

# AI can Make The World a Better Place

Konan Technology will take a step forward



## Video AI

### Konan Vision AI - Indoor SAR (1/2)

Konan Vision AI enables real-time person detection and recognition at the edge.



**Poor Lighting**



**Motion Blurring**



**Far Distance**



**Pose Variation**

- Supports multi-vision tasks simultaneously in real time on the Jetson series.
- This cutting-edge technology provides highly accurate person and face recognition in various surveillance scenarios such as CCTV systems, UAVs and delivery robots.
- Our technologies can help to quickly identify victims and survivors of indoor disasters and terrorist attacks.

## Video AI

### Konan Vision AI - Indoor SAR (2/2)

Indoor SAR offers highly accurate person and face recognition in diverse surveillance scenarios, including CCTV systems, UAVs, and delivery robots.

**Search and Rescue for missing persons**

### Konan Vision AI - indoor SAR

Person & Head Detection

Face Recognition

Person & Head Tracking

Face & Landmark Detection

Person Re-Identification

Face Quality Assessment

NVIDIA Jetson Device

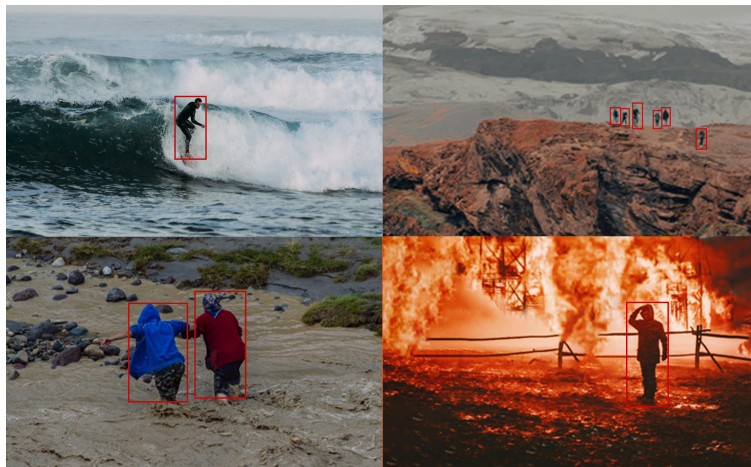


**Indoor Disaster beyond Reach**

## Video AI

### Konan Vision AI - Outdoor SAR (1/2)

Konan Vision AI enables real-time person detection and recognition at the edge.



### Person Detection Under Challenging Conditions

- With small-object-optimized networks and schemes, our system achieves robust high-altitude object detection.
- Under challenging conditions, including inclement weather, our video object identification technology ensures stable and reliable performance.
- Adaptive Object Data Association effectively extracts object features in camera blur situations, thus reducing ID missing.
- The enlarged Adaptive Object Data Association algorithm maintains stable object tracking performance even when frame drops occur.



## Video AI

### Konan Vision AI - Outdoor SAR (2/2)

Outdoor SAR achieves robust high-altitude object detection with small-object-optimized networks and schemes.

Search and Rescue for missing persons

### Konan Vision AI - outdoor SAR



Edge Device



Widespread outdoor disaster

# Digital Twin

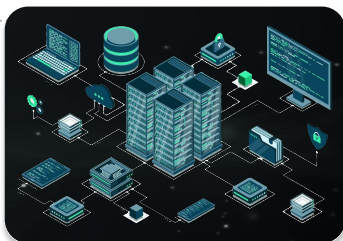
## Data-Centric AI Maintenance, Konan PHM (1/2)

Konan PHM is a digital twin-based AI predictive maintenance solution. It enhances the accuracy of fault diagnosis and remaining life prediction for components/equipment in the aerospace, defense, and manufacturing industries, supporting optimal decision-making.

### Overcoming Data Limitations

**Field issue** Lack of failure data and labeling data.

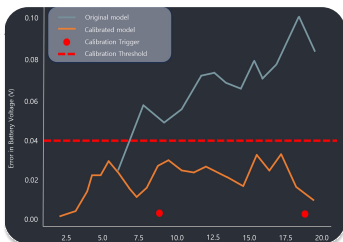
**Solution** The innovative combination of technologies such as Physics-informed Neural Networks, Self-supervised Learning, and Domain Adaptation enables robust fault detection and diagnosis even with limited failure data.



