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We will create a trustworthy hospital environment  
for both patients and medical staff with AI-PAM.

**AI-PAM** 에이아이팜  
AI based Patient cAre Monitoring system



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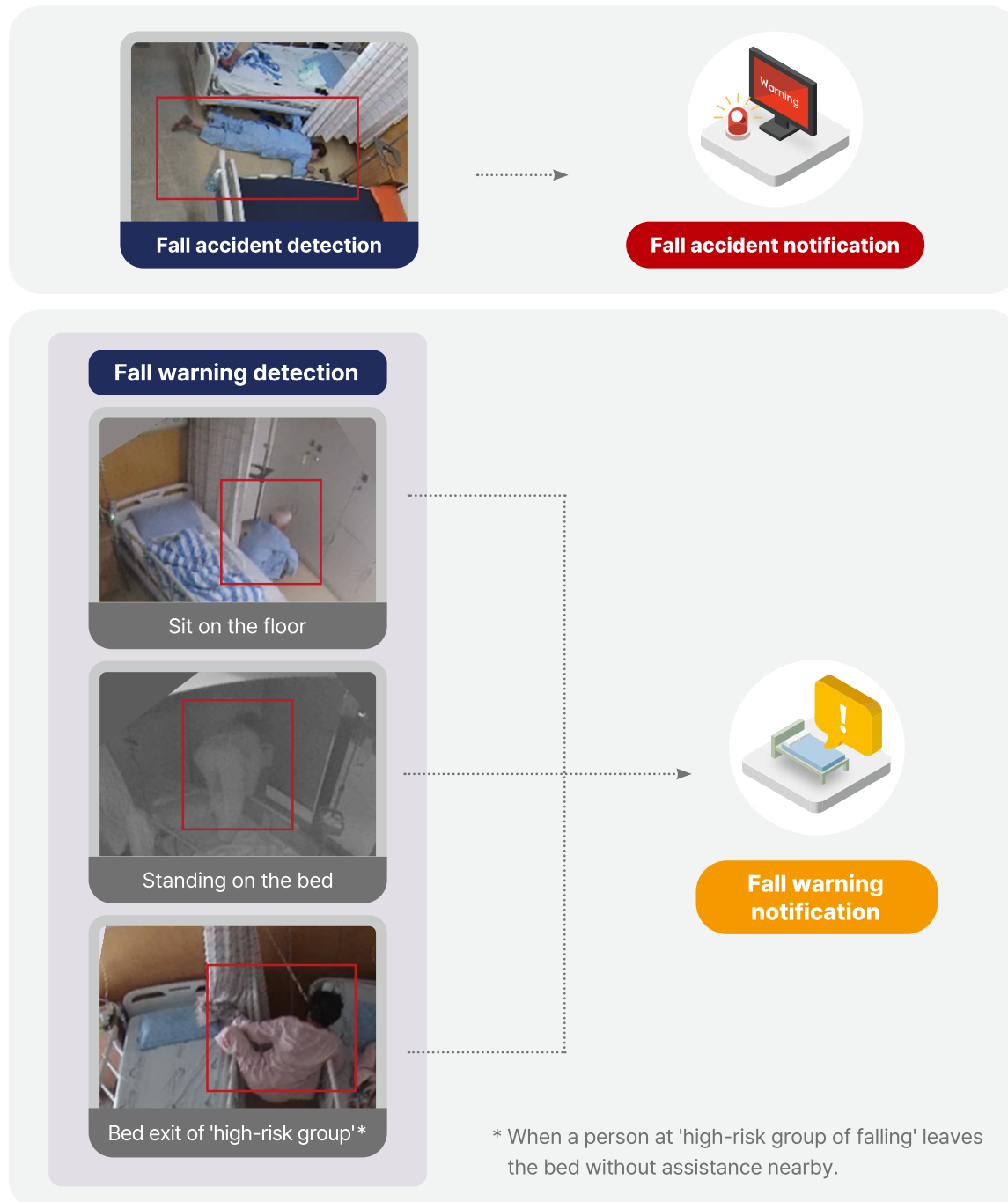
**Fisheye-based AI Anomaly Detection  
Intelligent Patient Monitoring Service**



