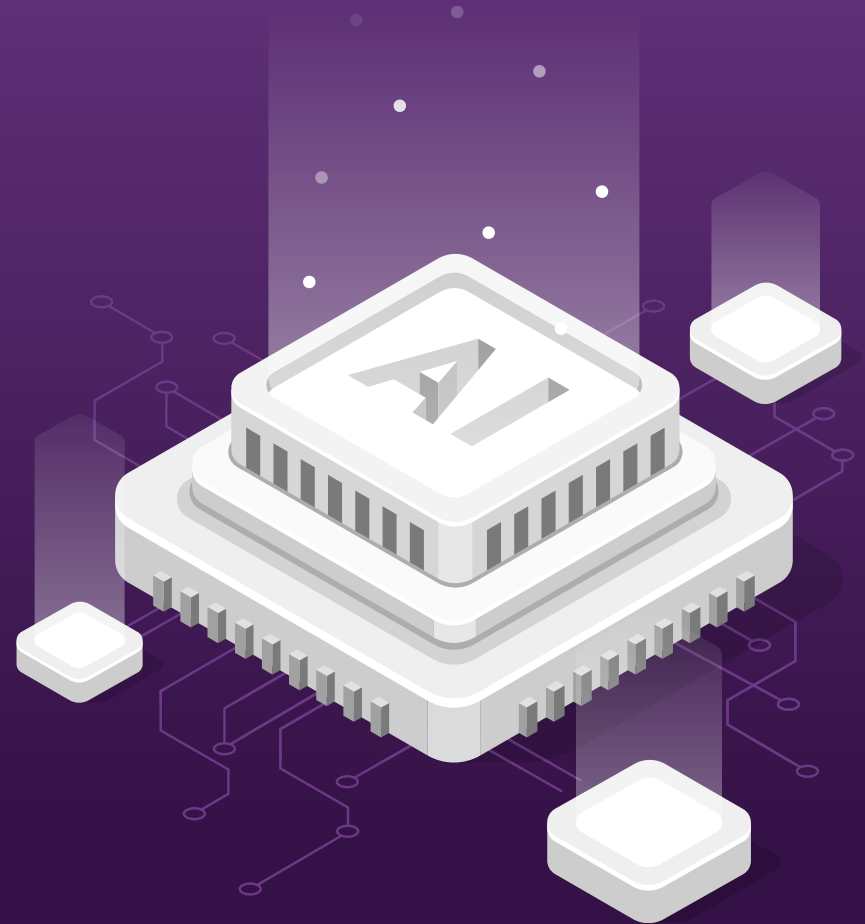


# Konan Watcher

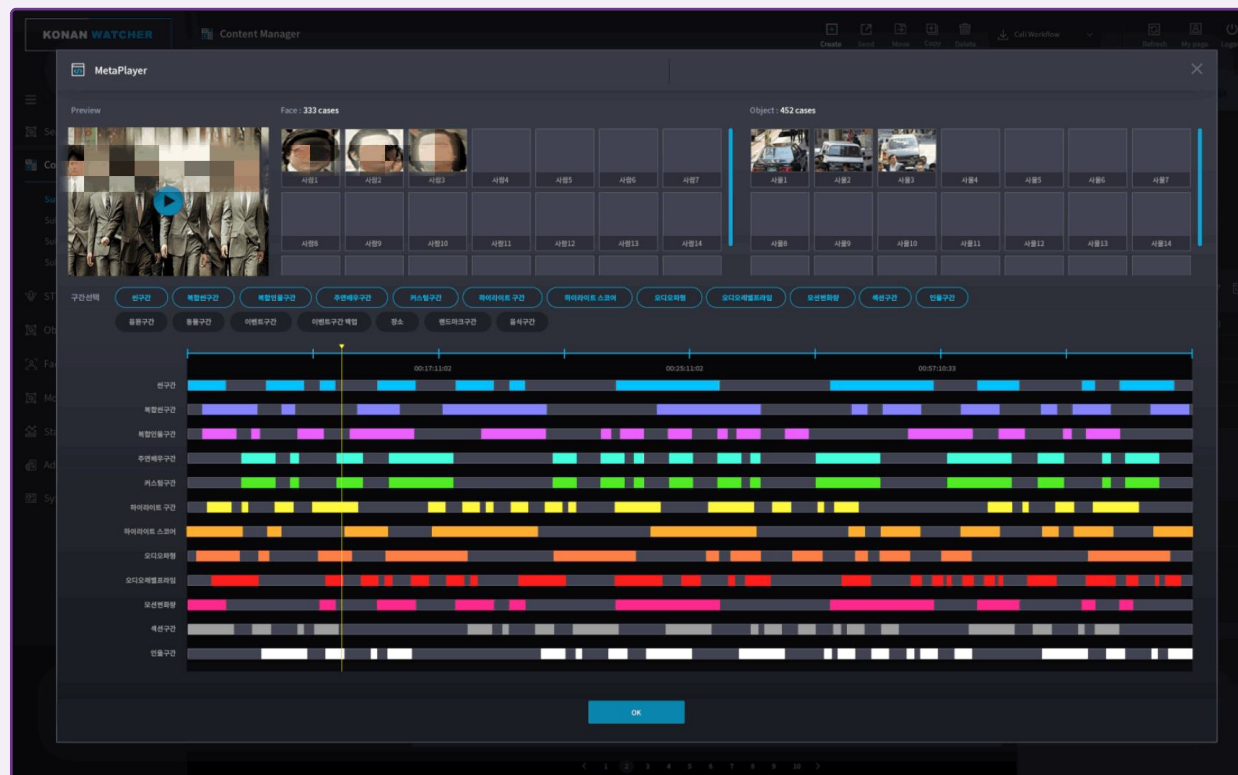
AI-based Video Understanding Solution



## Feature 1

# UX innovation through vision AI technology

- ◆ 'Contents Management' innovation through video object detection
  - Face/object detection, situation awareness, voice recognition
  - Timeline-based metadata viewing
  - Intuitive post-calibration of metadata
- ◆ AI-supported quick subtitling/quick dubbing
- ◆ Multimodal search
- ◆ Automatic creation of highlight videos



## Feature 2

# High quality solution built on 20 years' experience

- ◆ Video understanding framework based solution built on 20 years' experience