### Sustained Performance

**Field issue** Performance decline of initial prediction models due to aging of components or systems.

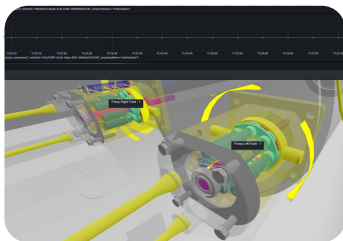
**Solution** Data-Driven Model Evolution: Continuous Learning and Model Updating for Optimal Performance.



### Real-time Simulation for Immediate Insights

**Field issue** Simulation Latency at the operational phase.

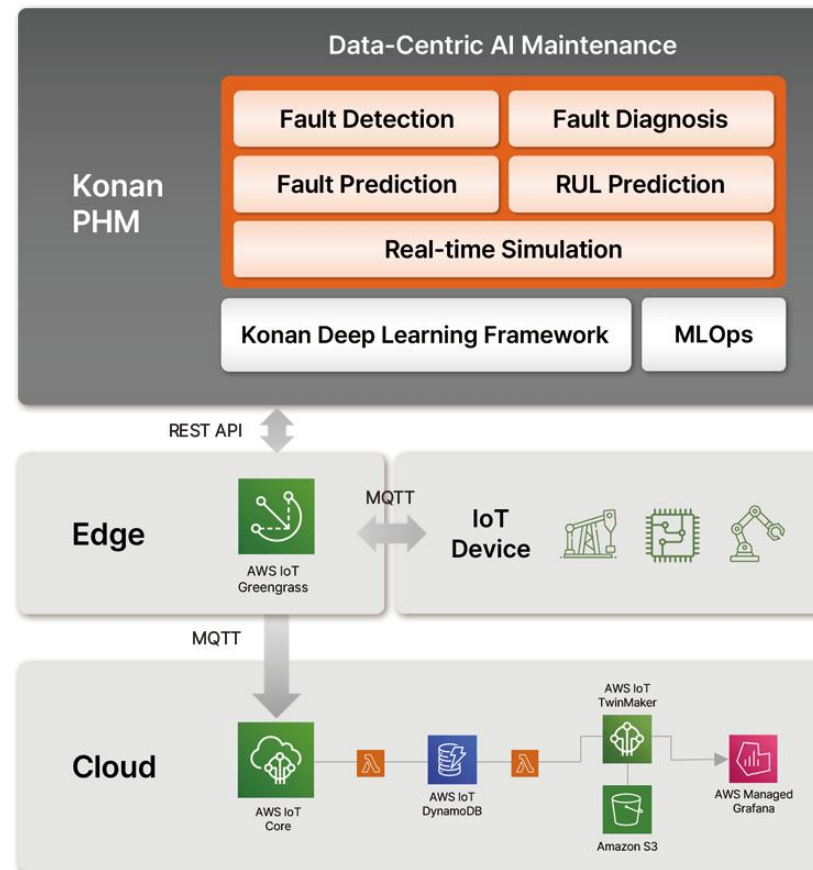
**Solution** Enabling Real-time Simulation with Neural Operator technology. Our data-driven simulation solution empowers Faster Decision-making.



## Digital Twin

### Data-Centric AI Maintenance, Konan PHM <sup>(2/2)</sup>

Konan PHM is a digital twin-based AI predictive maintenance solution. It enhances the accuracy of fault diagnosis and remaining life prediction for components/equipment in the aerospace, defense, and manufacturing industries, supporting optimal decision-making.