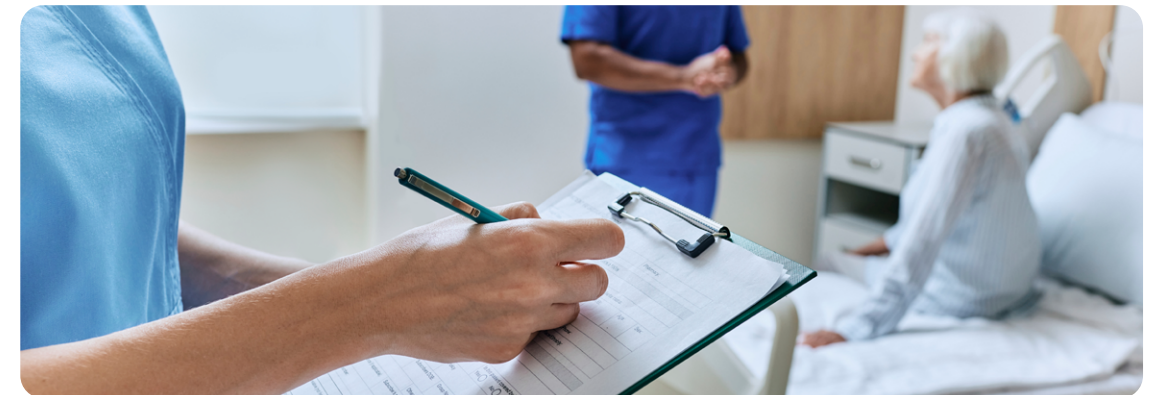
# System Feature

AI-PAM is optimized for multi-bed rooms, providing instant alerts to the nurse station in case of falls or other safety incidents in the patient room, enabling immediate response and support.

## Fall Accidents and Alert Types



## Reclassification of High-Risk Groups for Falls



### Classification of fall risk group



High-risk



Low-risk



No risk

### AI CCTV

- ✓ Number of fall risk behaviors
- ✓ Number of fall accidents
- ✓ Judgment of dependency the day before - Use of assistive devices and whether there is an assistant
- ✓ Judgment of activity