- ◆ Security Certification & GS Certification acquired
  - Intelligent CCTV evaluation certification (2021-12-09. defense business field)
  - GS Certification (expected to be acquired)
- ◆ International standards applied
  - Metadata management based on the international Dublin Core standard
  - Operating without additional plug-ins by applying HTML5 standard



## Feature 3

# MLOps-based end-to-end operation

### ◆ MLOps-based automation of the entire deep learning training process

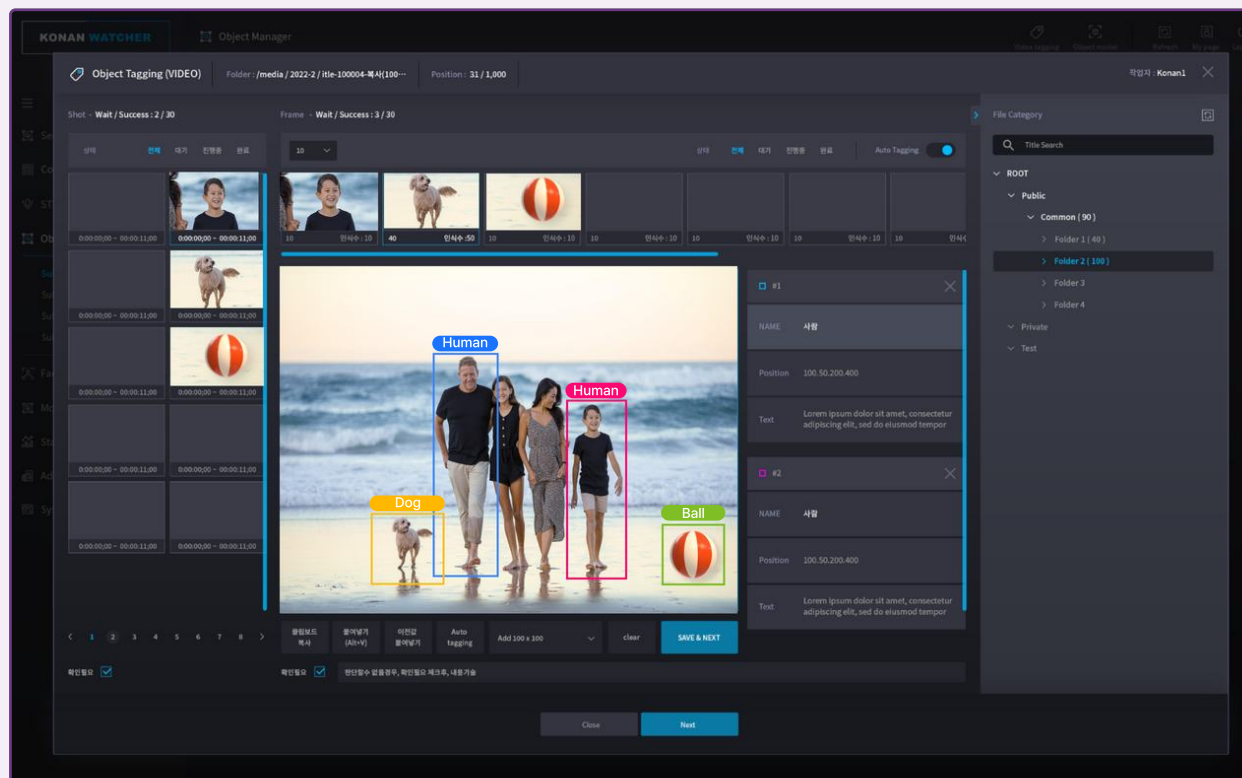
- Automatic process of data collection-cleansing-training-validation
- Training supported for voice/object/person detection in deep learning

