸Set up AI R&D lab ▸Awarded for best innovative startup in Gyeongbuk		▸Smart CCTV certified ▸INNO−BIZ certified ▸ISO 9001 certified		▸Delivery to Korea Expressway Corporation ▸Demonstration of intelligent identification tracking ▸ETRI joint research

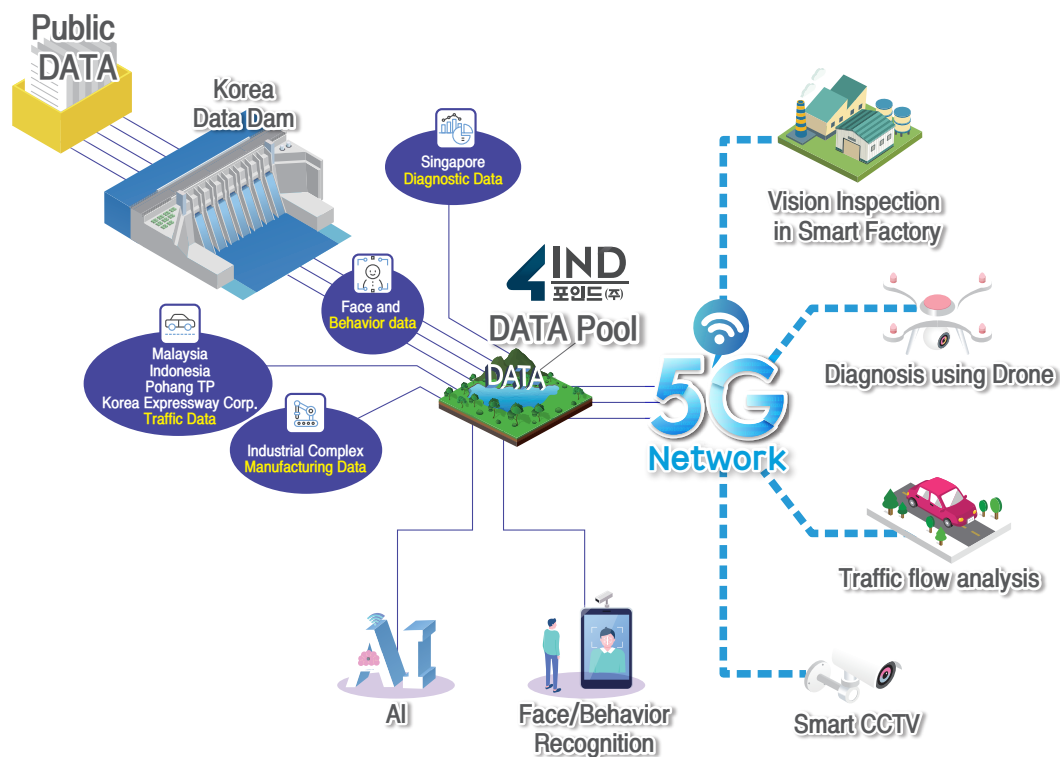| Company Name	4IND CO., LTD.	CEO	LEE CHAE SOO
Corparate registration number	176011−0112075	Business registraion number	334−87−00694
Capital	150 million won(KR)	Number of full−time workers	26
Date of establishment	2017.02.02.		
Address — Head office	Unit 320, Mobile Convergence Technology Center, 350−27, Gumi−daero, Gumi−City, Gyeongsangbuk−do (zip 39253)		
Address — R&D Center	Unit 320, Mobile Convergence Technology Center, 350−27, Gumi−daero, Gumi−City, Gyeongsangbuk−do (zip 39253)		
Business type	SW, HW development(SW development for Smartcity)		

4IND is a company that pursues solution−based services to become a leading company in the fourth industry