### Reclassification of fall risk group



Very High-risk



High-risk



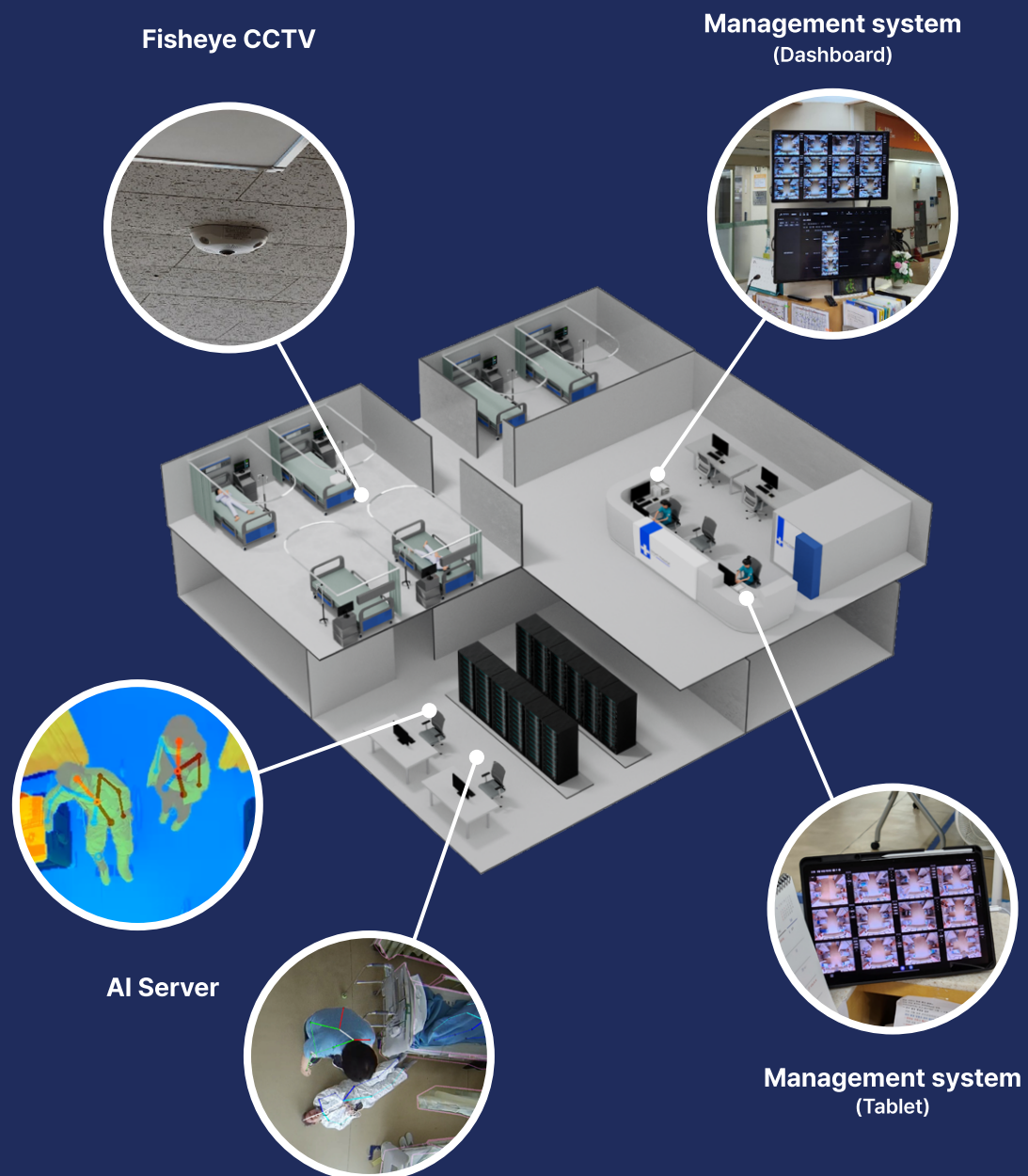
Low-risk



No risk

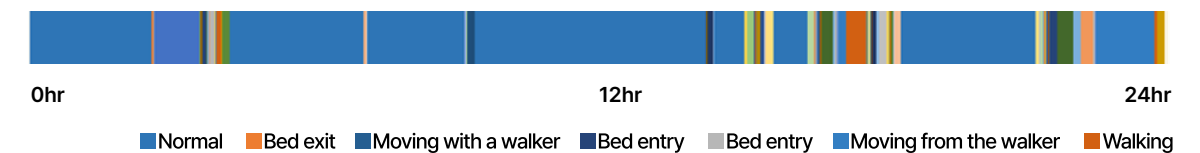


## System Configuration



## Patient risk behavior collection report system

### Collection of patient risk behaviors by time of day



### Classification of risk behavior types

Type	Behaviors
ALONE_MOVE	Moving without walking aids
POLE_MOVE	Moving while holding an IV pole
BED_IN	Getting into bed
BED_OUT	Getting out of bed
WHELL_MOVE	Transferring to a wheelchair
WALKER_MOVE	Transferring to a walker
FLOOR_FIND	Picking up or retrieving items from the floor
DOOR_OPEN	Opening and closing a hospital room door
FRIDGE_OPEN	Opening and closing drawer/refrigerator doors
RAIL_DOWN	Downloading bed rails
ALONE_TIOLET	Using the bathroom independently
CANE_MOVE	Transferring with a cane

# Achievements

## GS 1st Grade Certification



## TTA Certified

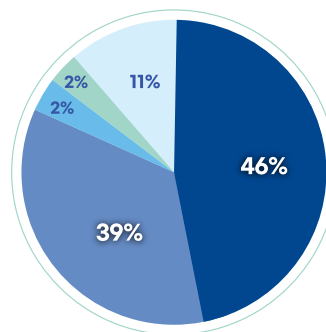


## Effectiveness

	Before	After
General Hospital	18	12
Rehabilitation Hospital	41	29
Geriatric hospital	10	6

Number of falls reported per year (cases)

## Usability Evaluation



### System usability 84.4%

Conducted a usability assessment of the system with staff on the wards where the system was implemented. 84.4% of respondents found it useful.

