



AIoT-Based DISASTER PREVENTION DIGITAL SAFETY SOLUTION

AI Software

that can be **customized for national and corporate**
and can be equipped with a preventive model for any risk

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PROBLEMS OF CURRENT SAFETY MANAGEMENT



Responsibility for
Disaster Prevention to Country
& Safety Prevention to Company



Difficulty in Safety Management
Relying on Human Resources
Due to Aging and Carelessness



A lot of Safety blind spots
that still exist

Expected Effects of Mining Place Introduction



Efficiency of construction management, such
as shortening construction period and
reducing construction costs

Through a systematic field management
platform and risk assessment model
Effectively reduce social loss costs by
reducing construction accidents

Contribute to reducing
human/physical disasters
through safety technology

Improvement of workers
security



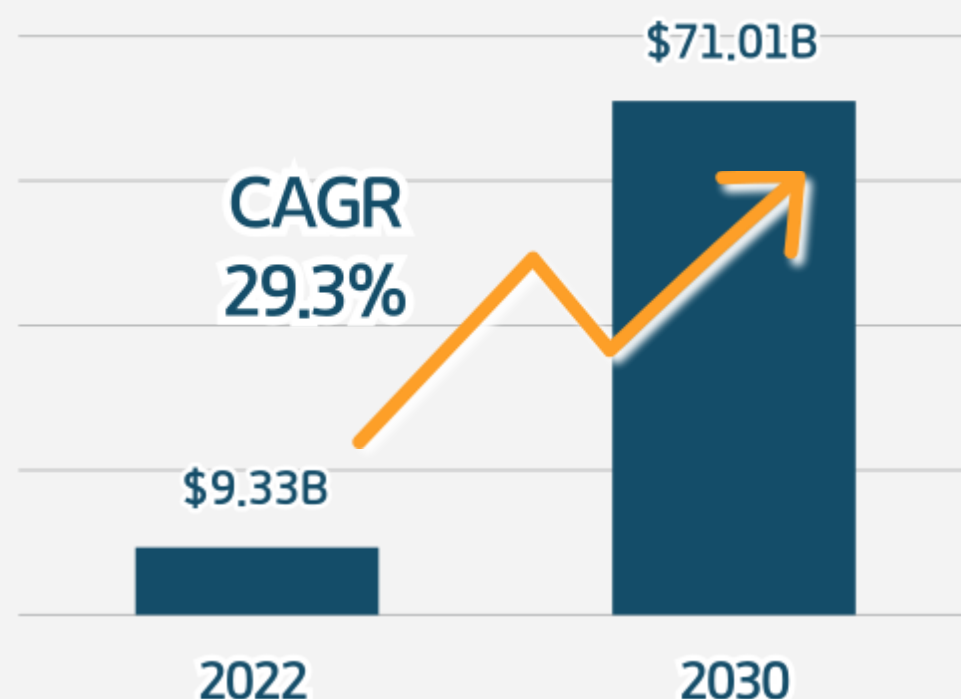
POTENTIAL FOR GLOBAL SAFETY MARKET ENTRY

The market for AI for safety is predicted at a CAGR of 29.3%.

In particular, in Vietnam, demand for smart cameras is expected to increase due to the promotion of smart city policies, and in Indonesia, demand for AI safety systems is expected to increase due to the construction of a new capital.

AI for Public Security and Safety Market

(Source : The INSIGHT Partners)



Smart City in Vietnam

(Source : KOTRA, "Smartcity Handbook in Vietnam")

Expected to Increase in "Smart Camera" (Vision AI)

The Vietnamese government is promoting 'Smart Safety and Security' and 'Smart Transportation Solutions' as Smart City Policies.