CEO

Advisory committee

R&D Lab

Headquarter of Technical Support

SW development Team

Vision Inspection Team

Data Team

Operation& Management Team
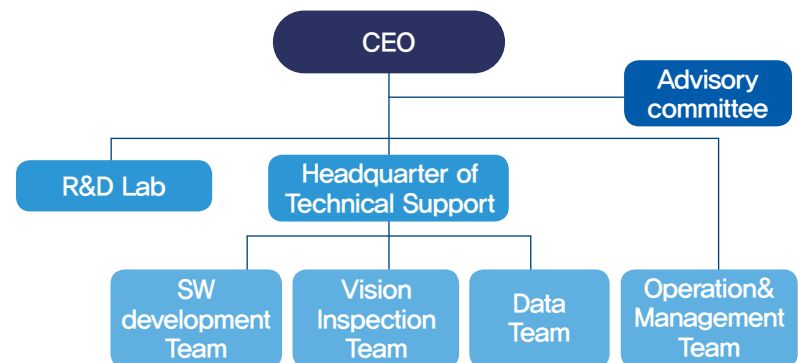
Key Products

:. Technology trends of the 4th Industrial Revolution

4IND DNA (Data, Network, AI) MODEL

Public DATA

Korea Data Dam

Singapore Diagnostic Data

Face and Behavior data

4IND 포인드(주)

DATA Pool DATA

Malaysia Indonesia Pohang TP Korea Expressway Corp. Traffic Data

Industrial Complex Manufacturing Data

5G Network

Vision Inspection in Smart Factory

Diagnosis using Drone

Traffic flow analysis

Smart CCTV

AI

Face/Behavior Recognition

Data collection and System setup

Data of face and behavior

"AI catches foreign criminals at immigration"..Opened "demonstration lab" for recognition track system

법무부
MINISTRY OF JUSTICE

4IND, has developed Smart image analysis solution, and its 'AI recognition track system demonstration project' was appointed to build the learning data and verification system until next year

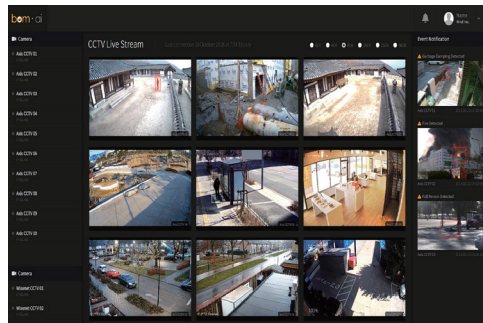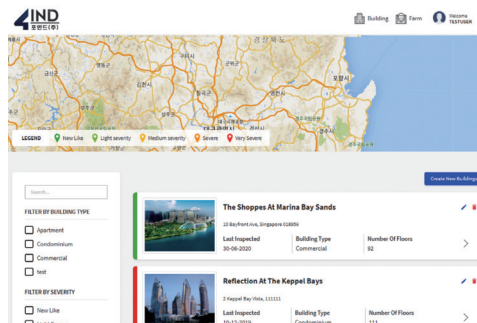**ET news** Lead for future   Daegu=Reporter JH Jung
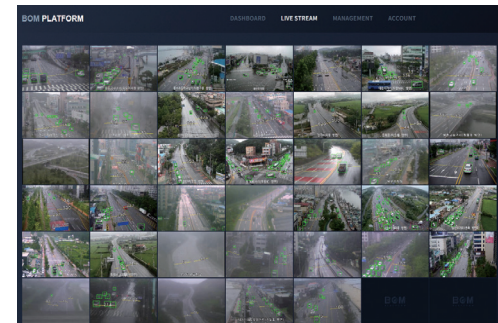
Inspection data using drone