- Very useful
- Useful
- Not very useful
- Not useful at all
- Not sure

## Partners

✓ Currently in continuous operation since January '22



## Achievements

- ✓ 2024 Ministry of Science and ICT ICT Fund Excellence Performance 50 Selection
- ✓ 2023 Minister of Health and Welfare Award
- ✓ 2022 Ministry of Health and Welfare Function Reinforcement Project Product Selection
- ✓ 2021 Smart Hospital Leading Model Selection
- ✓ MOU Signed with Armed Forces Capital Hospital, Gangwon-do Rehabilitation Hospital, Chuncheon Senior Citizens Hospital, and Kakao Enterprise
- ✓ MOU Signed with Gorinkai Medical Clinic, Japan

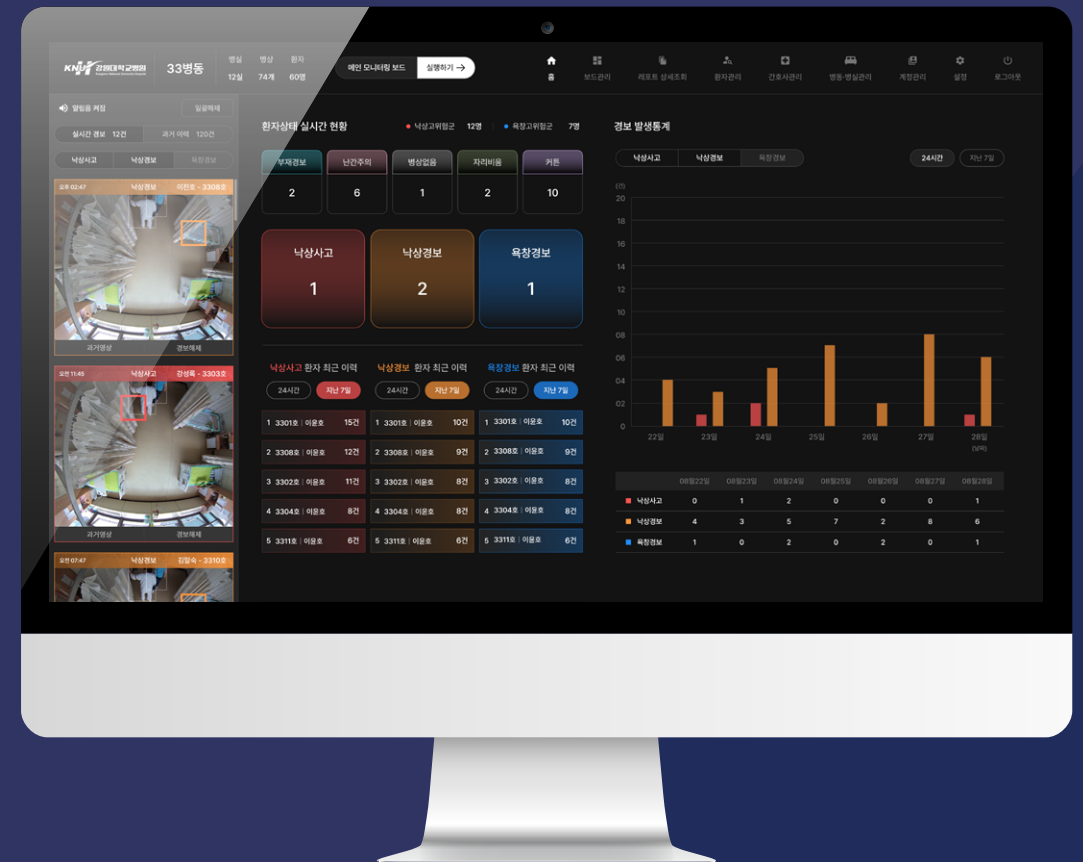


# 1. Efficient nursing assistant interface through collaboration with nursing and quality management teams

Supports tablets, enabling flexible station expansion



# 2. Safety status and reporting system for patient management and accident prevention



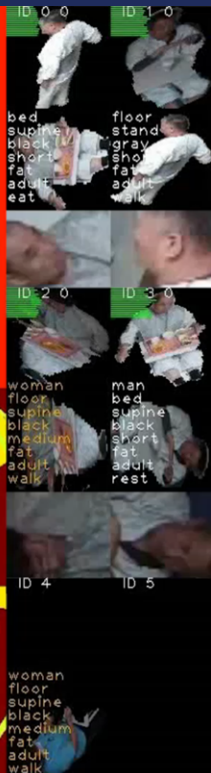
Various notifications and patient-specific reporting