Ho Chi Minh, Introduction smart safety and security system using CCTV in urban areas

Government, Plan to spend approximately \$93.6 million to introduce system by 2025 for traffic safety

Indonesia Builds New Capital

(Source : KOTRA)

Market Expansion & Growth Potential Increase following Indonesia's New Capital Relocation

Demand for safety management systems essential for smart city development and infrastructure construction is expected to increase

Participating in "2024 Southeast Asian Smart City Road Show" to verify the actual demand for safety models and vision AI technologies of the Indonesian regional government

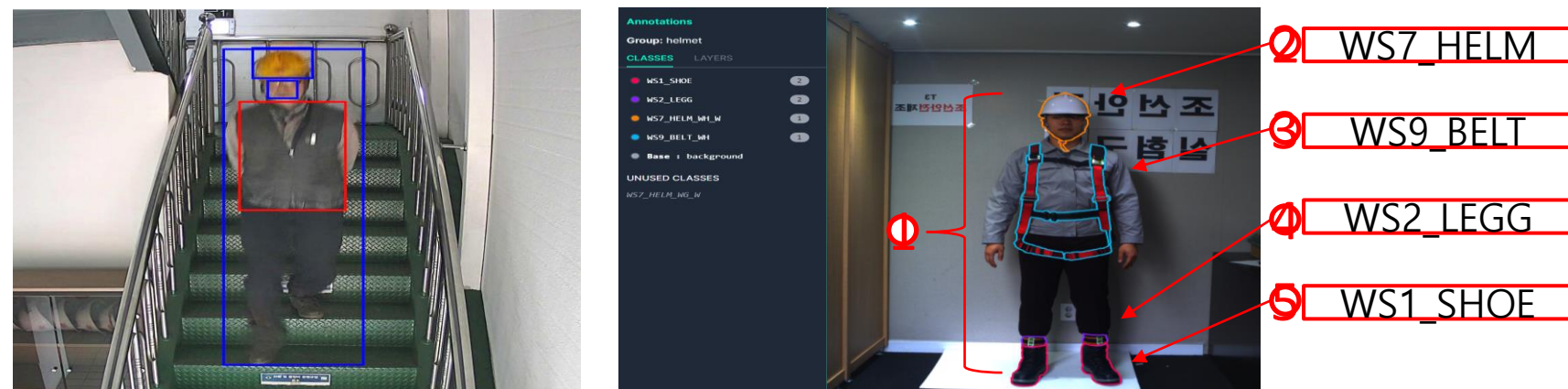
AI detection models expertise_(Customized)

Vision based AIoT safety management

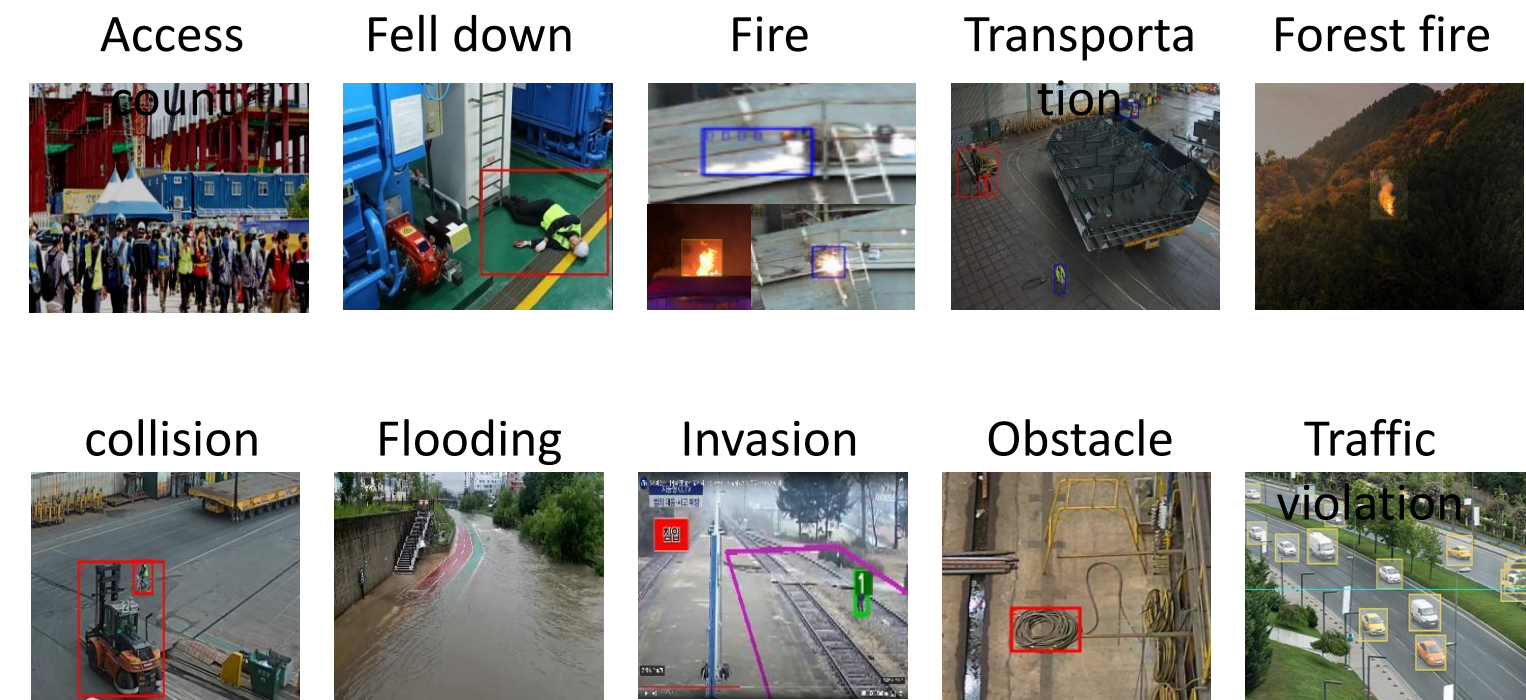
Patented technologies held by the proposed company:

Severe disaster video vision preemptive prevention system, ultra-precision vision analysis technology

AI model that **detects the wearing status of safety protective equipment** of field workers: **You can choose the type of safety protective equipment you want such as helmet, gloves, mask, goggles, work boots, etc.**



The proposed company has a number of AI models that can prevent various risk factors needed in the field, and will introduce them in a customized manner.



AI Safety Management Operation

4-step from risk detection to prompt notification

Step1

AI real-time monitoring

Discovering dangerous situations



Zoom-In

AI CAMERA monitors dangerous situations in the field in real time. If a dangerous situation is found,
AI CAMERA is tracking, monitoring, and enlarging only that risky situation.

Step2

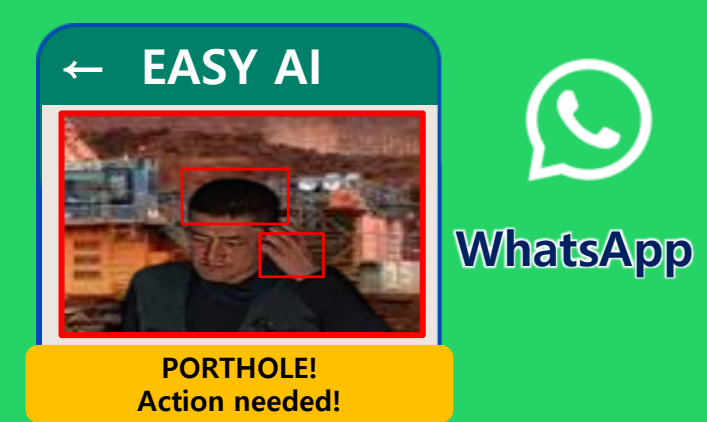
AI Risk Detection



The safety protection model detects in great detail which protection is not worn.

Step3

AI Alert Notification




Quickly inform the HSE safety management officer of the violation information through WhatsApp about **who is not wearing any safety gear and what kind of safety gear.**

Step4

Preparation of action report

AI and worker collaboration on-site situation sharing details



TITLE	Not wearing safety gear
DETAILS	A worker Teddy who is in area A Not wearing helmet, gloves

As AI automatically writes risk reports, HSE safety management personnel **shorten safety management time, increasing efficiency.**