Smart city data

Face/Behavior Data management

Building&smart Farm data management

Traffic data management

Platform-based service

Smart Solution

AI (Deep learning)/Big Data/5G /Cloud computing technology Application

B O M
Smart City Platform

Smart Surveillance

Smart Traffic Flow Analysis

Facial Recognition

Drone Inspection

Information Supply

Accident Slow down

Variable Message Signs

Internet
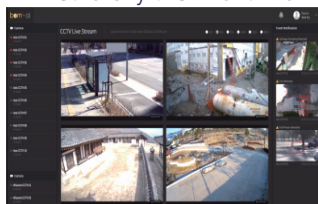
Smart Phone

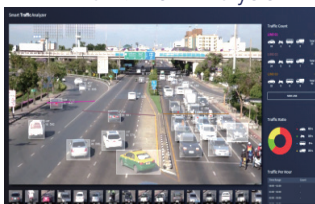### Contents & Services

Traffic

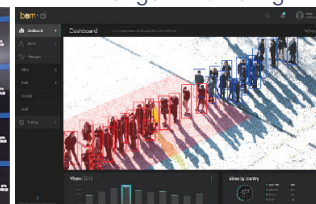Safety

Emergency

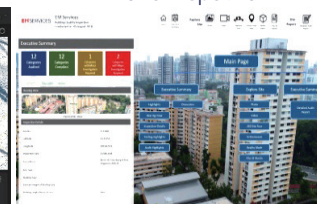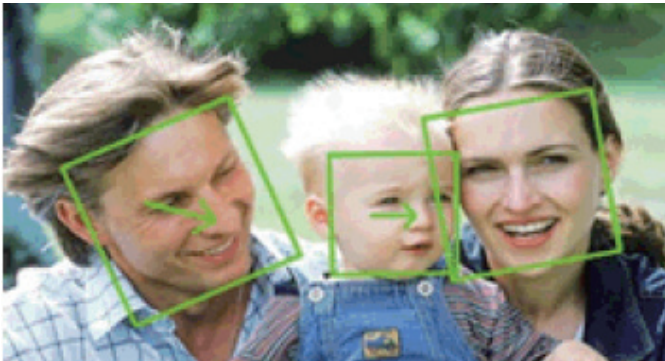▼ Safe City & Surveillance   ▼ Traffic Flow Analysis   ▼ Face Recognition   ▼ Intelligent Marketing   ▼ Drone Inspection

Service 1 within platform

Face Recognition

- Recognize human faces in still images or videos in 1:1, 1:N, N:N situations
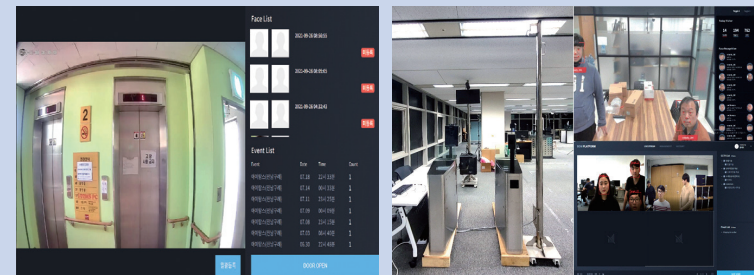