### ◆ Support for stable system operation

- Active-active duplex configuration
- Non-disruptive server patching with core and business logic modules separated

### ◆ Intuitive web-based tools supporting operation tasks

- Metadata field editor for customized services
- Dashboard for integrated real-time monitoring management
- Drag-and-drop workflow manager



## Feature 4

# Real-time video recognition

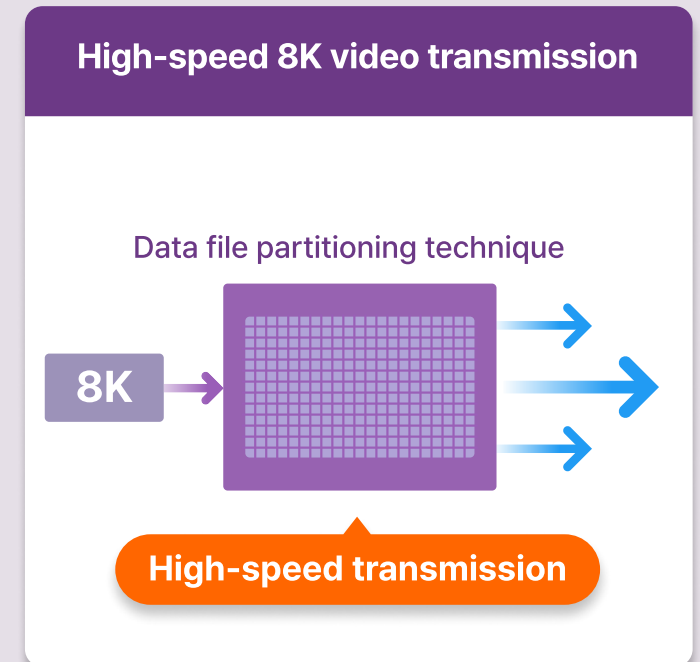
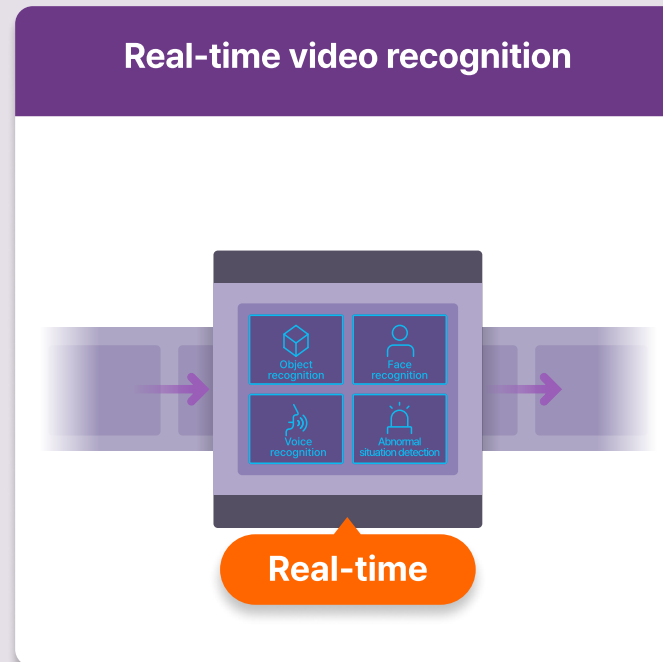
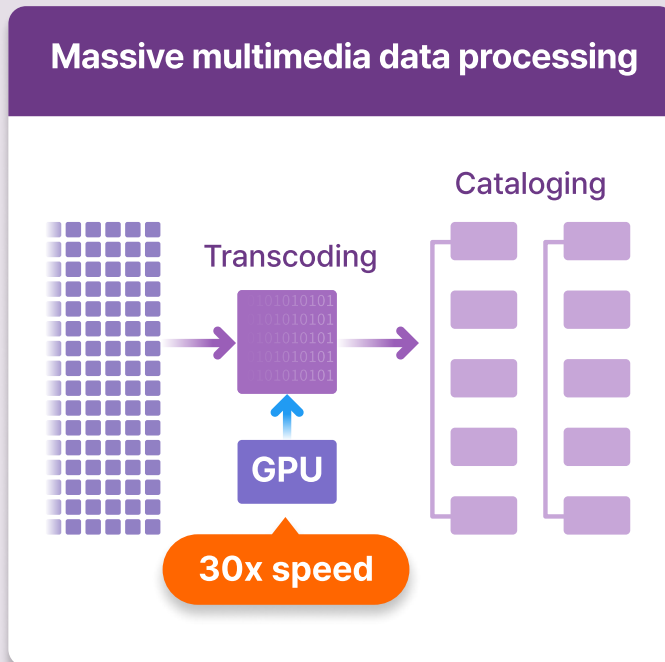
### ◆ Processing and management of massive multimedia data processing (more than 100 million files)

- On the fly transcoding implemented once video is acquired
- High-speed transcoding utilizing GPUs
- 30x speed cataloging