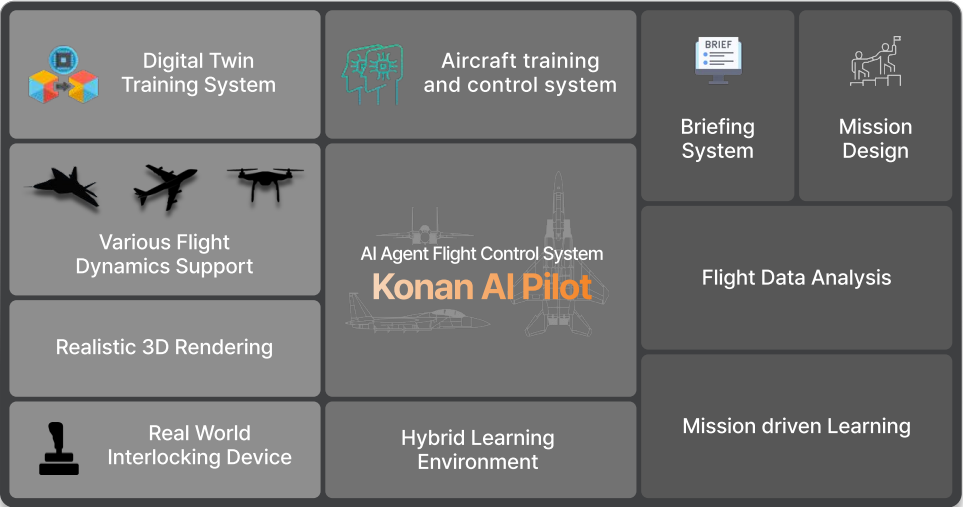


Digital Twin

AI pilot features

A digital twin technology that implements drone autonomous driving and unmanned flight training using reinforcement learning

Unmanned flight training using reinforcement learning, 'Konan AI Pilot'

