

# Company Introduction

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**AI can make the world a better place**

# CONTENTS

<i>01</i>	Company Profile	-----	p.03
<i>02</i>	Text AI	-----	p.08
<i>03</i>	Video AI	-----	p.19
<i>04</i>	Digital Twin	-----	p.25
<i>05</i>	Technologies	-----	p.28

# 01

## Company Profile

- 1) About us
- 2) Clients
- 3) Shareholders
- 4) Product Lineup

# Konan Technology

Konan Technology is a company specializing in Artificial Intelligence software.

Since its establishment in 1999,

we have built up the original technology for over 25 years by focusing on unstructured big data analysis and AI technology.

Please watch Konan Technology drive AI business growth through “AI that sees, hears, understands and speaks like a human.”

Company Name	Konan Technology Inc.
CEO	Kim Young-Sum
Date of establishment	1999. 04
Key Technologies	Text AI, Video AI, Digital Twin
Main Business	LLM, AI Search/Analytics/Chatbot, AI Watcher/Listener, Voice, PHM, AI Pilot
Number of Employee	225 ( as of 2025. 1. 2 )
Address	327, Gangnam-daero, Seocho-gu, Seoul, Daeryung Seocho Tower 6,7,9 FL
Corporate Type	KOSDAQ-Listed Company



# Clients

Leveraging 25 years of customer trust and cutting-edge technology, We has successfully onboarded 2,900 clients spanning various industries, including major corporations such as Hyundai, Samsung, government agencies, and financial institutions.

2,900 + Clients

3,400 + Projects

## Conglomerate



## Government Services



## Retail



## Financials



## Communication Services

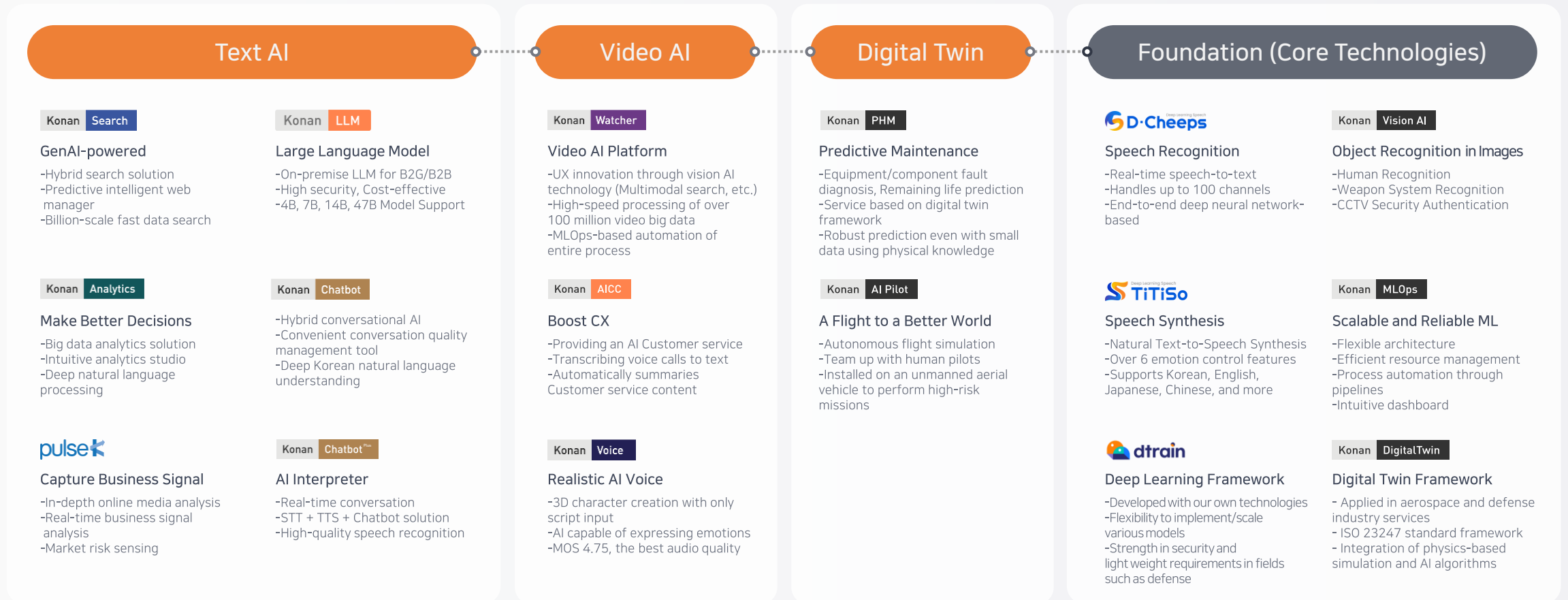


## Consumer Services



# Product Lineup

Based on in-house developed core technology,  
We provide various solutions in the fields of text AI, video AI, and digital twin technology.



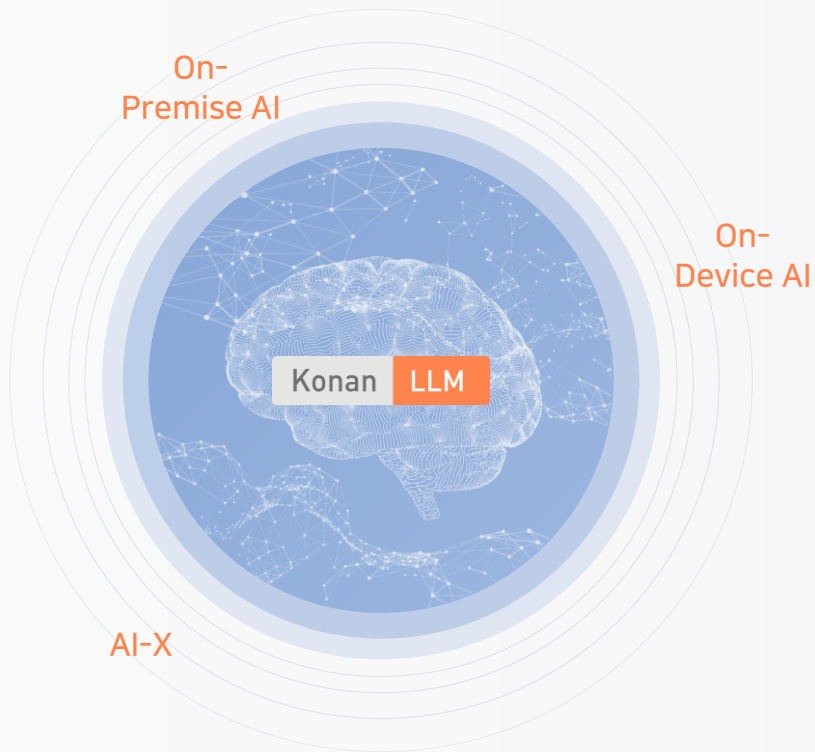
# 02

## Text AI

- 1) Innovation Accelerator, **Konan LLM**
- 2) GenAI-powered, **Konan Search**
- 3) Boost CX, **Konan Chatbot**
- 4) AI Translator, **Konan Chatbot +**
- 5) Detect Business Signal, **PulseK**

# Innovation Accelerator, Konan LLM

Konan LLM is a generative AI model offering top-tier Korean document generation capabilities. We supply a lineup of diverse sLLMs built on our proprietary AI technology, training data, and development environment.