### ◆ Real-time video recognition without delay

- Object detection, face/voice recognition, anomaly detection

### ◆ High-speed 8K video transmission using the data file partitioning technique



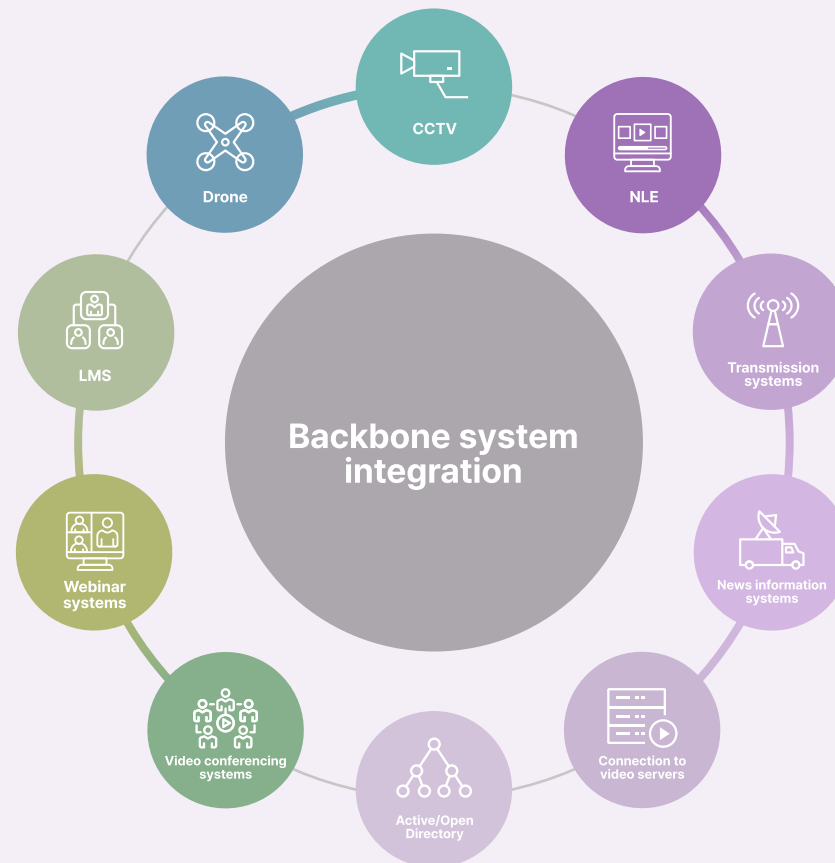
## Flexible backbone system integration

### ◆ High level/low level restful APIs enabling backbone system integration for each industry

- Support for integration to drones and CCTV systems
- Support for integration to LMS and video conferencing/webinar systems
- Support for integration to video servers, news information systems, transmission systems and NLE systems

### ◆ Support for integration to organizational chart for authorization management

- Linking to AD (Active Directory)/OD (Open Directory)



# Key Functions

## Content Management

- Content Registration
- Metadata Editing
- Storyboard
- Automatic Subtitle Creation and Video Editing
- Adding Voice to Video
- Adding Voice to PDF
- Deep Metadata
- Automatic creation of highlight videos

## Neural Search

- Image Search by Images
- Multimodal Search (Search by Images + Texts)
- Vector Search