EASY AI DISASTER PREVENTION SYSTEM

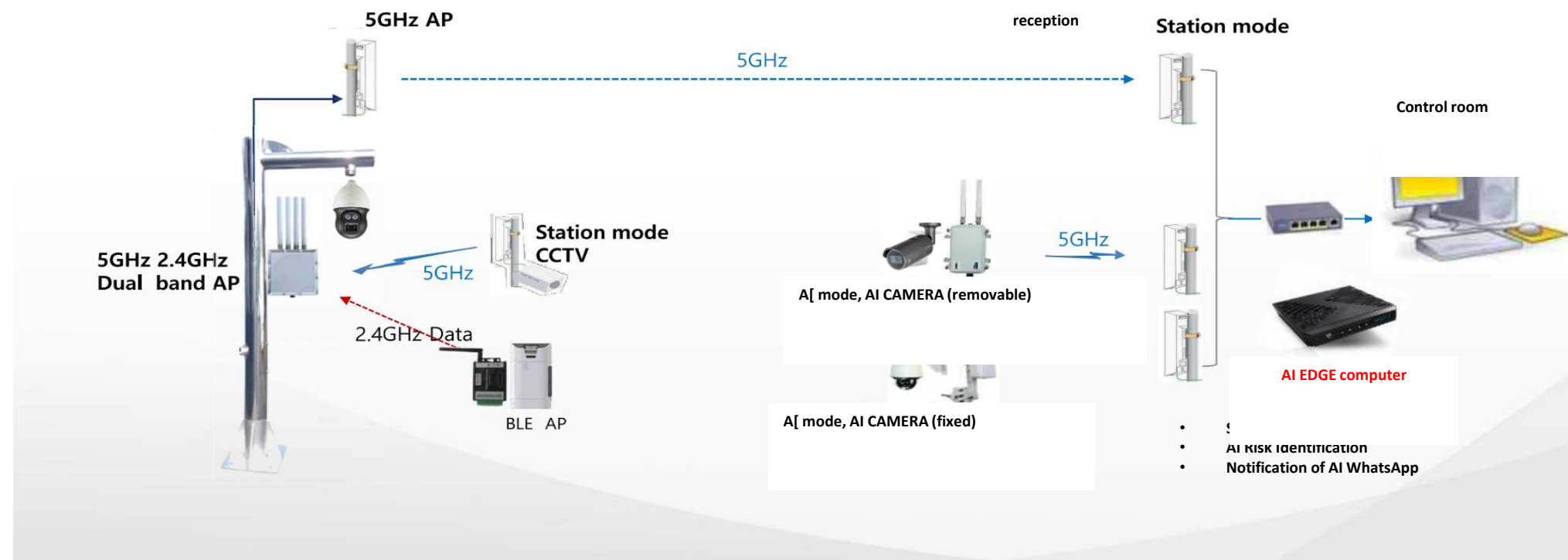
This is an integrated disaster prevention service that installs a desired risk prevention model tailored to the country and company in AI edge computers(SaaS), protects on-site risks together while communicating with workers in real time, and utilizes real-time risk images for safety education.



System operation concept

How does the AI model work? Wireless network

The AI Safety gear detection service HW device consists of AI CAMERA and AI EDGE computers, and the AI SW model is installed and operated on an **AI EDGE computer** called on-device AI.



1 AI CAMERA



AI CAMERA can shoot up to 6x magnification while monitoring up to 1km of distance. By magnifying a single situation into multiple detailed situations, it accurately detects risks.