## Feature

- Highest amount of Korean training data (5,111 billion tokens)
- Offer a variety of models, from enterprise to on-device, all powered by H100 development servers. allowing you to choose a model that best suits your needs and budget.
- RAG support via vector search engine
- Provides a no-code management tool, "Konan LLM Studio"
- Applying 25 years of accumulated, top-tier language processing technology

## Technology

- Domain-adaptive pretraining(DAPT)
- Modular RAG
- LLMOps

# Use Case of Konan LLM

## Client

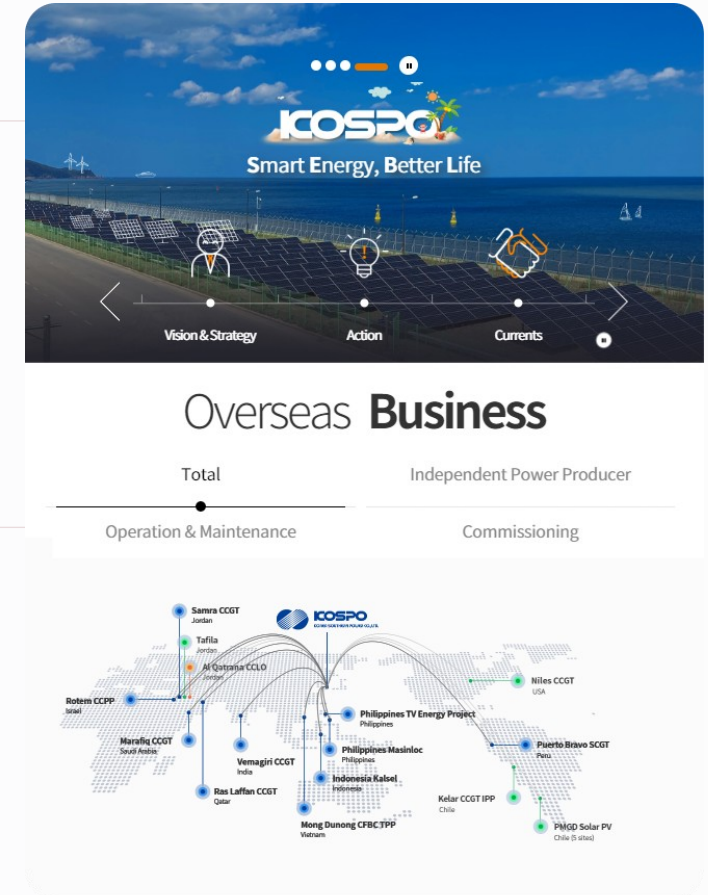


## Details

- First public institution in Korea to adopt LLM
- Generative AI used for report writing, summarization, translation, analysis, coding, and Q&A
- Knowledge collection and learning in common public sector and development areas
- Provides management functions for training, deploying, and operating generative AI models

## Benefits

- By building it in-house, the risk of information leakage is eliminated, allowing generative AI to be safely applied to internal tasks.
- Automates repetitive and time-consuming tasks like report writing, summarization, and translation, reducing employee workload and boosting productivity
- Enhances collaboration across the organization and enables informed decision-making processes



# GenAI-powered, Konan Search

Konan Search delivers more relevant results by semantic search, supports multi-modal search, and enables RAG for Konan LLM through a combination of traditional NLP-based search and vector search.

## Neural search-based semantic search



- RAG support in LLM with vector search
- Vector search enables synonym search without a synonym dictionary
- Image vector search enables similar image search without image captioning

## Hybrid Search System



- Increase search accuracy with a hybrid approach that analyzes data with rule-based NLP technology first and then further analyzes data with deep NLP technology

## Multimodal AI Search



- Multimodal learning overcomes unimodal search limitations by understanding diverse data like text and images, improving search accuracy.

## Auto summary



- Enable intelligent analytics, including auto-summarization of long texts using deep learning and machine learning models.

## Key Technologies

### Big Data Storage/Search Technology

Supports transactions, multithreading, and horizontal scaling for large-scale parallel processing and search..

### Hybrid Search Technology

Technology that supports hybrid search combining disk-based large-scale vector search and NLP search.

### Domain Language Technology

Provides the largest number of pre-built NLP system dictionaries in Korea, along with user-defined dictionaries, to ensure accurate indexing and search.

# Use Case of Konan Search

## Client

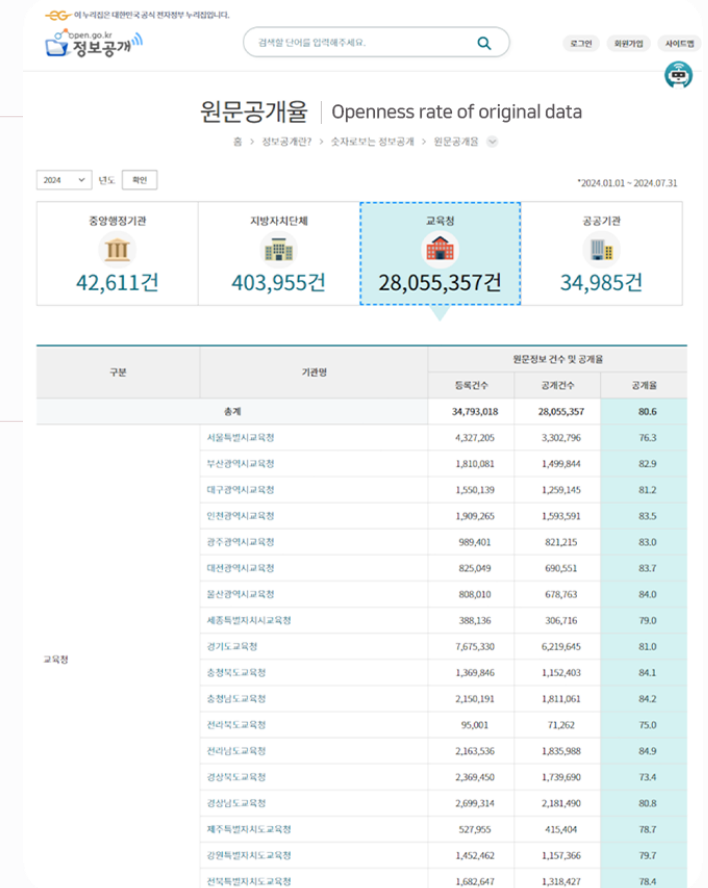


## Details

- Provides uninterrupted public search services
- Reduced server count by one-third compared to the previous S company's search engine, optimizing costs
- Offers Index Tool for easy operation by non-developer

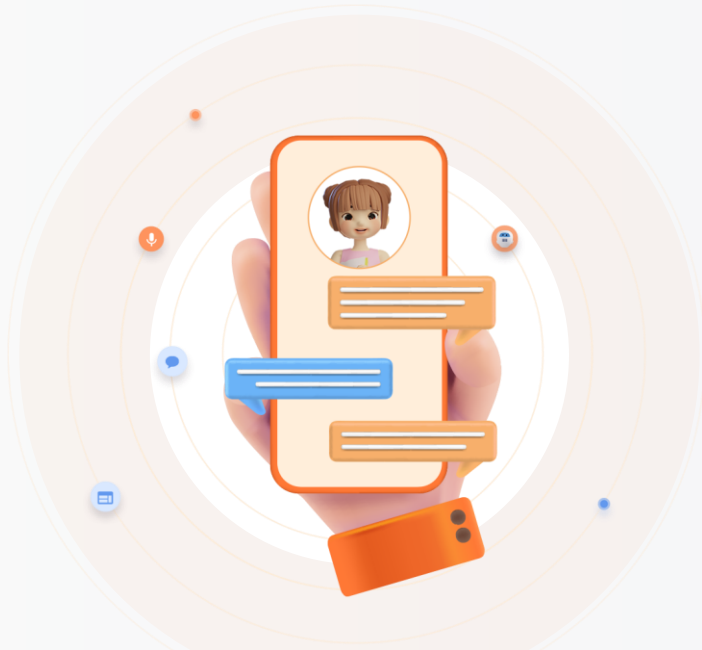
## Benefits

Category	Before Replacement (S Company)	After Replacement (Konan Technology)
Search Time for Entire Data Period	∞ (Not Searchable)	1~5 Seconds
Searchable Data Period	3 Month (Partial Period)	13 Years (Entire Period)
Maximum Searchable Data Volume	0.52 Billion Records	17 Billion Records
Service Stability	System downtime for daily maintenance	Continuous stable operation without downtime
Number of Servers	9	8



# Boost CX, Konan Chatbot

Konan Chatbot is a state-of-the-art conversational AI that deeply understands Korean natural language. By integrating with our advanced language model, Konan LLM, Konan Chatbot can precisely identify the intent behind your questions.