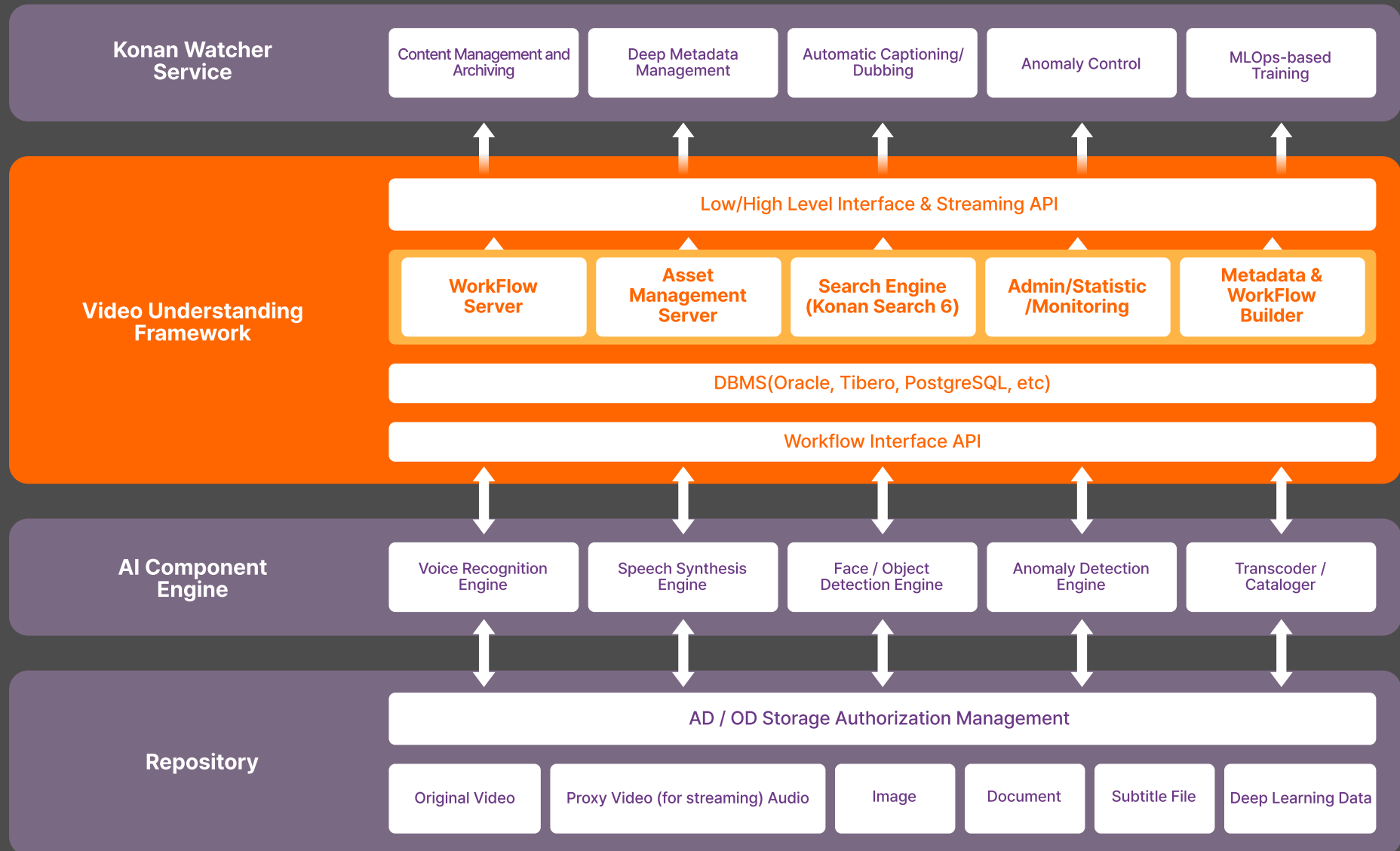
## Deep Learning

- Training Data Collection
- Training Data Management
- Data Tagging and Cleansing
- Task Status Management
- Validation Data Review
- Visualization of Model Performance Evaluation

## System Operation

- System and Storage Monitoring
- Content Usage Statistics
- User and Authorization Management
- Workflow Monitoring
- Component Server Monitoring
- Setting System Environment Variables

# System Architecture





# Benefits

## Video Value Enhancement using AI

- Video Value Enhancement by tagging persons and objects and creating metadata

## Improvement of Video Production Process using AI

- Subtitle creation, dubbing, automatic creation of highlight videos, etc.

## Increase in Video Reuse Rate by utilizing neural search

- Improving responsiveness (e.g. subscriptions, views, reactions and comments) by increasing the density of video contents (including tags, subtitles, and dubbing)