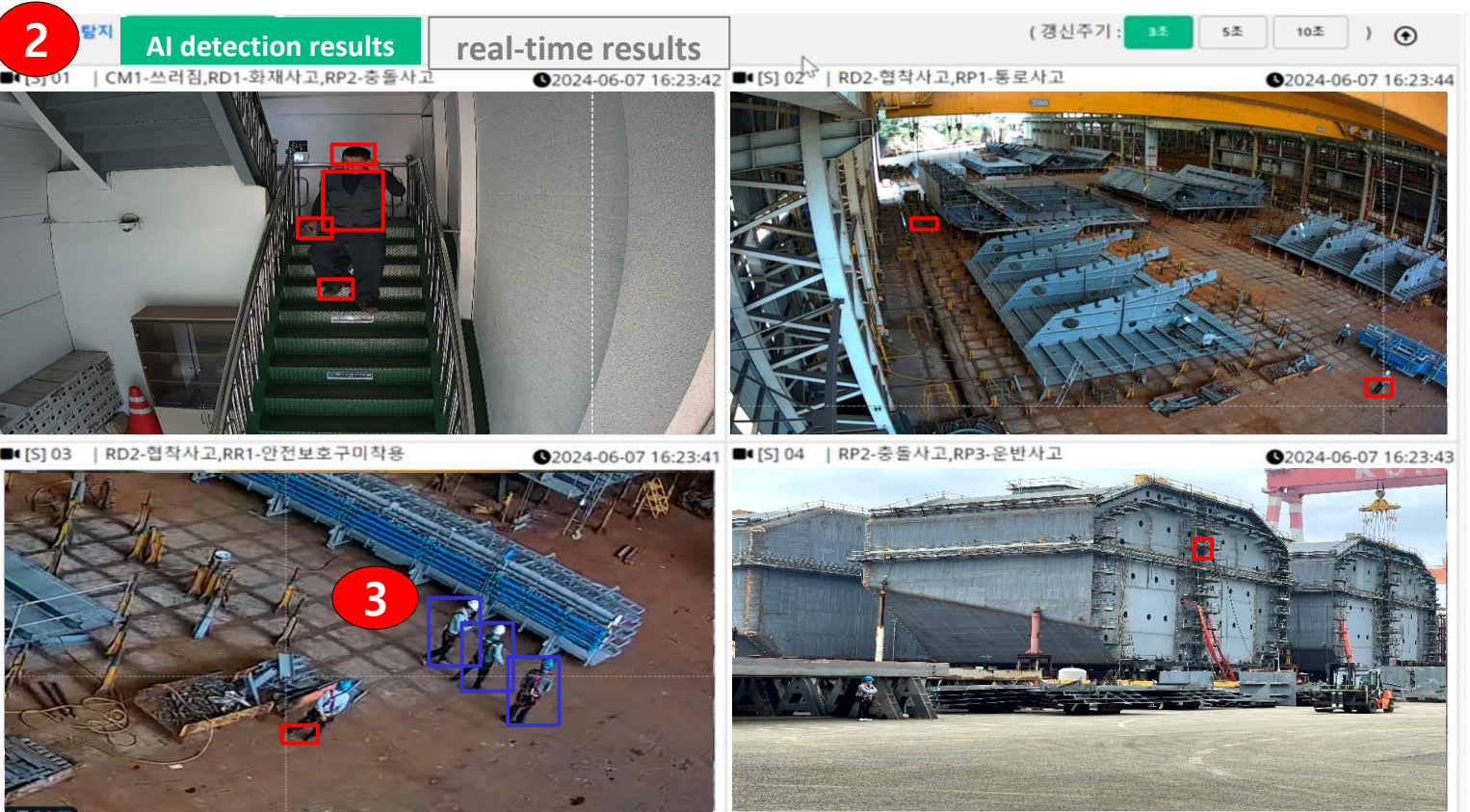