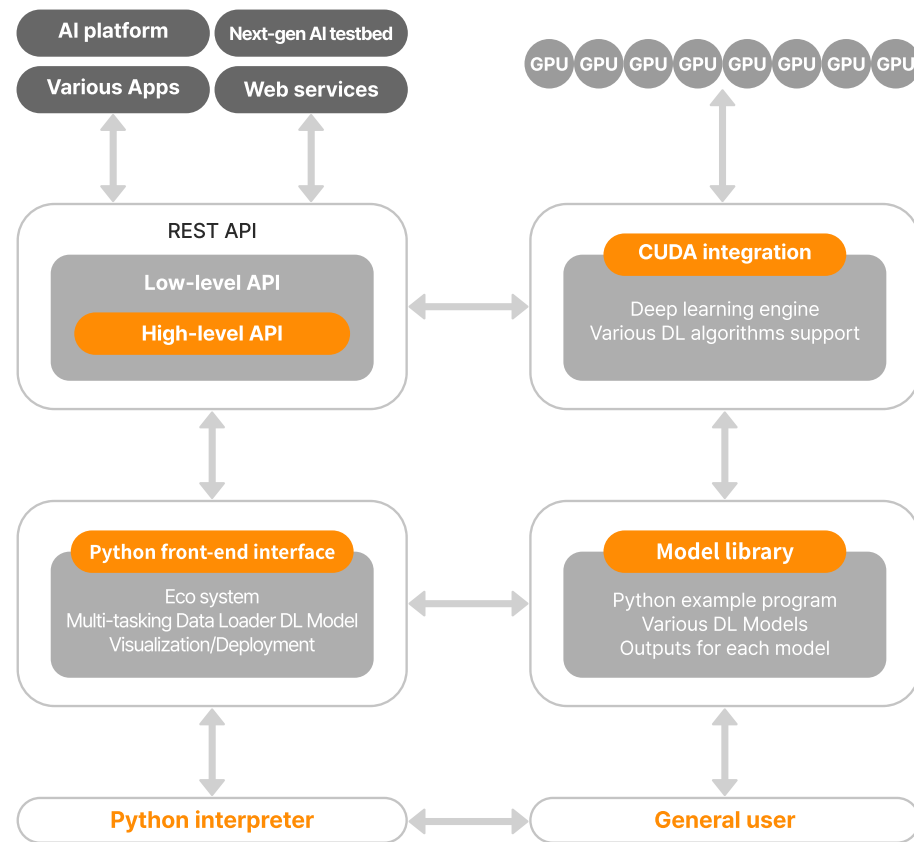


# Technology

## Deep Learning Framework

### DL Framework Architecture

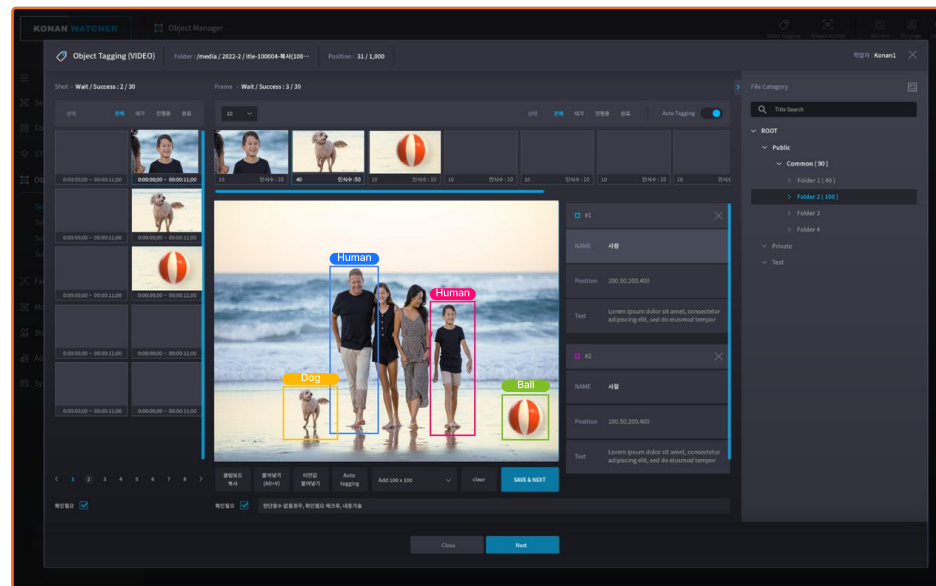
A flexible Deep Learning Framework that is easy to use for developers across a wide range of industries.



## Video AI

### Storyboard generation by Konan Watcher

Vision AI solution composed of Video Scene and Object detection, Timeline based storyboard generation for intuitive video editing

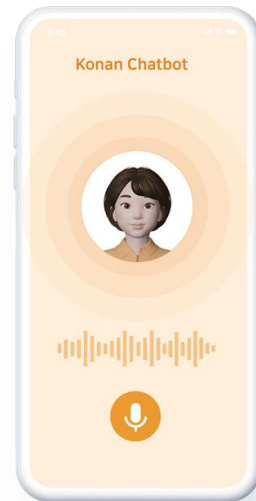


# Technology

## Text AI

### STT+NLU+TTS on Chatbot

"Conversational agent" technology that listens, understands, and speaks natural language like a human



“ Let me know the **company location**

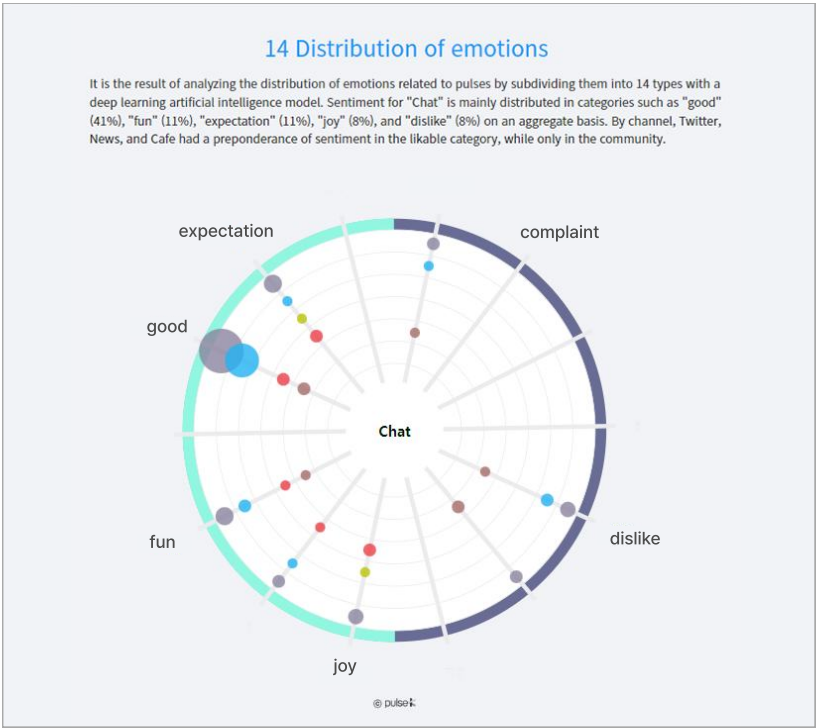
“ **Where** is the **company** ?