## Konan Chatbot

Conversational Natural Language Understanding

### Feature

- **Hybrid conversational intent inference:**
  - Ensures high response accuracy through multi-layer intent inference using deep learning and natural language analysis.
  - Provides optimal answers to off-script queries by integrating with [Konan LLM](#).
- **Reduction in conversation data construction costs**

By using [Document AI](#) technology, conversation data is automatically generated from unstructured documents such as manuals and rulebooks, reducing both time and costs.
- **Easy and intuitive development tools**

Easily integrate with legacy systems with minimal coding using the ["Conversation Scenario Editor."](#)

### Technology

- Natural Language Processing (NLP)
- Natural Language Understanding (NLU)
- Document AI



# Use Case of Konan Chatbot

## Client

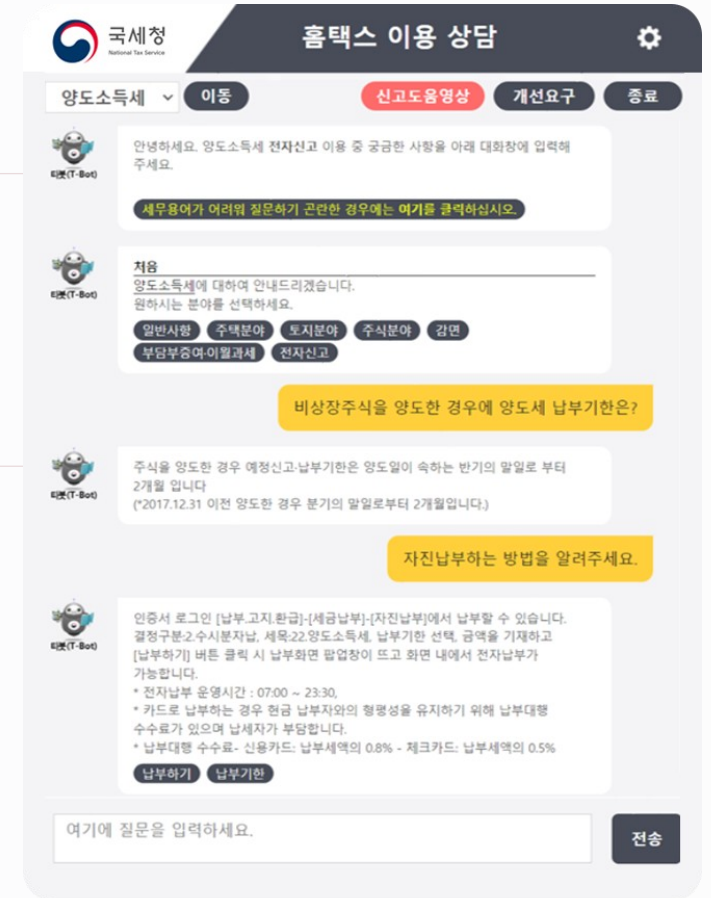


## Details

- Public chatbot service by National Tax Service's HomeTax
- Offers consultations on taxes and reporting (e.g., year-end settlement, income tax, VAT)
- Includes 2.76 million intents with entities, synonyms, and patterns

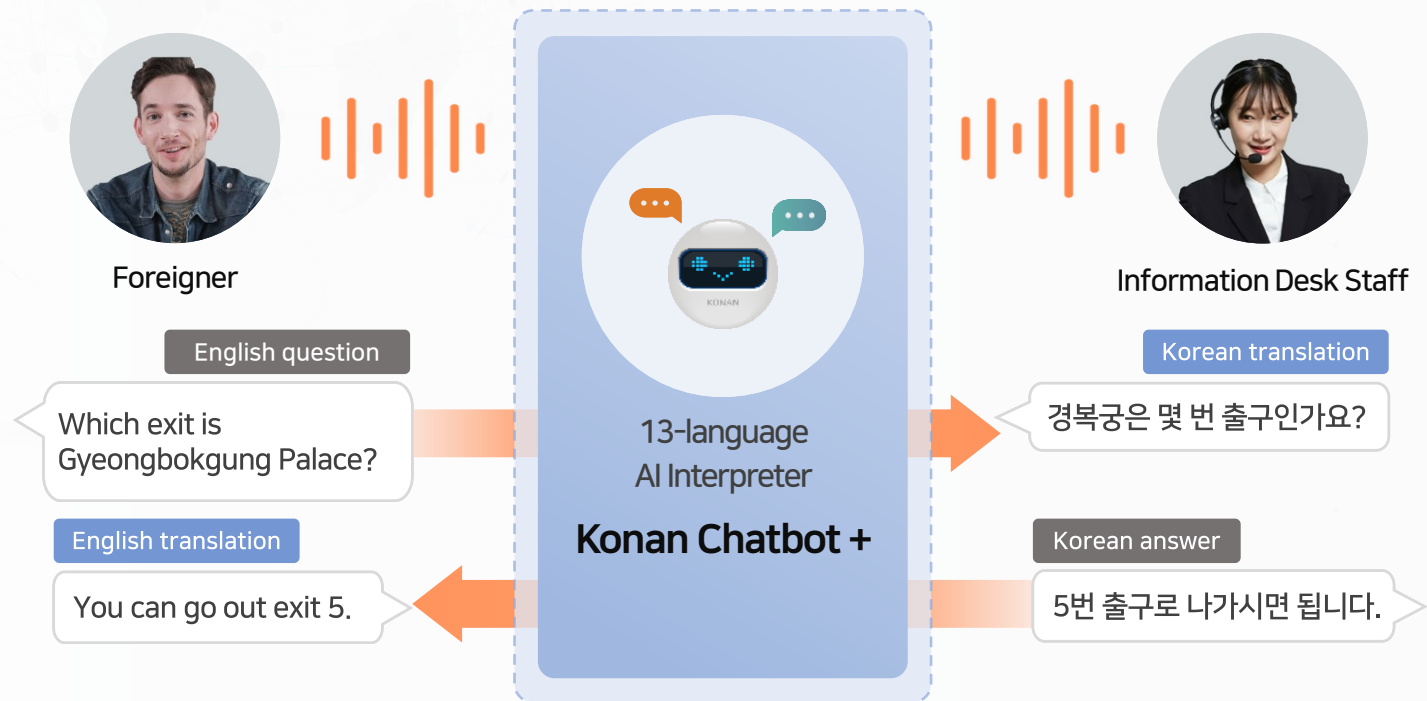
## Benefits

- 1.87 million chatbot consultations on HomeTax in 2023
  - 24/7, year-round service
  - Generative AI to be introduced in 2024 for tax law consultations
- (Source: National Tax Service, January 2024)



# AI Translator, Konan Chatbot +

Konan Chatbot+ is an AI-based translation service that allows real-time conversations in various languages. It provides more natural communication with foreigners in their native language through high-quality speech recognition and machine translation technology.



## Feature

- Real-time translation with the nation's top multilingual recognition and translation engines.
- A convenient User experience combining a transparent touch screen and voice commands.
- We offer fine-tuning to enhance the recognition of domain-specific terms and abbreviations.