Video Value Enhancement



Improvement of Video Production Process

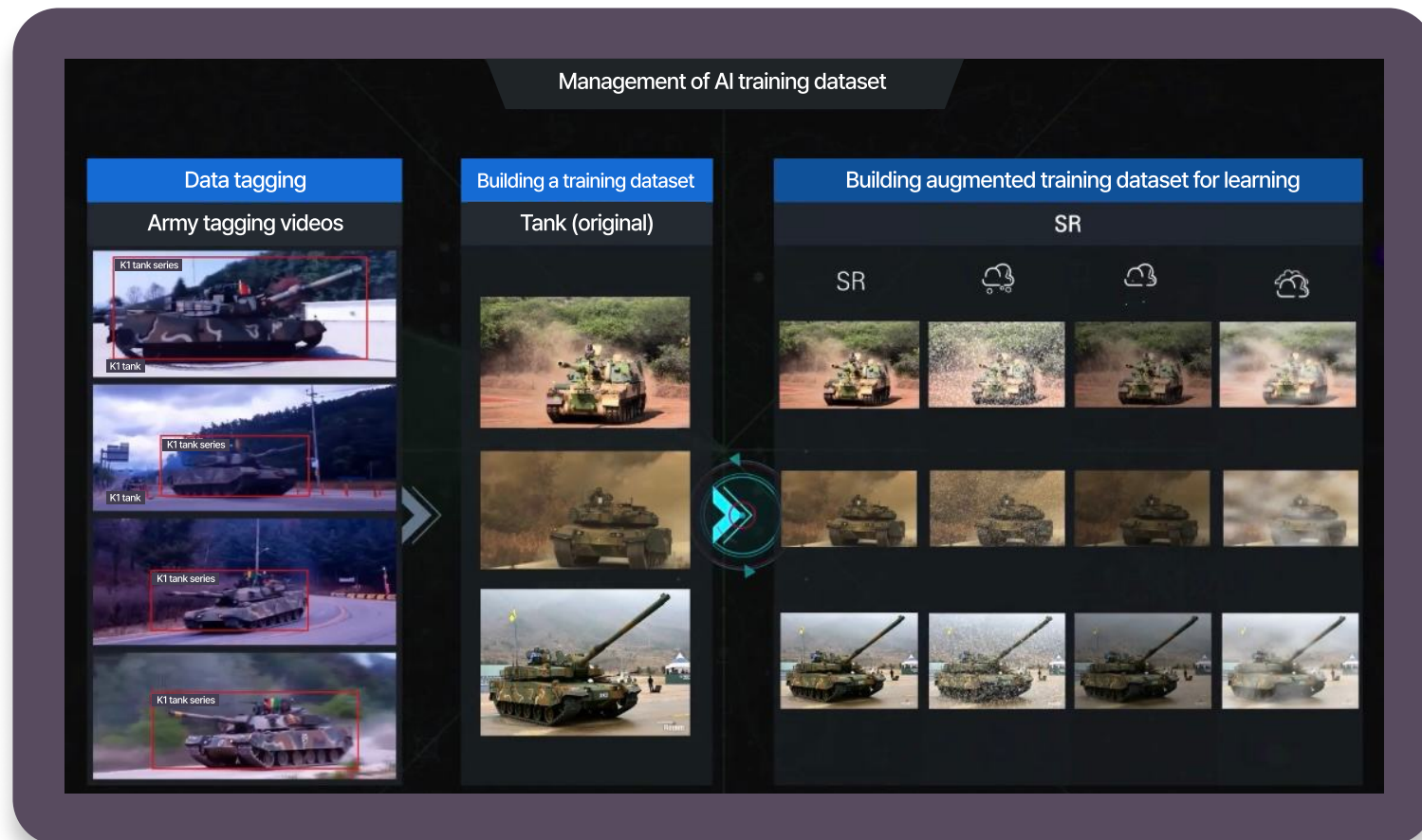


Increase in Video Reuse Rate

# Case study **1**

## ◆ National defense case

- Identifies enemies and allies by analyzing data from videos and photos using deep learning technology
- Building battlefield scenarios suitable for military command and control systems