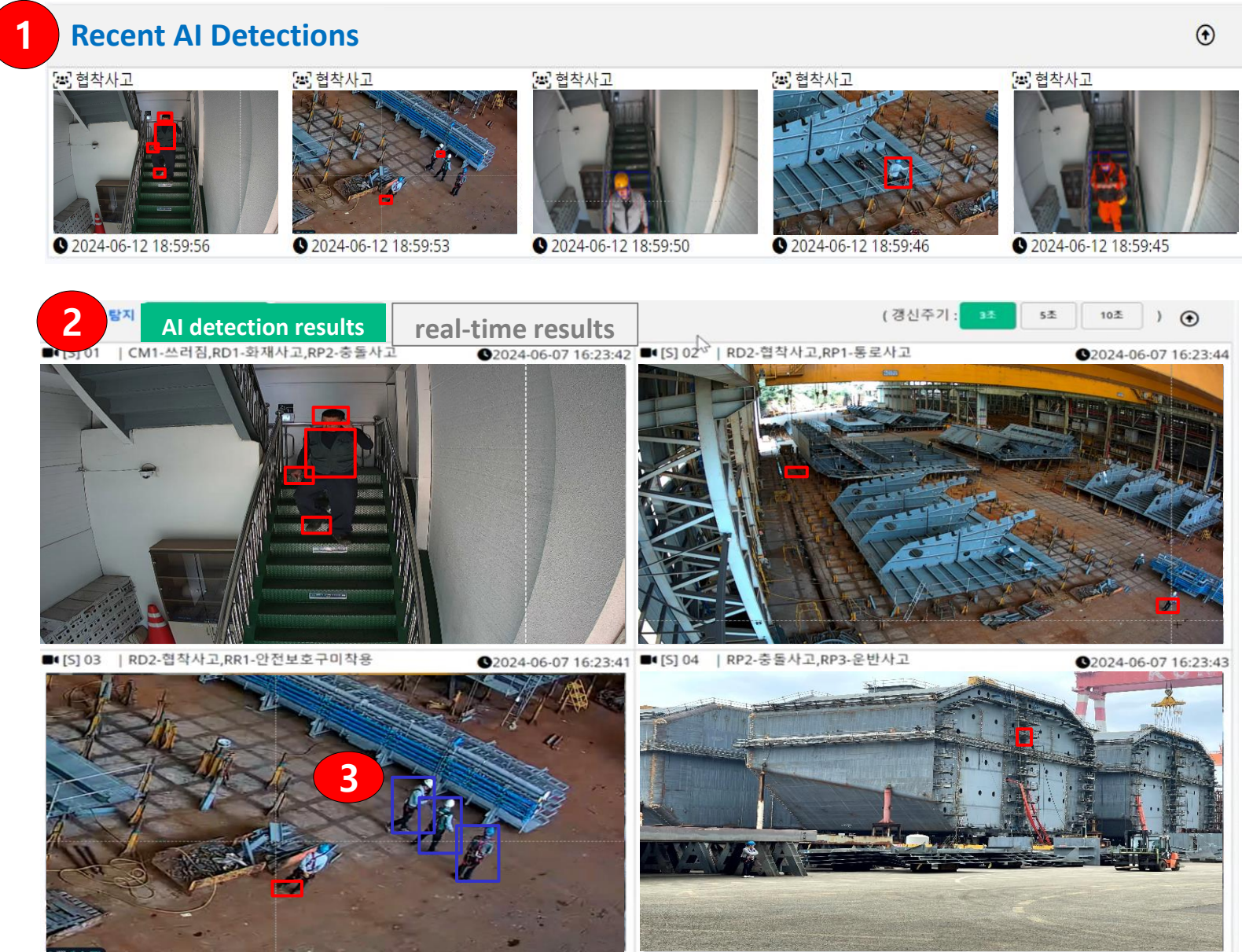
2 AI EDGE computer Benefit