Face detection

Face Recognition
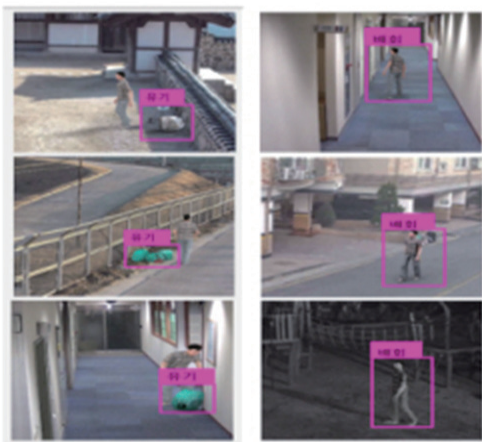
Commercialization

- Unmanned store control (management of access and management of multiple stores simultaneously)
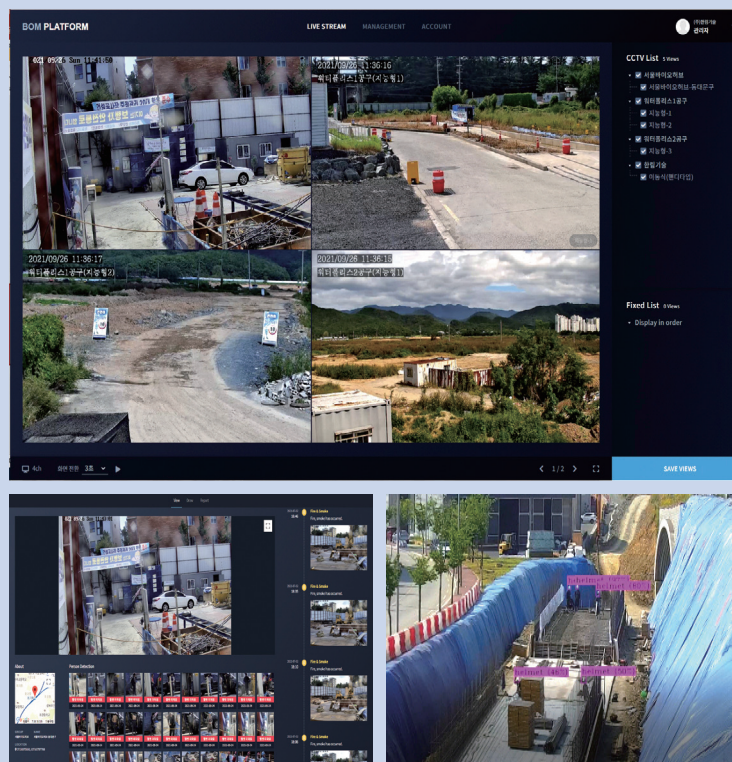
Service 2 within platform

Object Recognition

- Recognize people counting, abandonment, intrusion, prowling, falling, etc.

- Detection of workers not wearing PPE(helmets)

Commercialization

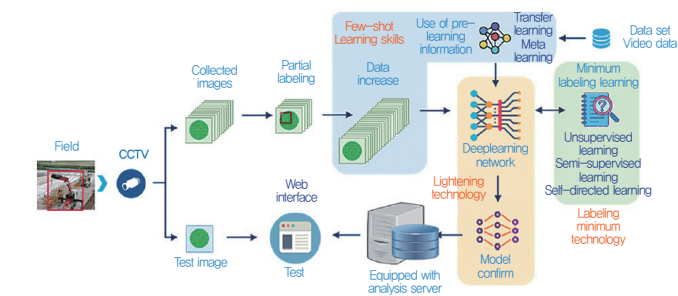- Construction site, surveillance center (server type, edge type)

Service 3 within platform

Traffic Analysis

- Vehicle detection, weight reduction, data generation, unsupervised learning, etc.
- Detection by classifying vehicle types
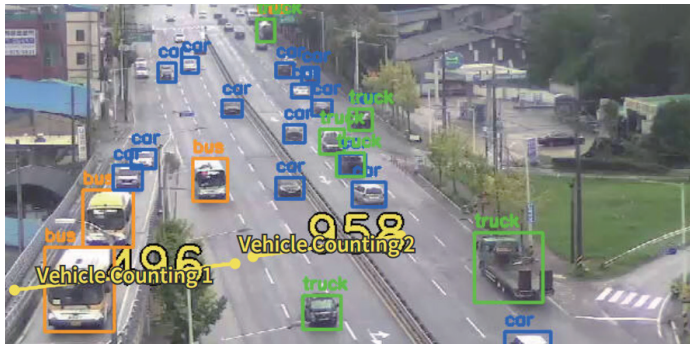
Commercialization

- Big Data Center, Malaysia, Indonesia (violation of traffic laws: reverse driving, speeding, center line violation, not wearing a motorcycle helmet, etc.)
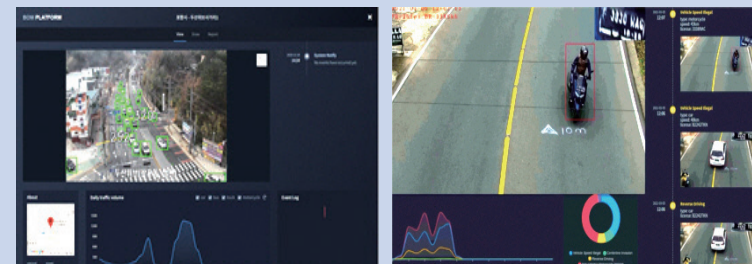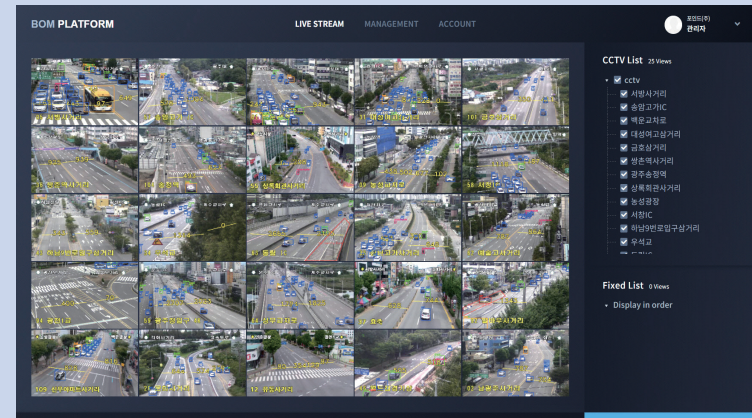
Service 4 within platform