“ Tell me the **company transportation**

Text AI

NLG by pulse K

"NLG(Natural Language Generation)" technology applied to a billion-scale unstructured social data analysis service

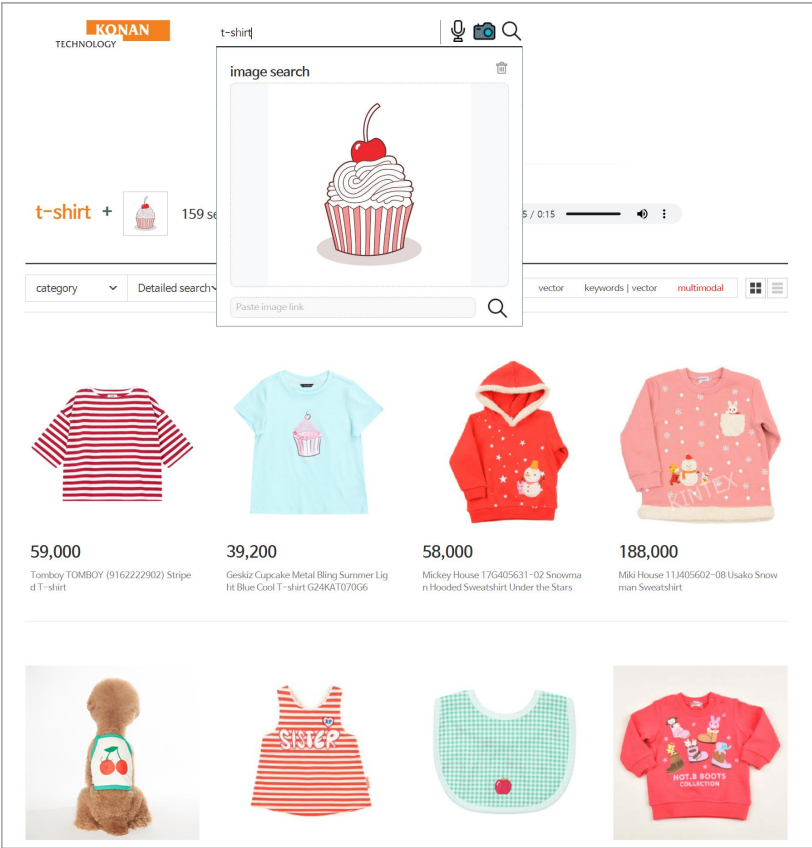




Text AI

Multi-modal search

"AI-based Multi-modal search" technology that understands the user's situation and intentions



## Company Overview

Konan Technology is an AI software company. Established in 1999, Konan Technology focuses on unstructured big data analysis technology for over 25 years.

Company Name **Konan Technology Inc.**

CEO **Young Sum Kim**

Date of Establishment **April 1999**

Core Technologies **Text AI, Video AI, Digital Twin**

Key Products **Konan LLM, Konan Search/Analytics/Chatbot, Konan Watcher, Konan Voice, PHM, AI Pilot**

No. of Employees **245**

Address **327, Gangnam-daero, Seocho-gu, Seoul**

Corporate Type **KOSDAQ-Listed Company**

## Customer

Based on the accumulated consumer trust for over 25 years, Konan Technology has secured more than 2,500 customers ranging from large corporations such as Hyundai Motor Company, Samsung Electronics, and SK Telecom to public institutions.

2,500

Customers

3,000

Projects

Enterprise

HYUNDAI

SAMSUNG



현대중공업

LG전자

KIA

olleh kt

HYOSUNG

SHINSEGAE

두산건설

셀트리온

DOOSAN

한일현대시멘트

AMOREPACIFIC

SPC

E:LAND MALL

DAE KYO

KPSA

모두투어

HANSEM

KAI

# Customers

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## Public Institution



## Finance



## Commerce



# Customers

Based on the accumulated consumer trust for over 25 years, Konan Technology has secured more than 2,500 customers ranging from large corporations such as Hyundai Motor Company, Samsung Electronics, and SK Telecom to public institutions.

## Media



## Education



## Company History

For the past 20 years, we have built a strong technology foundation in the unstructured data analysis field. For the upcoming 10 years, we will write history as an leading AI company related to image, voice and text.