- 1) Size: Less than a laptop compared to a traditional server
- 2) Less Power consumption, Less Heat, Less Noise
- 3) Can be installed anywhere on site
- 4) Communication costs: Edge computers themselves do not incur communication costs because they do not send data to the outside
- 5) Device cost: Very low, one-twentieth of the existing AI server

Monitoring AI detection results

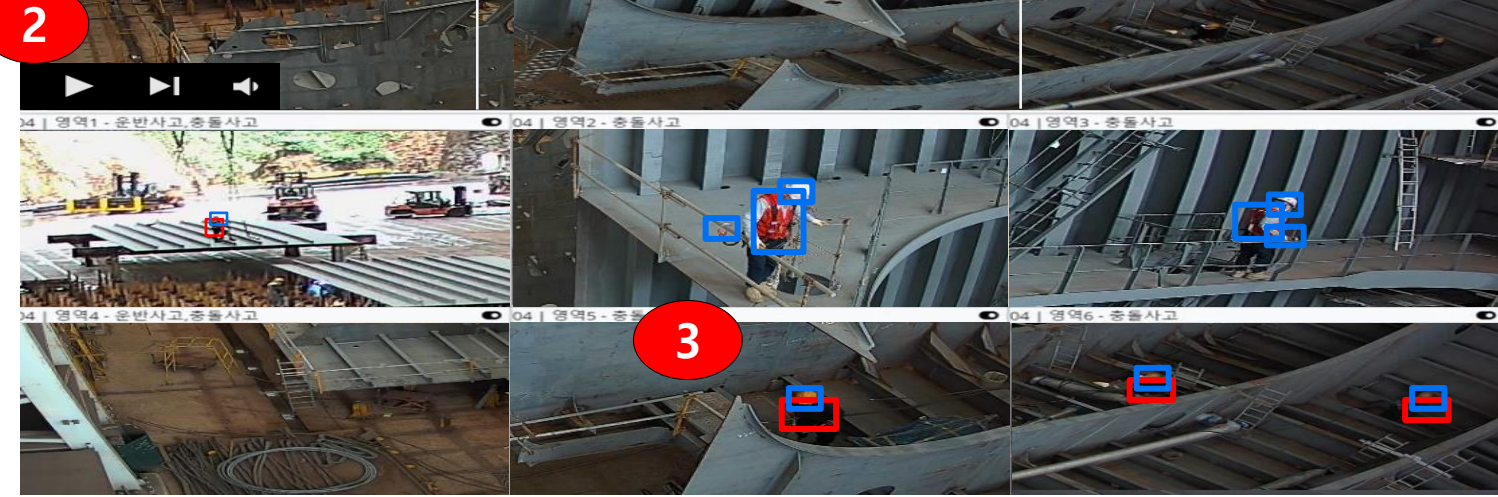
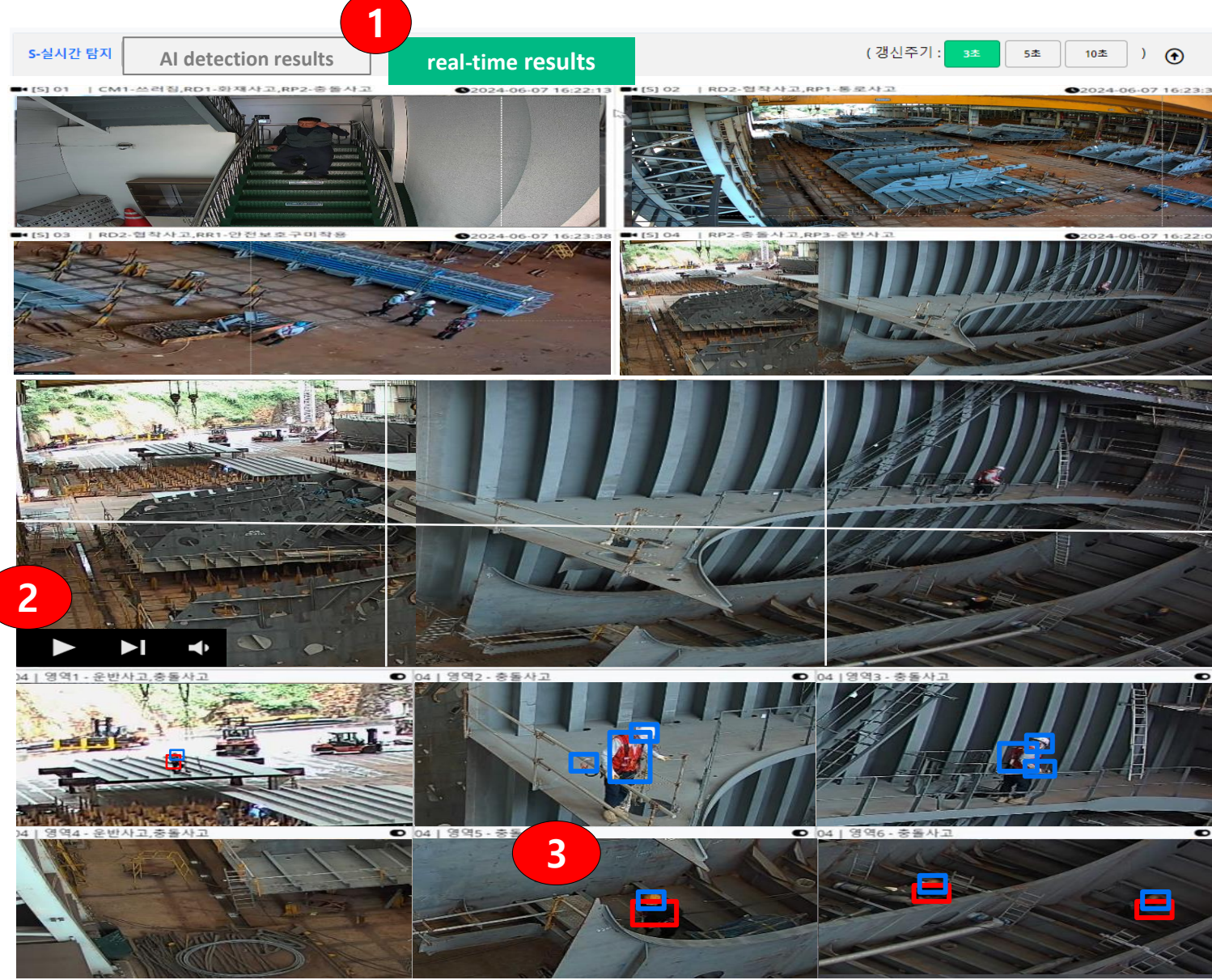
Monitoring the full AI detection results by AI CAMERA location