Fire/Smoke Recognition

- UCT-Crime (American standard image, arson, explosion)Learning using Korean intelligent authentication video

Fire

Fire-like video

Fire Recognition CNN NETWORK

ALARM!

"CCTV : 2
bbbox : [100, 200, 100, 100]
Probability : 80%

Commercialization

- Japan EdgeMatrix (NTT Docomo subsidiary)

Service 5 within platform

Drone control application technology

- Applied recognition model
  · Applying the latest AI technology (real-time object detection, weight reduction, data generation, unsupervised learning, etc.)
  · Applying it to the perception of dangerous situations (fire, smoke, chemicals, etc.).
  · Application to recognition of dangerous objects and conditions such as traffic flow, buildings/bridge/tunnels, etc.

- Specialized drone operation
  · High-resolution video shooting, RGB/IR video shooting, real-time data transmission, etc
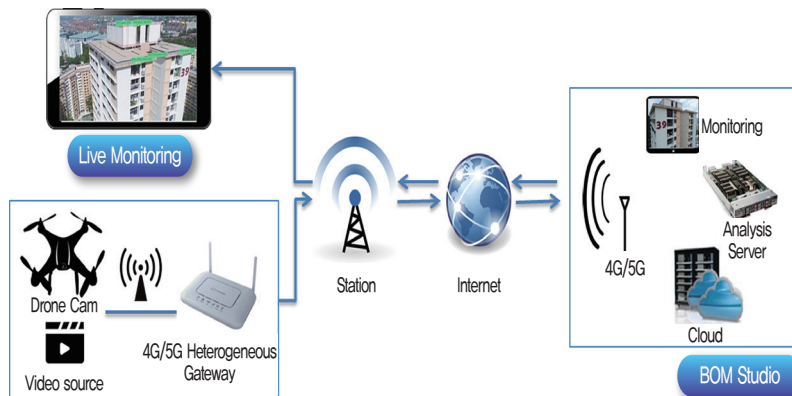
Demonstration and commercialization

- Gumi National Industrial Complex Control Center (Risk Situation Monitoring)
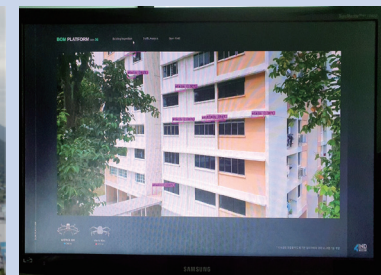
Service 6 within platform