- 2024** Contract 'Generation AI Project' with Korea Southern Power Corporation  
Honored with the Minister's Prize at the Korea AI Industry Awards  
Selected as an 'Emerging AI+X Top 100 Company' for 4 consecutive years
- 2023** Selected as 'Defense Innovative Company 100'  
Completion of the 'Defense Intelligent Platform' project for R.O.K MND  
Released document generation AI, 'Konan LLM'
- 2022** Konan Technology (402030) listed on KOSDAQ  
Business agreement with 'KAI' to strengthen AI-based aerospace technology
- 2017** Started applying AI technology to commercial products
- 2009** Provide video-search technology for Nate Portal
- 2007** Provide integrated search services for Nate Portal and Cyworld
- 2006** Business alliance with SK Communications established
- 2005** Overseas incorporated company Konan Digital Inc. established
- 2004** Launched SBS Digital News based on 'Konan DigitalArc'
- 2001** Konan image-searching technology selected as MPEG7 international standard
- 1999** Konan Technology established

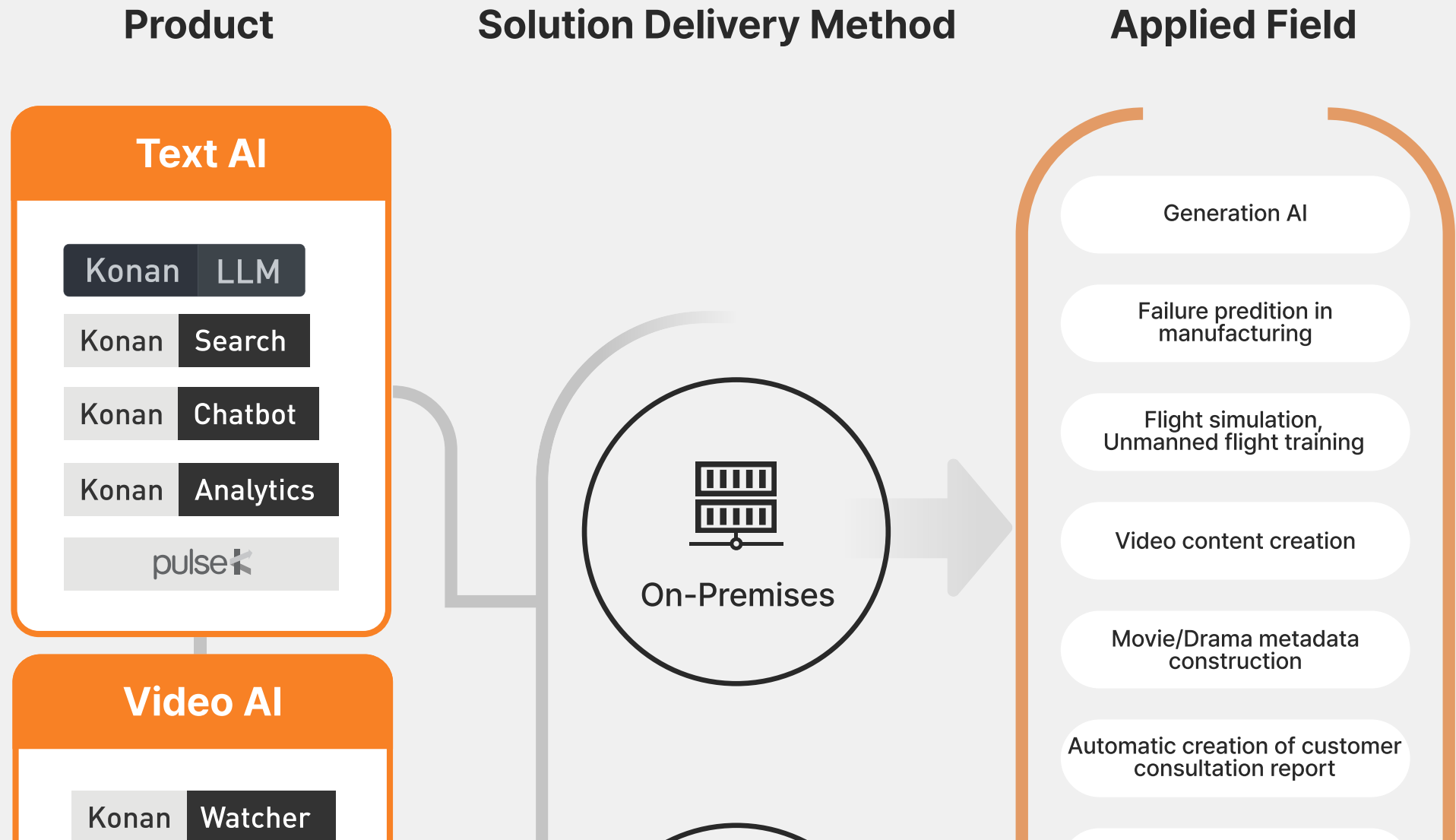
# Vision

Our AI technologies empower enterprises to make faster, better decisions.