## Technology

- End-to-End Contextual Automatic Speech Recognition
- End-to-End Neural Machine Translation
- Neural Speech End-Point Detection

# Use Case of Konan Chatbot +

## Client



## Details

- Enables real-time, two-way communication between foreigners and station staff.
- Supports 13 languages, including English, Chinese, Japanese, Indonesian, and Vietnamese.
- Handles various queries, from directions to emergency responses and tourism information.
- Improves translation speed and accuracy with STT and proprietary AI technology.

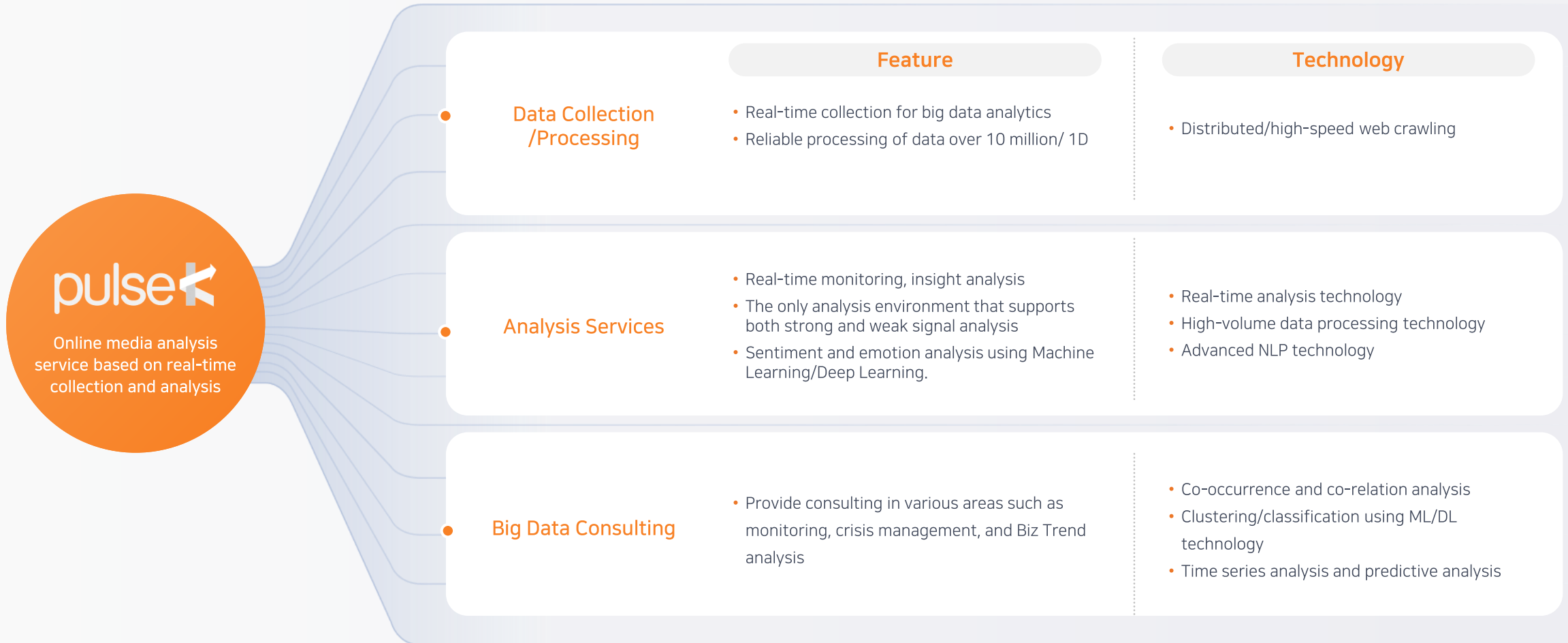
## Benefits

- Increases both staff job satisfaction and foreign tourists' service satisfaction.



# Detect Business Signal, pulseK

PulseK is a real-time online media analysis service that deeply analyzes current online issues using AI-based data science to uncover business signals



# Use Case of PulseK

## Client

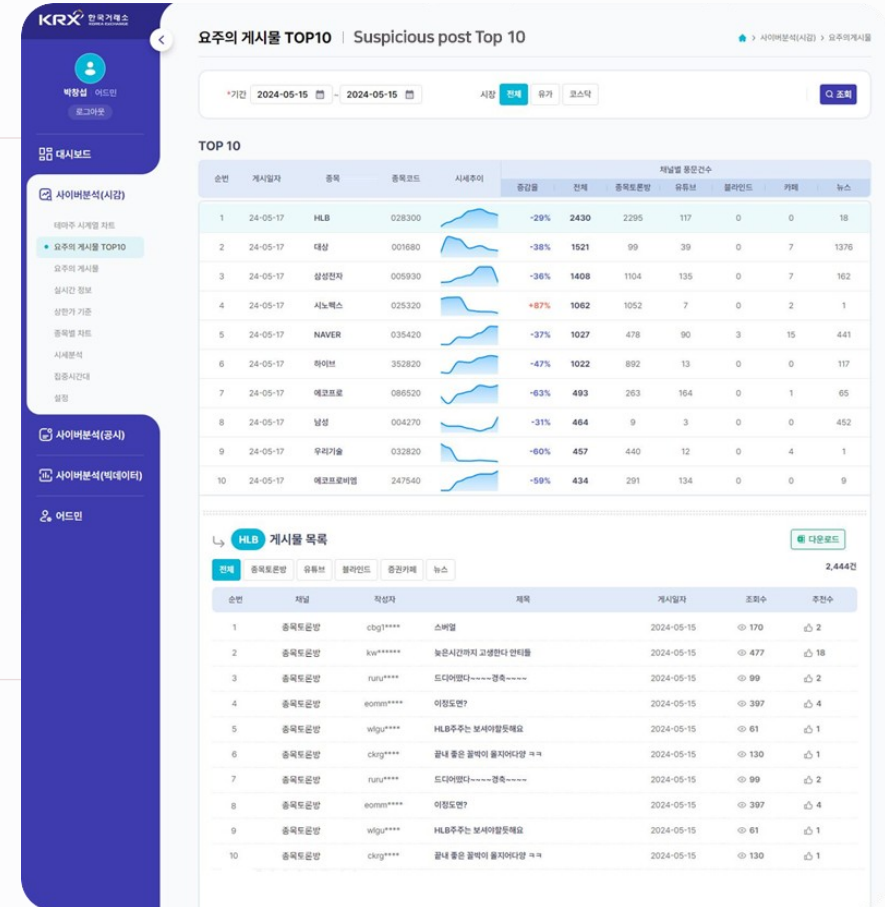


## Details

- Cyber monitoring system implementation case.
- Big data analysis for detecting unusual transactions.
- Collection from stock portals (+comments), securities forums, news articles, Blind, YouTube videos (+comments).
- Identification of key posts, anomaly detection, sentiment analysis, and time series analysis.
- By extracting URLs from Fraudulent Stock Signal Chat Rooms\*, suspicious activities are detected and identified.
- Provision of collection, analysis, and STT solutions.

## Benefits

- Establishment of an early detection system for Stock market monitoring.
- Expanded monitoring depth through the addition of YouTube content analysis.
- Increased operational efficiency by automating the identification of key posts.



# 03

## Video AI

- 1) Video AI Platform, **Konan Watcher**
- 2) Boost CX, **Konan AICC**
- 3) Realistic AI Voice, **Konan Voice**

# Video AI Platform, Konan Watcher

Konan Watcher is an AI Platform specialized in video processing. It enables the development of various AI applications in defense, safety, and broadcasting by supporting object recognition and anomaly detection within video content.



## Feature

- Applied data augmentation and correction techniques to secure training data.
- Extraction and generation of various deep metadata within digital content.
- Automatic subtitle generation for real-time video, combined with high-quality TTS technology at a professional voice actor level.
- An all-in-one workflow for video collection, analysis, processing, tagging, and training.