Smart Factory Vision Inspection Application Technology

- Applied recognition model
  · Application of the latest AI technology (defect detection, lightening, data generation, unsupervised learning, etc
  · Fine−tuning learning using production site and self−generated data
  · High−speed inspection (real−time), micro−defect inspection, and atypical defect inspection
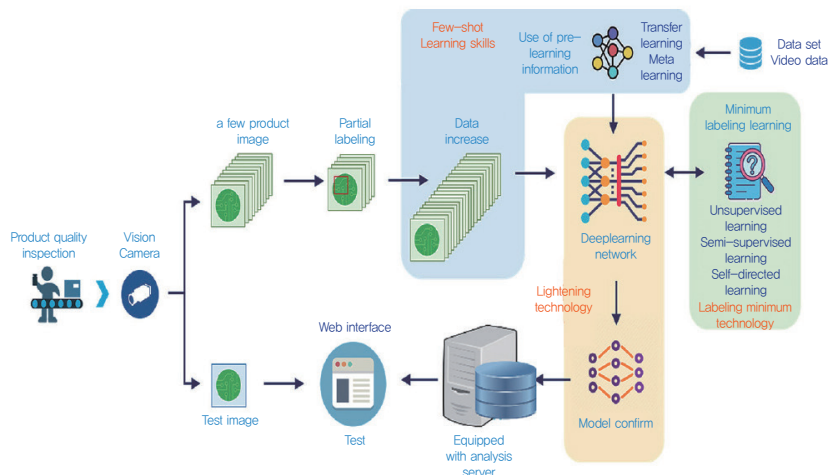
commercialization

- Steel surface inspection, LED surface inspection for vehicles, PCB inspection, fiber production inspection, etc
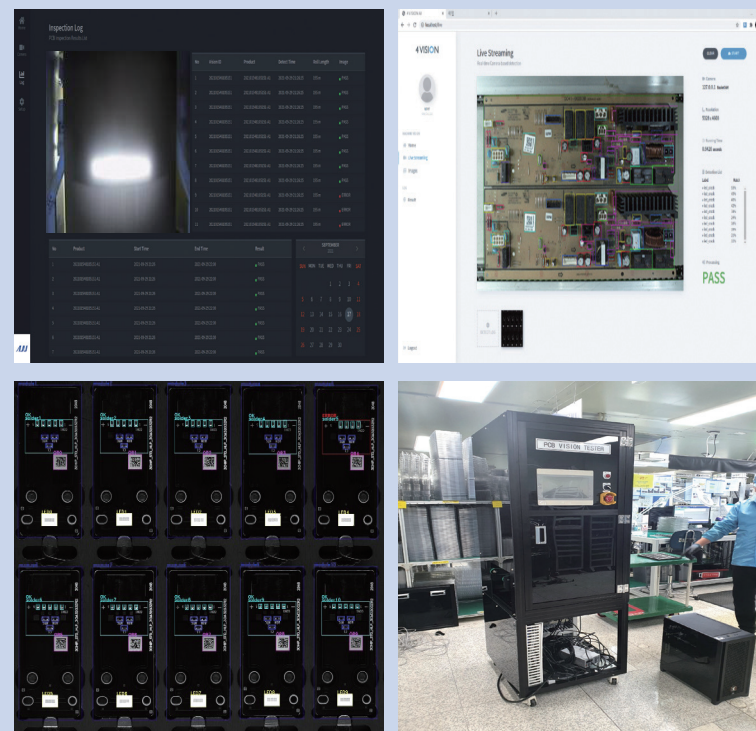
Integrated platform for system

[Integrated platform] Service system setup

BOM PLATFORM

CLIENT

System

· HPE DL380 Gen10
  (NVIDIA Tesla V100 * 2)

· ASUS 2GPU Server
  (NVIDIA Quadro RTX6000 * 8)

· TYAN 8GPU Server
  (NVIDIA Quadro RTX4000 * 2)

· AI Training Server
  (NVIDIA Quadro RTX8000 * 4)
  (NVIDIA GeForce RTX3090 * 8)
  (NVIDIA GeForce RTX2080ti * 4)

· ESC4000-G4 Server

· TYAN FT77 E5 Server

· Synology RS1219+ NAS

· Face Detection solution at
  unmanned store

· Intelligent Integrated Control
  Solution

· AI-based traffic control solution

· Dataset Integrated Management
  Solution

· Smart Gate

Integrated Solution

Safety/Security | Traffic

Face Detection | Marketing

LTE 5G
Internet

Internet

LTE 5G

Input Device

Fixed Camera	PTZ Camera	Speed Dom Camera
Video File	Drone	Car Blackbox

Output Device

Phone	Manager PC	Client PC

Platform service characteristics

Platform−based services

- Individual solutions are integrated and customized

Before) Control solution

Consumer−requested control

Consumer−requested Function

↓

Construction of a consumer−requied system(Server, Edge)