# 3.

## Analysis of patient and hospital room environment through person/object separation estimation

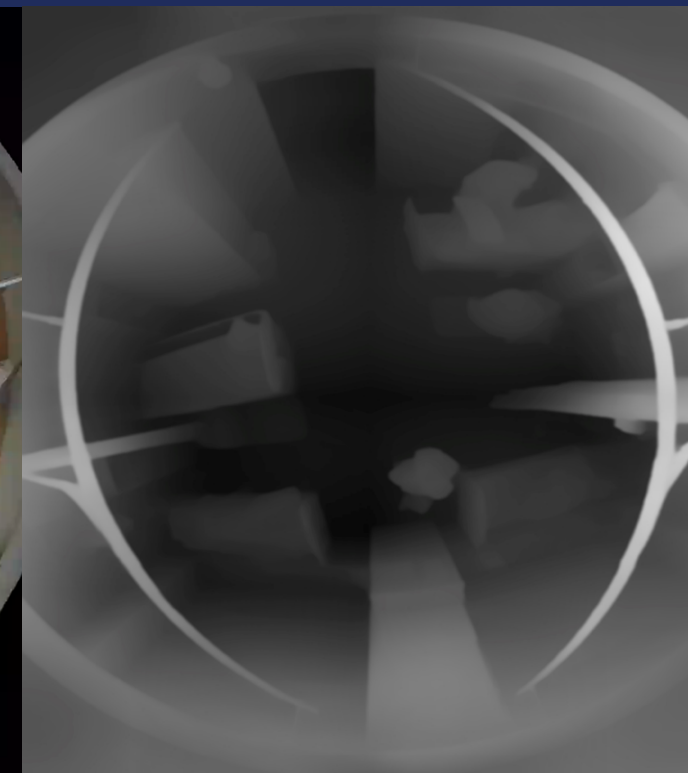
Individual patient tracking and hospital room usage environment analysis



# 4.

## Deep Learning-based Object Detection and Distance Estimation

Deep Learning-based: Accurate floor detection through Depth Map(depth values) reduces the false detection rate.