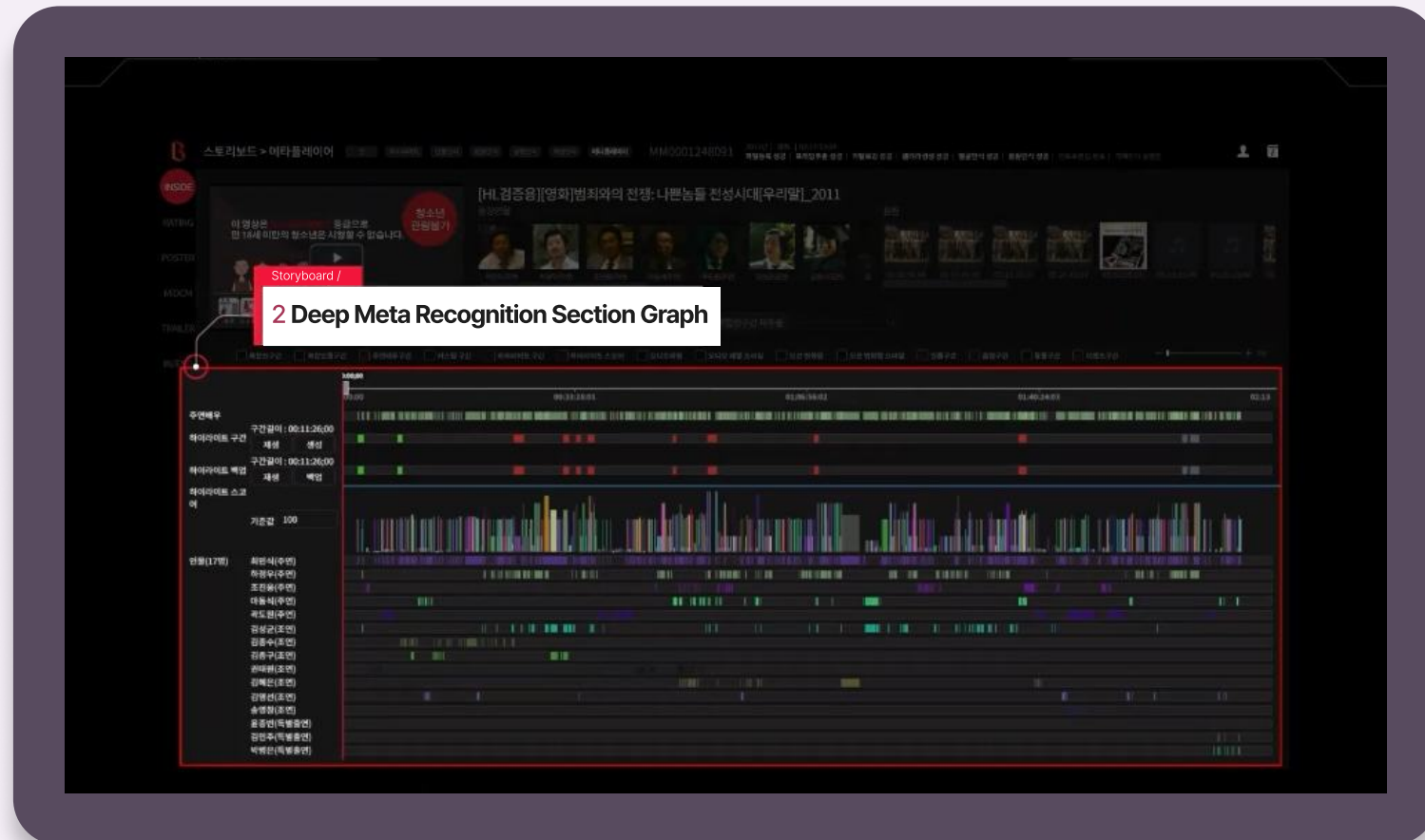


**Industry :** National defense / **Period :** 10 months / **Project Overview :** AI-based military intelligent information platform

## Case study <sup>2</sup>

### ◆ SK Broadband case

- Provides personalized search and recommendation services by using deep learning technology to analyze deep metadata in contents such as movies, dramas, and shows
- Automatically provides key highlight videos such as eating and action scenes

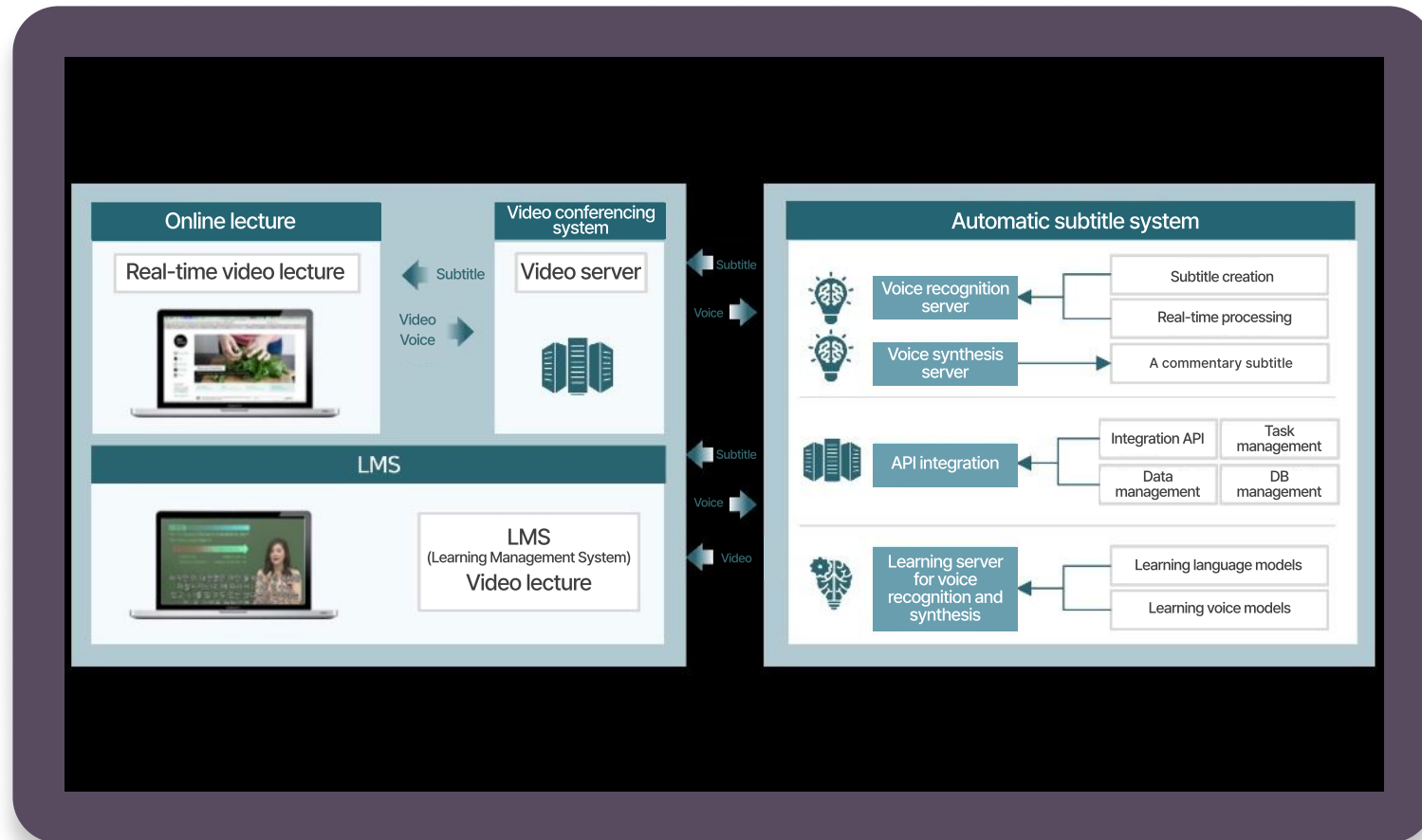


**Client :** SK Broadband / **Period :** 8 months / **Project Overview :** AI-based DeepMeta Solution

## Case study 3

### ◆ Korea National Open University case

- Subtitles online courses for students including those with hearing loss
- Creates accurate subtitles using speaker adaptive acoustic modeling to improve voice recognition rate