## Technology

- SOTA object detection technologies such as YOLO, Co-DETR, and RT-DETR.
- Flexible Adaptive Object Tracking technology that handles frame drops effectively.
- Speaker-adaptive end-to-end speech recognition and multi-speaker speech synthesis technology.
- Automating model execution, training, evaluation, and deployment via a machine learning pipeline.



# Use Case of Konan Watcher

## Client



## Details

- Use case of AI-Based Combat vehicles Operation System Development
- Developed AI recognition models capable of identifying enemy combat equipment.
- Created optimized firepower recommendation models for various scenarios.
- Established an MLOps-based training platform for AI model development.
- Displayed target information and firepower recommendations on a web GIS-based map.
- Developed a drone communication interface for real-time.

## Benefits

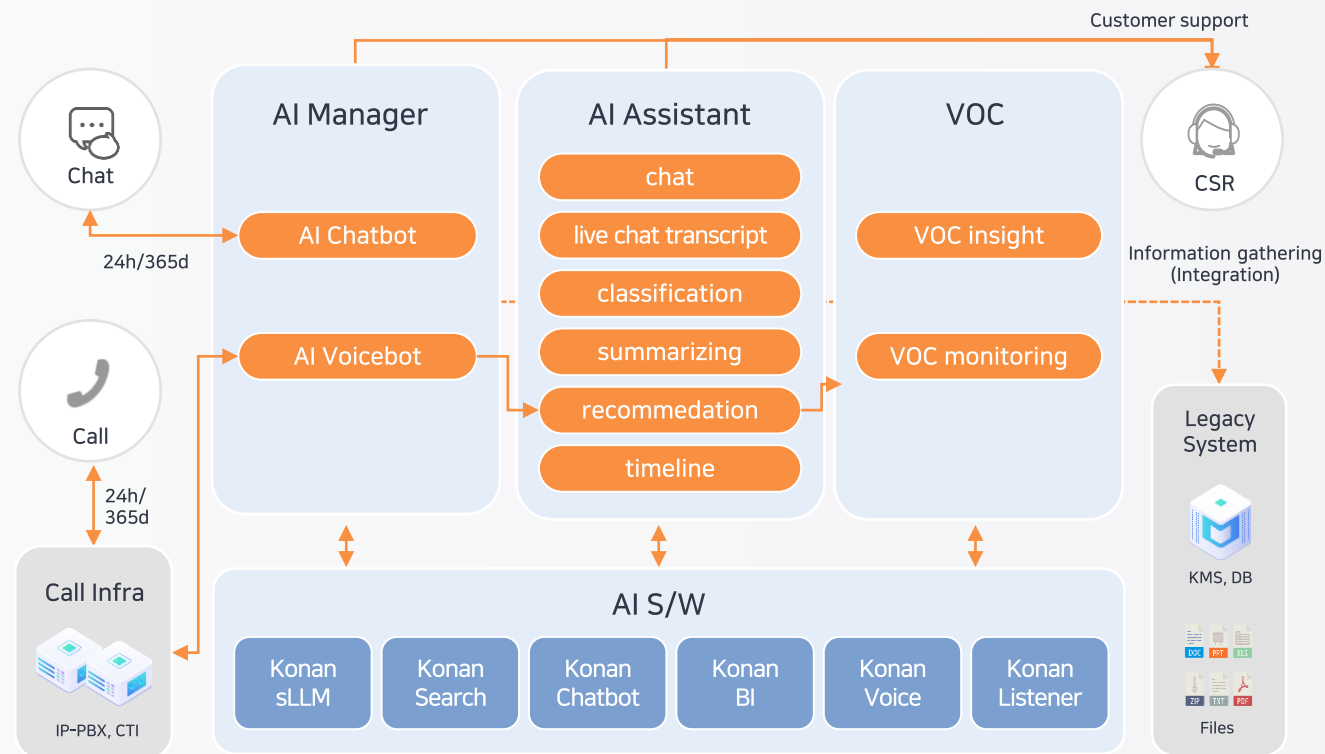
- Provides command and control support as an AI advisor for strategic and efficient strike tactics in network-based air and ground combat operations.
- Establishes an MLOps-based AI platform optimized for K-defense.
- Ensures efficient budget allocation in the defense sector, considering the declining domestic population.





# Boost CX, Konan AICC

Konan AICC is an AI Contact Center solution that enhances both operational efficiency and customer experience. By integrating AI technologies such as speech recognition, speech synthesis, text analysis, and conversational agents, it supports the implementation of AI agents that interact with customers just like a human representative.



## Feature

- AI Contact Center solution
- A solution built with in-house developed technologies.
- Applied top-tier deep natural language processing core technology.

## Technology

- Auto-scaling technology
- CPU-based optimization technology
- STT, TTS, Text Analytics, AI Chatbot

# Use Case of Konan AICC

Client **kt cs**

## Details

- Telecom Company AICC Implementation Case
- Automated transcription, classification, and summarization of voice consultations to enhance agent efficiency.
- SaaS-based service integrating Voice AI, Conversational AI, and NLU technologies.
- Chatbot services seamlessly integrated with multiple channels such as webpages, KakaoTalk, Naver TalkTalk, Slack, and Telegram.
- Provides dashboards with analysis and statistics to extract valuable business insights.

## Benefits

- An AI service that enhances both operational efficiency and customer experience in consultations.
- Provides 24/7, 365-day customer support.
- Transformed text from consultations is stored in a database, enabling personalized services based on previous interactions.

**AICC 솔루션**

문의는 빠르게,  
상담은 AI기술로 편리하게

<b>Voice Bot</b> 더 정확하고 자연스럽게 AI 상담사가 24시간 365일 응대합니다.	<b>Omni-channel AP</b> 인터넷 접속 환경이면 어디에서든 이용 가능합니다.
<b>Chat Bot</b> 최적의 답변을 빠르게 맞춤형 맞춤식으로 답변합니다.	<b>AI Assist</b> AI기술의 힘으로 자동 답변 추천으로 상담사를 돕습니다.

# Realistic AI Voice, Konan Voice

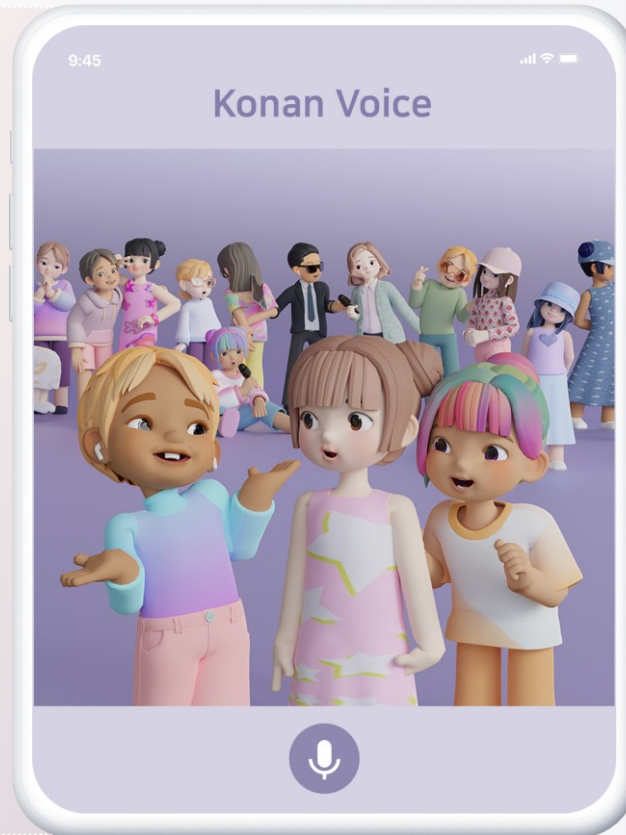
Konan Voice is an end-to-end speech synthesis solution that uses a single neural network technology to synthesize voice waveforms from text inputs instantly. It has the competitive edge to quickly synthesize the most natural high-quality voice.