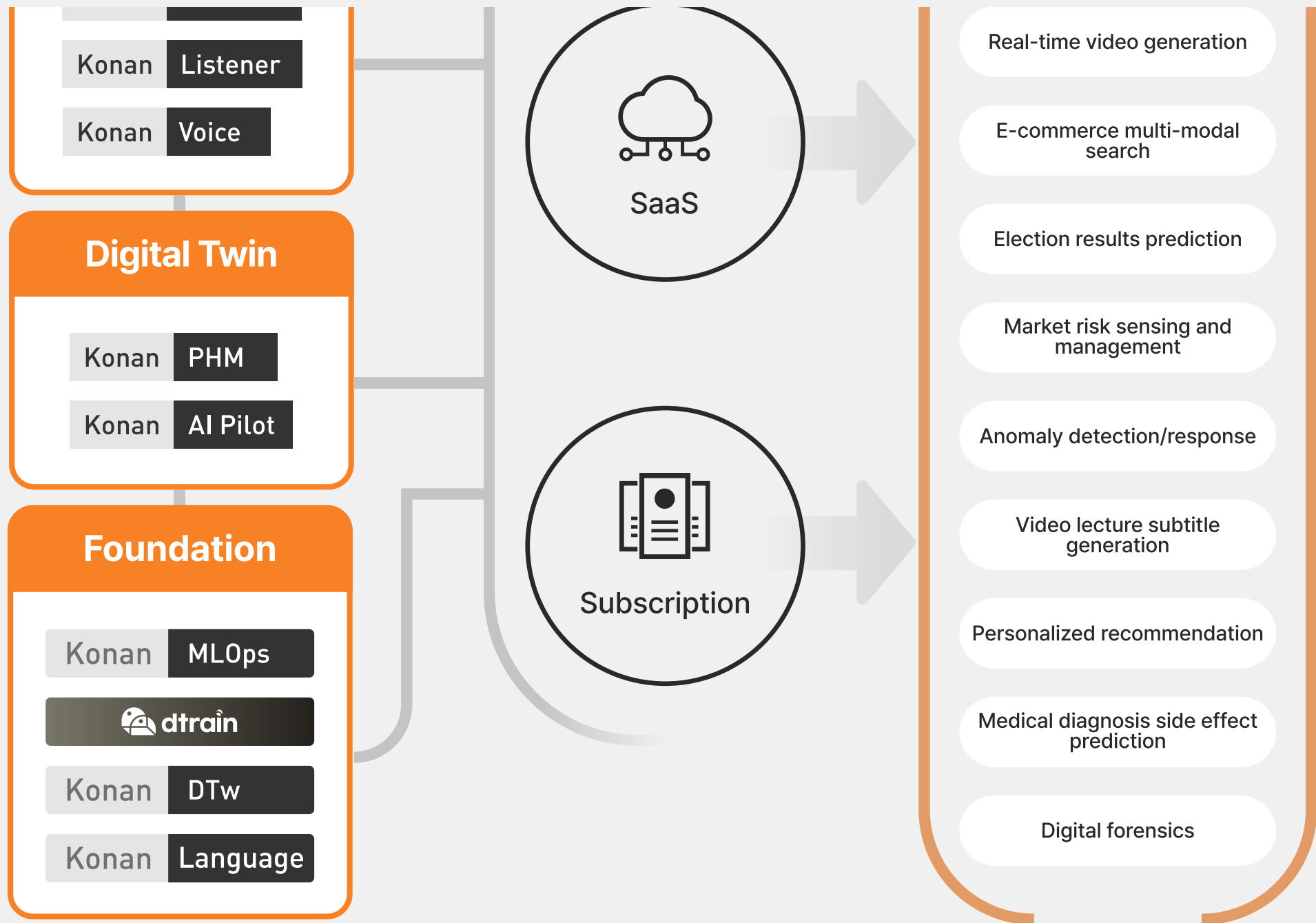


## Business Information

Konan Technology focuses on technology commercialization to develop AI that 'watch, listen, understand, and speak' like human-beings do.







# Featured Products

## Text AI

To understand the intention of the speaker.

### Konan LLM

**Konan LLM** is an on-premise 'Document Generation AI' for B2B/B2G. It boasts Korean document generation having the largest number of Korean tokens. Also, it provides accurate and well-founded answers through self-developed Vector Search engine-based RAG.