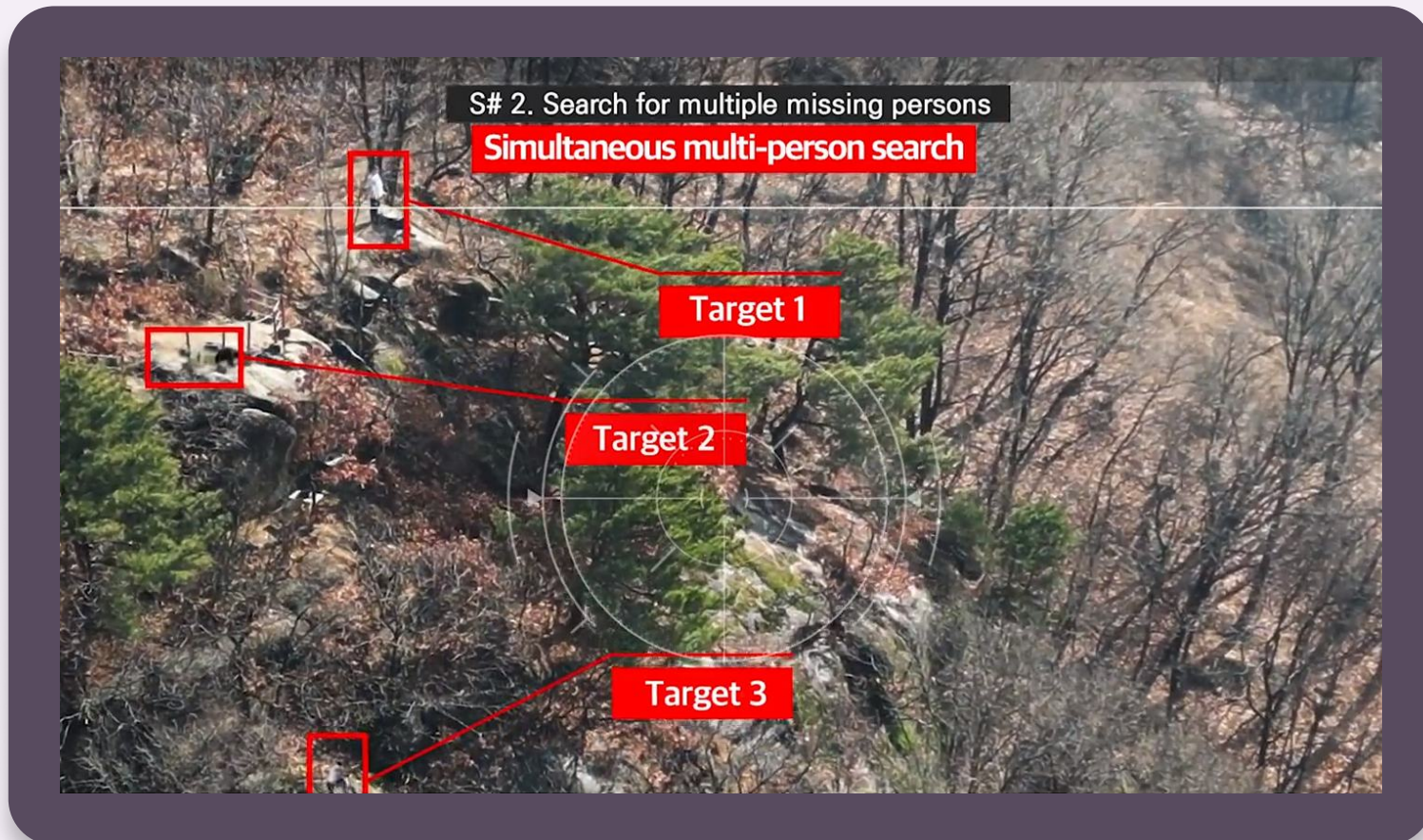
**Client :** Korea National Open University / **Period :** 12 Months / **Project Overview :** AI-based subtitling system



## Case study **4**

### ◆ 'Konan Vision AI' Missing Person Search

- A high-performance real-time object (person and face) recognition engine specialized for edge devices
- Applicable for missing person searches in disaster and safety fields



## Case study **5**

### ◆ 'AI-based Fire Operation System' ROK Army Training & Doctrine Command

- Provides swift and accurate decision-making support in various battlefield scenarios
- Provides swift and accurate decision-making support in various battlefield scenarios