## Technology

SSML-based user customizable speech synthesis

Prosody prediction-based super-natural speech synthesis

Chunk-based Low-latency streaming speech synthesis



### • 3D characters with 6 facial emotions

Type your script text and the 3D character will automatically lip-sync and dubs.(6 emotions available: happy, sad, angry, embarrassed, anxious, and nervous)

### • Easy to use

High-quality speech synthesis service that generates voices by selecting a voice actor and inputting a script

### • High-Quality Voice that Surpasses Professional

MOS 4.5+ natural, high-quality voice production capability

\*Mean Opinion Score (MOS): A quality index that subjectively evaluates voice quality into five levels

### • Natural Reading that Understands the Context

Provides the most natural reading quality by understanding context and meaning, such as spacing correction, sentence closing-ending recognition, postposition correction, and dual expression recognition

# 04

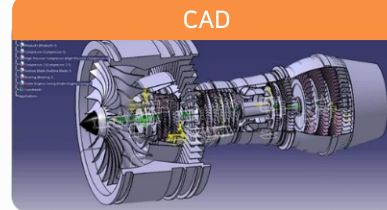
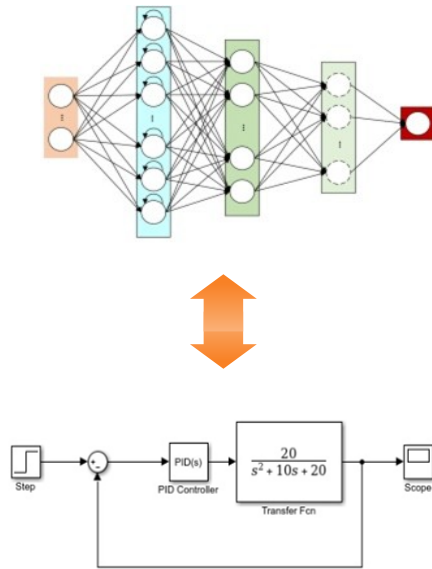
## Digital Twin

- 1) Predictive Maintenance, **Konan PHM**
- 2) Unmanned Flight and Missions, **Konan AI Pilot**

# Predictive Maintenance, Konan PHM

PHM (Prognostics and Health Management) is a solution that combines digital twins and AI technologies (PBDL and RL) to help diagnose equipment/component failures and make residual life prediction decisions.

## AI-based Physics Simulation



Optimization

## 3D Visualization



3d models

## Real-Time Simulation



Data

## Feature

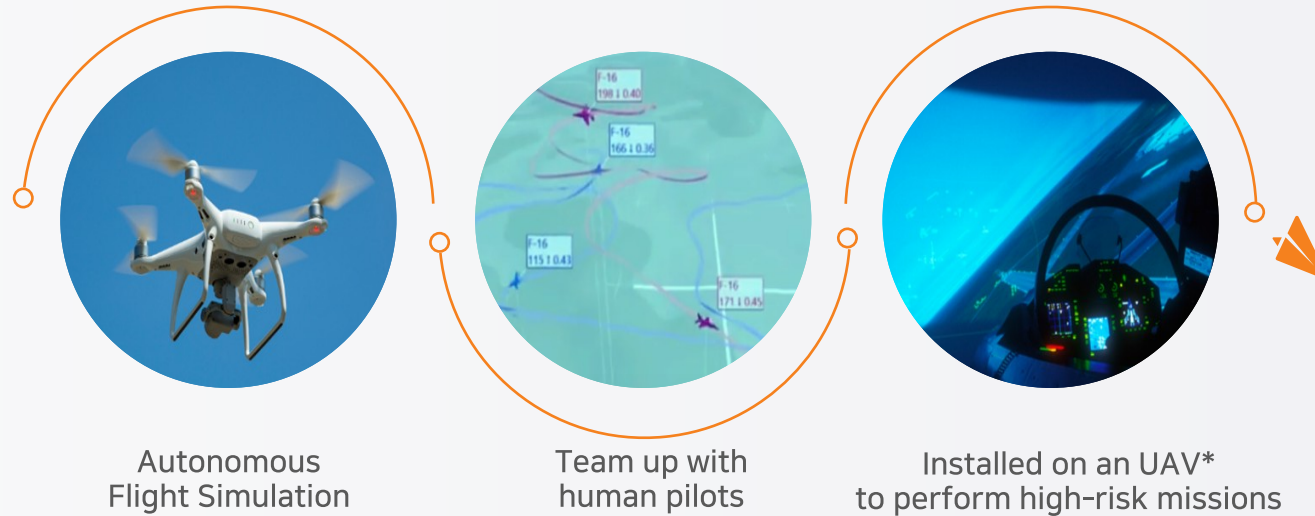
- AI analytics service based on Deep Learning
- Monitoring function for faster fault diagnosis and lifetime prediction in the field
- When equipment/parts fail, it helps to find the cause and make decisions to solve it

## Key Technologies

- Time Series Sensor Data-Based Deep Learning Diagnostic Algorithm
- Physical Simulation Interlinked Deep Learning (PINN) Algorithm
- Real-time, high-quality visualization
- Digital twin for fault diagnosis/prediction/cause analysis of equipment

# Autonomous Flight, Konan AI Pilot

Konan AI pilots can team up and collaborate with pilots.  
It learns and understands missions like a human and can perform high-risk missions on behalf of humans.



## Feature

- Simulated engagement training with human pilots, including many-to-many engagements
- Perform missions for tactical purposes and provide a briefing system to analyze/validate them
- Realistic mission rehearsal and simulation of edge cases\* at low cost

\*Edge cases: rare situations, extreme situations

## Key Technologies

- Autonomous flight simulation utilizing hybrid reinforcement learning
- 3D rendering technology that visualizes real fighters
- Installed on an UAV\* to perform high-risk missions instead of humans
- Voice recognition command and control

\*UAV: Unmanned Aerial Vehicles

# 05

## Technologies

- 1) STT
- 2) TTS
- 3) Vision AI
- 4) MLOps
- 5) Deep Learning Framework
- 6) Digital Twin Framework

# STT

D-Cheeps delivers highly accurate speech recognition results using state-of-the-art deep learning-based advanced speech recognition algorithms.

## High-quality speech recognition

Using advanced deep learning algorithms, we deliver highly accurate Korean speech recognition.

## Multichannel STT

One STT server 1copy offers multichannel processing capabilities, handling up to 50 channels (full duplex) or 100 channels (half duplex) simultaneously.

## Reliable operation

Provides a reliable server distribution architecture that manages network load for concurrent users based on L4 switch technology.



## Versatile application

Provides basic speech-to-text conversion along with word and sentence-level recognition confidence and time boundary information via API, enabling use in various additional services.