### Konan Search

**Konan Search** is an "AI-based multimodal search engine" that understands the user's situation and intentions. You can search by taking a picture without typing, and you can search for synonyms / similar expressions by vector search without using a synonym dictionary.

### Konan Chatbot

**Konan Chatbot** is an AI-based conversational agent that upgrades businesses by providing high quality conversational services. It provides conversational services that are based on natural language understanding, text mining, machine learning, and deep learning technologies.

### Konan Analytics

**Konan Analytics** is an 'intelligent text analytic engine' that discovers business insights through structured and unstructured data analysis using machine learning, AI, and data science based technologies.



**pulse-K** is a real-time analytic service that analyzes current online issues and finds business signals using AI-based data science technology.

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## Video AI

Recognize objects in video, such as people, faces, voices, and situations, to understand the context of video scene.

### Konan Watcher

**Konan Watcher** is a solution that can identify various multimodals such as faces, entities, situations and scenes in video contents and can be applied to public, broadcasting, and national defense fields.

### Konan Listener

**Konan Listener** is an end-to-end voice recognition engine solution that automatically generates subtitles from various video contents by combining and utilizing technologies such as video processing, natural language processing etc.

### Konan Voice

**Konan Voice** is '3D Character-Integrated Text-to-Speech (TTS) service' for B2B/B2C. It automatically lip-syncs and dubs a 3D character with just the script text. Additionally, it can express 6 emotions and provides natural high-quality sound with a MOS of over 4.5.

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## Digital Twin

System diagnosis, prediction, and optimal decision-making by PBDL and RL with digital twins.

### Konan PHM

**Konan PHM** can have a dramatic impact on manufacturing operations by PBDL and RL with digital twins.

### Konan AI Pilot

**Konan AI Pilot** implements drone autonomous driving and unmanned flight training using reinforcement learning.

## Leadership



### Youngsum Kim CEO

Ph.D. in electrical and communications engineering, Hanyang University  
Senior Researcher, ETRI  
Bellcore Research from U.S.A

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Youngsum Kim, he has been asked his top business priorities, he always replies "Our people are our top competitive advantage."

Under this management philosophy, he has built a strong organizational culture based on autonomy.

And he has focused on artificial intelligence business development that encompasses image, voice and text from its inception to the present.



### Seunghyun Yang CTO

Ph.D. in Computer Science, Seoul National University  
Senior Researcher, ETRI  
IBM Natural Language Processing Researcher, Seoul National University  
SKT CTO concurrently

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Seunghyun Yang has directed the company's technology innovation based on the principle of creating well-made products that are minimalistic and faithful to the basic function of the product.

As a result, It has become the only AI software company in Korea that uses its own 'K-language' as its source code and trains AI models with its own deep learning framework.

## Leadership



### **Deokho Yoon** Vice President

Ph.D. in Computer Science, Seoul National University  
Professor, Hannam University

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Deokho Yoon is in charge of developing a flexible deep learning framework for next-generation AI research and development.  
Additionally, he had led the development of ""SBS Digital Newsroom System"" that adopted a digital TV news production system for the first time in South Korea.



### **Youngchang Song** CFO

Bachelor of Laws, Seoul National University  
KTB, Heungkuk Life Insurance

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Youngchang Song has a background in excellent investment management and has over 29 years of experience in the financial field.  
Before joining Konan Technology, he was in charge of investment management at KTB Network and management planning at Heungkuk Life.

## Leadership



### **Wantaek Lim** Managing Director

Bachelor of Computer Science and Statistics, Seoul National University  
Head of Mobile Division, KTH  
Senior Invited Researcher , KISTI

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Wantaek Lim is a strategic planning expert with over 10 years of experience. Prior to joining Konan Technology, he was in charge of the mobile businesses such as Pudding Camera, Pudding Face Recognition service, location-based SNS service "I'm in", at KTH.



### **Jungju Choi** Executive Director

Ph.D. in Computer Science, Postech  
Professor, Department of Media at Ajou University  
Senior Researcher, ETRI  
Academic Chairperson, Korea Computer Graphics Society

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Jungju Choi is the head of research and development for digital twin and metaverse technologies. He has a number of research achievements and publications in computer graphics, such as standardization of '3D digital human models' and 'Haptic rendering to improve immersion'.