↓

Multi−item, small amout of control service

Customized AI control solution for 4IND CO., LTD

Customized control for consumers

Customized functions for consumers

↓

Functional linkage and integration

↓

Organizing a customized system for consumers(Server, Edge)

↓

Selective service among integrated functions(Small item, big amount)

New demand

Service contents

- Cloud−based services available overseas
  − Remotely managing users and services
  −The system provided by 4IND is available
  −Customer system is available

- Provide customized capabilities to meet customer needs
  − The customer remotely selects the function and checks the price
  −Verification of product reliability through the use of test service
  −Additional development of functions that reflect customer needs

Global Network

Growing into a global company
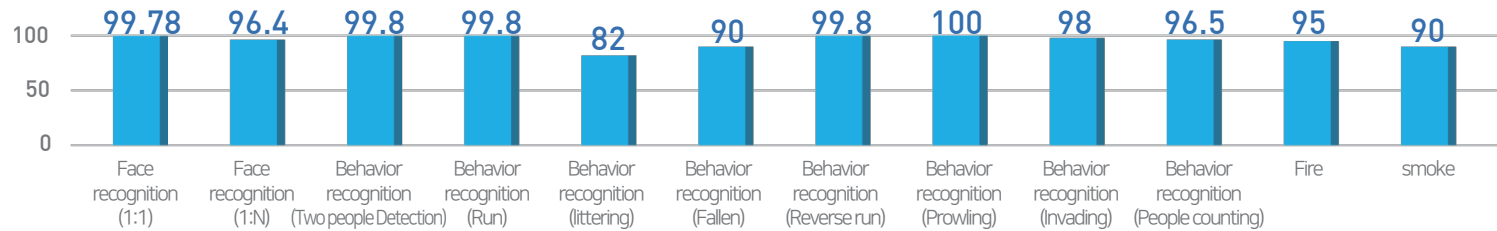
Leaping into a sustainable growth company by diversifying products that meet global standards, diversifying customers, and expanding businesses


4IND 포인드(주)

Korea

Japan **SOREST**

art active robotics technologies Malaysia — Vietnam **mekong link** Greater Mekong Subregion(GMS) Business Platform

MYTRAFFIC SMART CITY SOLUTIONS

Singapore **EM**SERVICES

R REVELATION PRODUCTIONS

Technology

∴ Objectified technology verification

Great performance capabilities can be customized for user needs

Category	Value
Face recognition (1:1)	99.78
Face recognition (1:N)	96.4
Behavior recognition (Two people Detection)	99.8
Behavior recognition (Run)	99.8
Behavior recognition (littering)	82
Behavior recognition (Fallen)	90
Behavior recognition (Reverse run)	99.8
Behavior recognition (Prowling)	100
Behavior recognition (Invading)	98
Behavior recognition (People counting)	96.5
Fire	95
smoke	90

Securing a number of intelligent technologies and having a high recognition rate

* International KOLAS Test Report, Intelligent Certification by Korea Internet & Security Agency
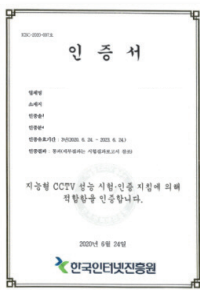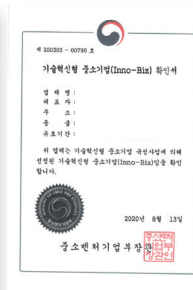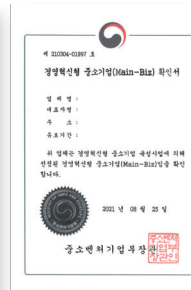
Intelligent CCTV Certification

Patent certificate

Trademark registration card

INNO-BIZ Certification

MAIN-BIZ Certification

ISO 9001 Certification

4IND

포인드(주)

We usher the smart era with AI vision technonogy

4IND CO., LTD.

Unit 320, Mobile Convergence Technology Center, 350−27, Gumi−daero, Gumi−city, Gyeongsangbuk−do(ZIP 39253)

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