- 1) Check the latest AI detection results
- 2) Check real-time video
- 3) If wearing safety gear is normal, it is marked in blue, if there is a problem, it is marked in red

Monitoring real-time

Real-time video and detailed risk detection



- 1) Click real-time results: Real-time monitoring for each AI CAMERA
- 2) Check real-time video
- 3) By magnifying a single situation into multiple detailed situations, it accurately detects risks

AI detection history

Check the history of not wearing safety protective equipment

Detection history

HOME > 위험상황 (5) > 탐지 이력

검색

Q 검색

AI model

전체RR1- not wearing safety protective equipmentRP1-동로사고RP2-출동사고RP3-운반사고RD1-화재사고RD2-혈액사고CM1-쓰러짐

AI Detection Period








12024-06-03~2024-06-121 Week1 Month3 Months6 Months

work area

전체

2카메라 탐지 영상 목록

3Excel

<input type="checkbox"/>	NO	Risk type	AI Detection Date	CAM	Location	Notification Date	Image (AI result)	기능
<input type="checkbox"/>	48	RR1- not wearing safety protective equipment	2024-06-12 08:56:37	06	Section B-2	2024-06-12 08:56:37		카카오톡 채널 공유
<input type="checkbox"/>	47	RR1- not wearing safety protective equipment	2024-06-12 08:56:33	06	Section B-2	2024-06-12 08:56:33		카카오톡 채널 공유
<input type="checkbox"/>	46	RR1- not wearing safety protective equipment	2024-06-12 08:52:11	06	Section B-2	2024-06-12 08:52:11		카카오톡 채널 공유
<input type="checkbox"/>	45	RR1- not wearing safety protective equipment	2024-06-12 08:52:07	06	Section B-2	2024-06-12 08:52:07		카카오톡 채널 공유
<input type="checkbox"/>	44	RR1- not wearing safety protective equipment	2024-06-12 08:46:41	06	Section B-2	2024-06-12 08:46:41		카카오톡 채널 공유
<input type="checkbox"/>	43	RR1- not wearing safety protective equipment	2024-06-12 08:43:45	06	Section B-2	2024-06-12 08:43:45		카카오톡 채널 공유
<input type="checkbox"/>	42	RR1- not wearing safety protective equipment	2024-06-12 08:43:41	06	Section B-2	2024-06-12 08:43:41		카카오톡 채널 공유

- 1) Select the period for which you want to check AI detection results
- 2) Check AI detection result information for not wearing safety gear (can be customized according to desired information)
- 3) Download Excel and create report



AIoT-based Disaster Prevention **Easy AI Digital Safety Management System**

Demo of Construction of Shipyards in Korea



WEASVAI

**THANK YOU FOR
ATTENTION**

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