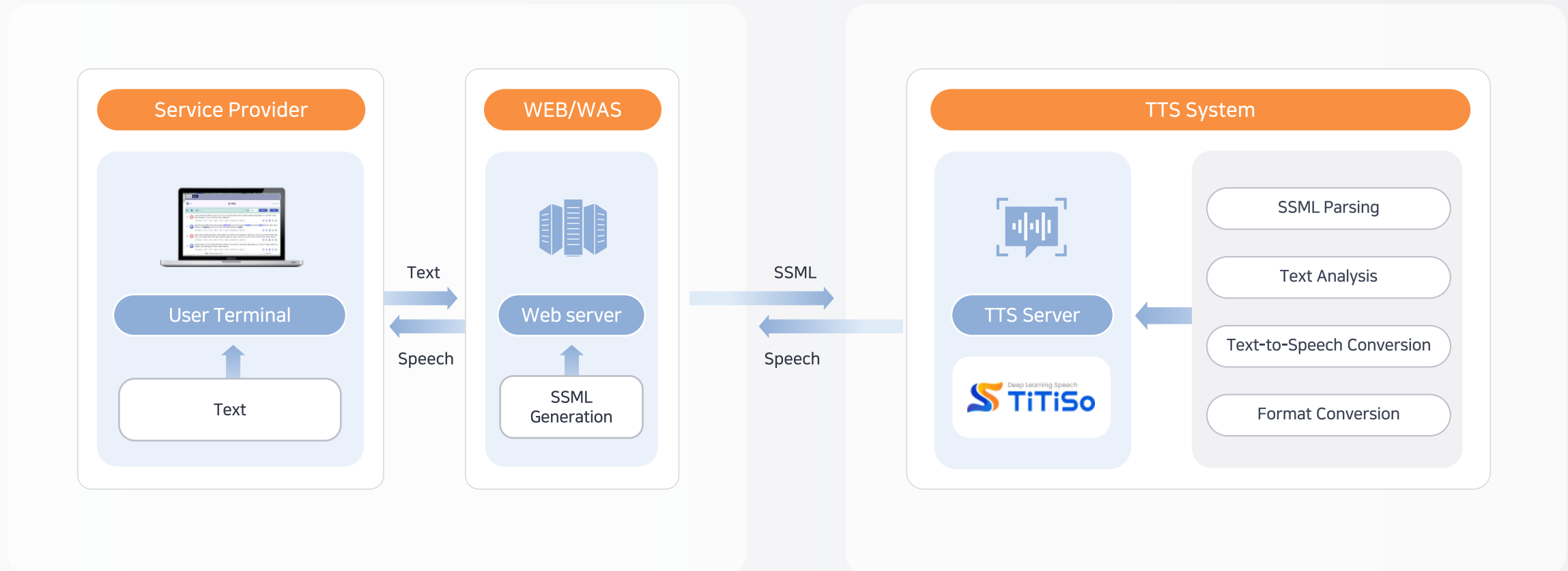
## Developed with our own

We develop the core technologies of our speech recognition products in-house, ensuring reliable solution delivery and responsible technical support.



# TTS

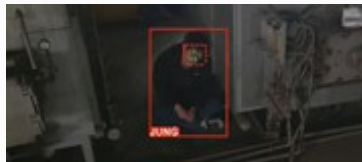
TiTiSo is a cutting-edge text-to-speech system that delivers highly natural, multilingual speech. It leverages state-of-the-art Conformer-based deep learning and proprietary prosody modeling to provide the highest level of natural speech synthesis in the country. Additionally, it supports ultra-low latency, multichannel speech synthesis on a CPU-based system.



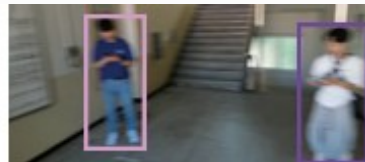
# Vision AI

Konan Vision AI is an on-device AI that recognizes people and faces in real-time. It can be used to identify rescue targets in inaccessible indoor disaster situations or large-scale outdoor emergencies.

## Konan Vision AI – Indoor SAR



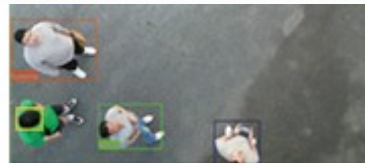
Poor Lighting



Motion Blurring



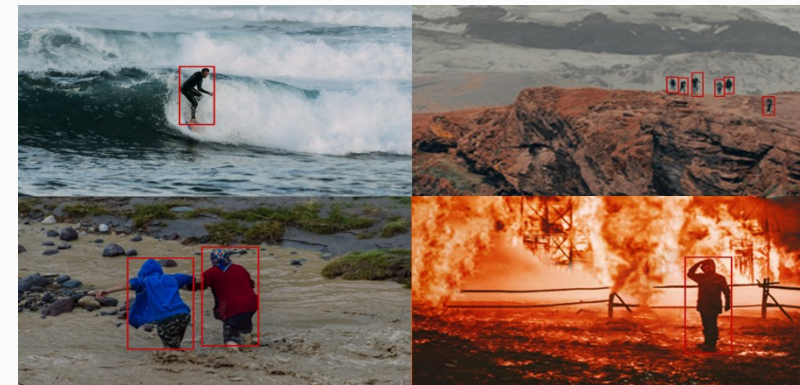
Far Distance



Pose Variation

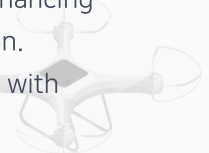
- Real-time, simultaneous multi-vision tasks (detection, tracking, classification, identification) on NVIDIA Jetson series.
- Applicable for human and facial recognition in stationary and mobile surveillance (CCTV, drones, delivery robots).
- Quickly identifies victims or rescue targets in indoor disasters or terrorist situations for rescue efforts.

## Konan Vision AI – Outdoor SAR



Person Detection Under Challenging Conditions

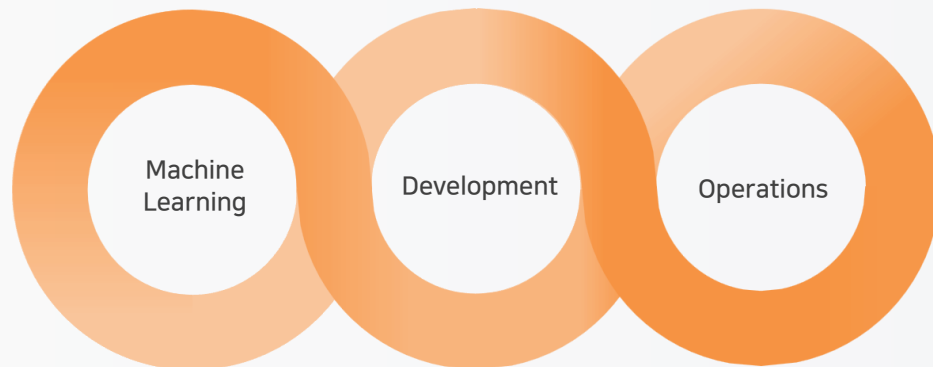
- Delivers reliable object recognition at high altitudes with specialized training for small objects.
- Reduces object ID loss using Adaptive Object Data Association, enhancing performance under camera motion blur or unstable communication.
- Maintains tracking through frame drops by linking object features with Enlarged Adaptive Object Data Association.



# MLOps

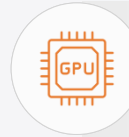
Konan MLOps automates the entire process from deep learning model training to deploying, providing operation convenient. It is also a flexible solution that provides an optimized operating environment tailored to each project's characteristics.

## Konan MLOps



### Flexible architecture

- Modular components Customizable for each project Easy integration with existing systems Offers various interfaces (CLI/SDK/GUI/Rest API)



### Efficient resource management

- Offers optimized plans from single GPU servers to enterprise-level scale.
- Unified management of GPU, CPU, and memory resources.



### Process automation

- Automation of the entire process of model execution, training, evaluation, and deployment through a pipeline.



### Q&A Feature

- Convenient operation support with alert, reporting, and monitoring features.
- Management capabilities at the project, group, and task levels.