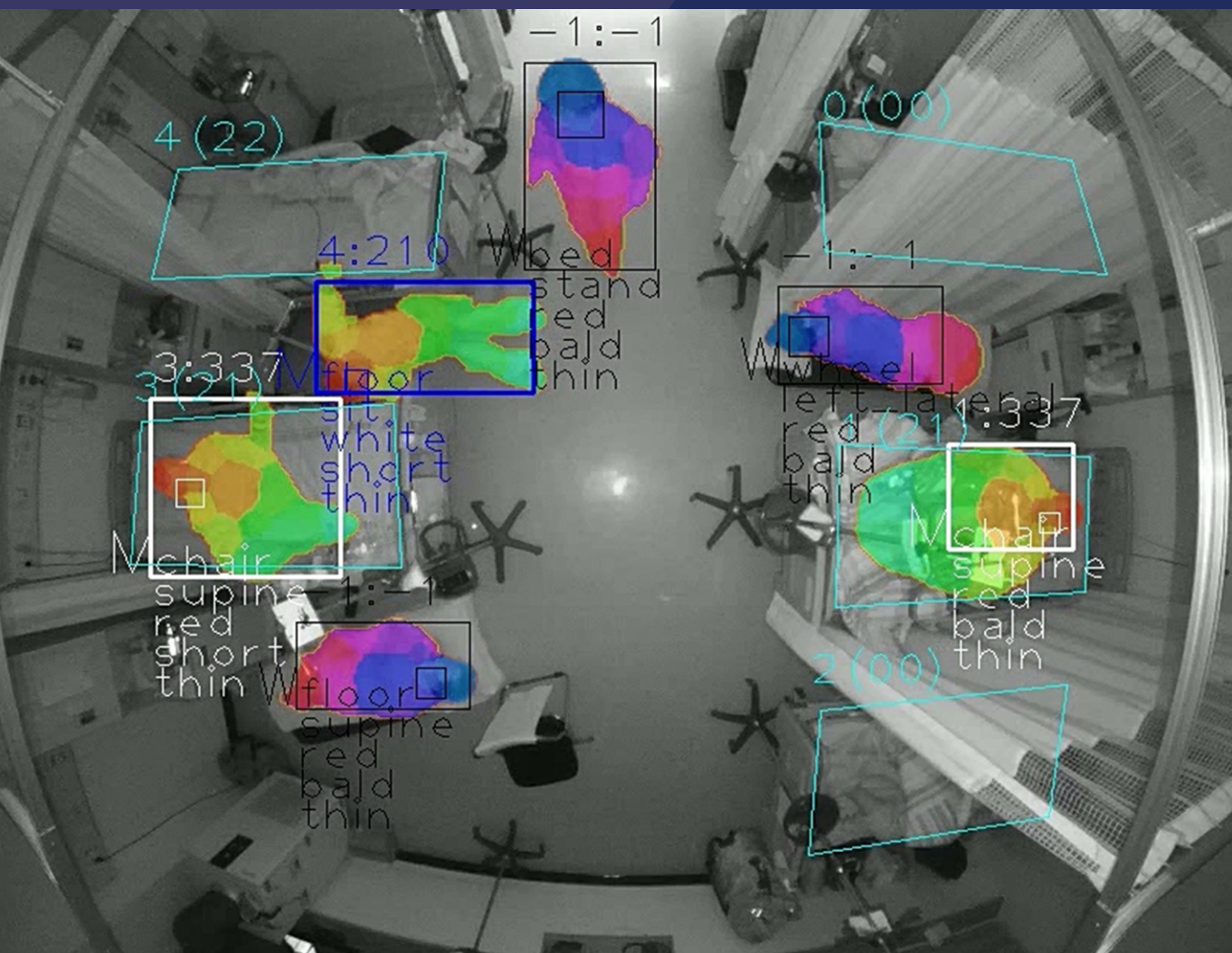




# 5.

## Patient/Medical Staff Masking System for Personal Information Protection

Provides curtain bed area non-detection function



# 6.

## Day and night integrated detection system with perfect detection even at night

Supports infrared photography





## Global Exhibition

HIMSS 23

APAC HEALTH CONFERENCE &amp; EXHIBITION



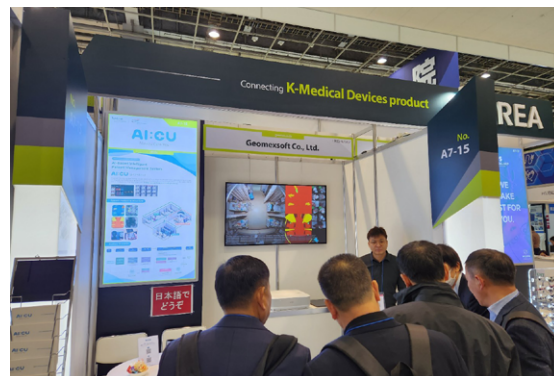
2023

KHF K-HOSPITAL +  
HEALTH TECH FAIR  
with HIMSS

2022, 2023

MEDICAL JAPAN OSAKA  
MEDICAL / ELDERLY CARE / PHARMACY WEEK OSAKA

2024



Korean Academy of Rehabilitation Medicine24



Korean Society for Quality in Health Care 24

Korean Convalescent Hospital Association  
Academic Seminar 24

## Global Expansion

## Consultation for Clinical Demonstration in EU

- ✓ The North Estonia Medical Centre
- ✓ Tartu University Hospital
- ✓ Narva Hospital
- ✓ Viljandi Hospital
- ✓ South-Estonian Hospital



## Consultation for Clinical Demonstration in Japan

- ✓ Medical Clinic Gorinkai