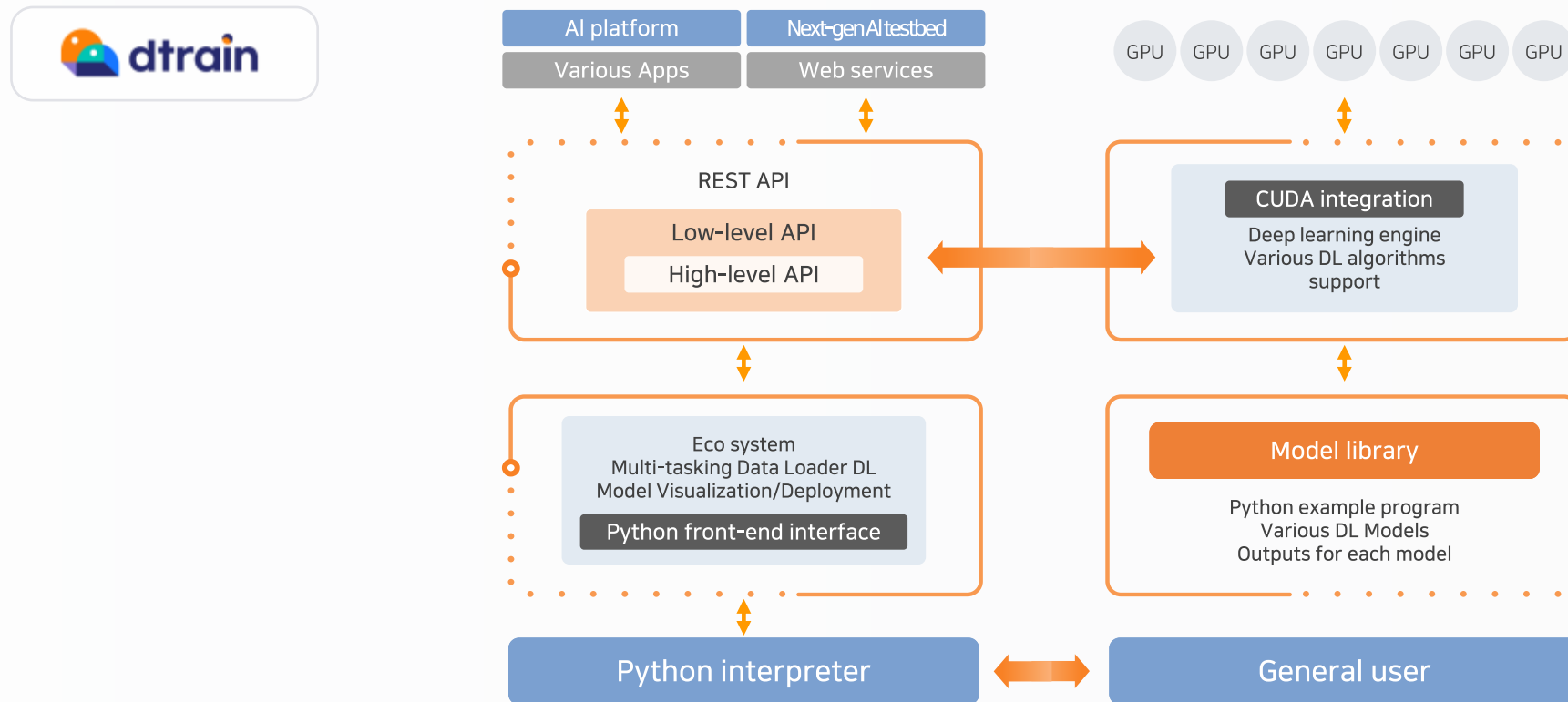


### Dashboard provision

- easily view and manage all the elements needed for model development through a dashboard.

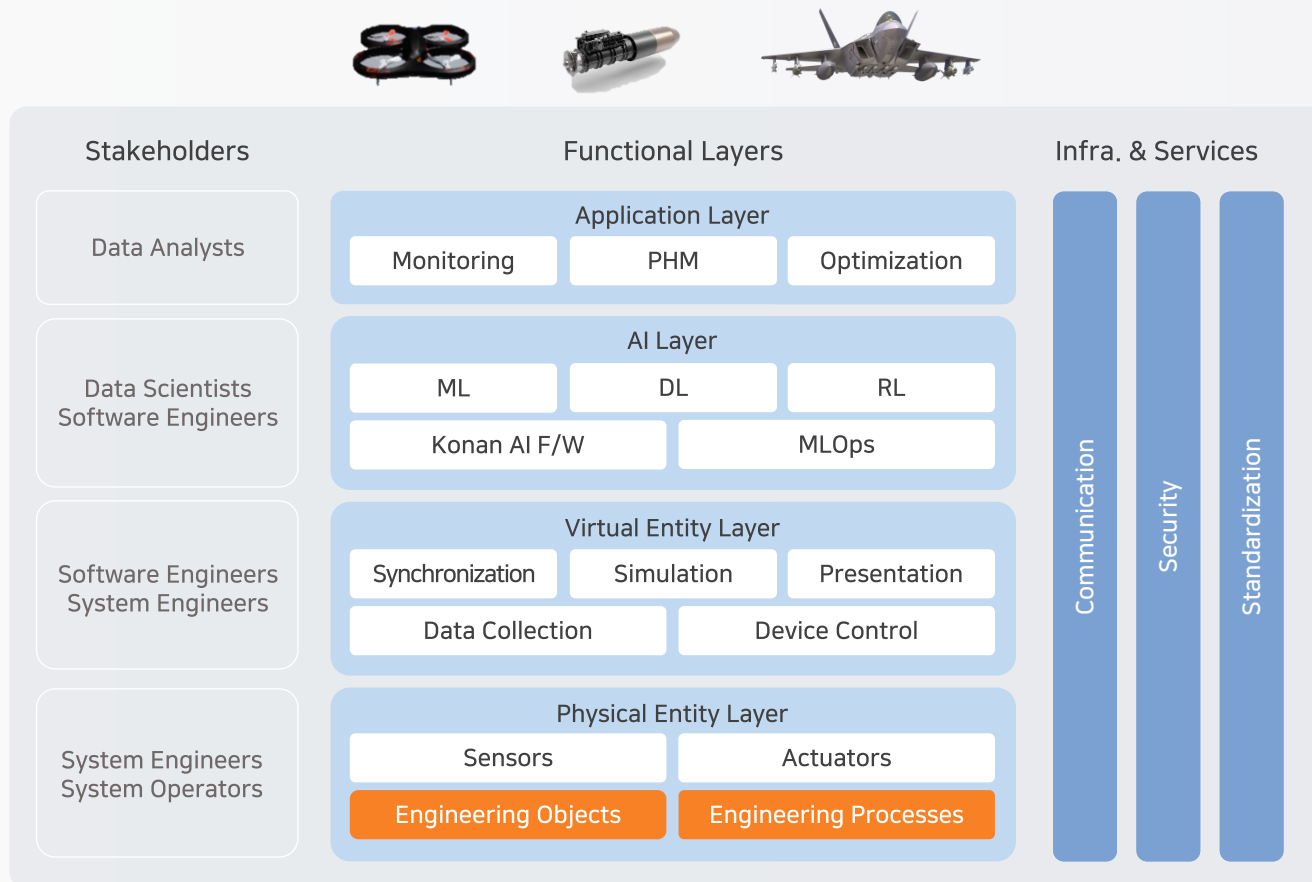
# Deep Learning Framework

Using entirely in-house technology, We has developed our own deep learning framework. dtrain supports an on-premises deployment method that prevents security incidents such as model leakage and data breaches from the source.



# Digital Twin Framework

Konan Technology is developing a digital twin framework applicable to the aerospace and defense industries. This framework supports system diagnostics, predictions, and optimization tasks through simulations within a digital twin environment.



## Feature

- A high-resolution digital twin development framework for high-quality PLM decision-making.
- ISO 23247 standard framework

## Functionality

- Cross Commissioning using Digital Twin
- Interoperability between heterogeneous Digital Twin objects
- Building explainable decision-making application models
- High-speed PINN (Physics Informed Neural Network) inference engine
- Synthetic data generation for AI training
- Hardware-accelerated high-quality visualization

# Thank you

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