



# KnowDee Intelligence

# Vision and Mission



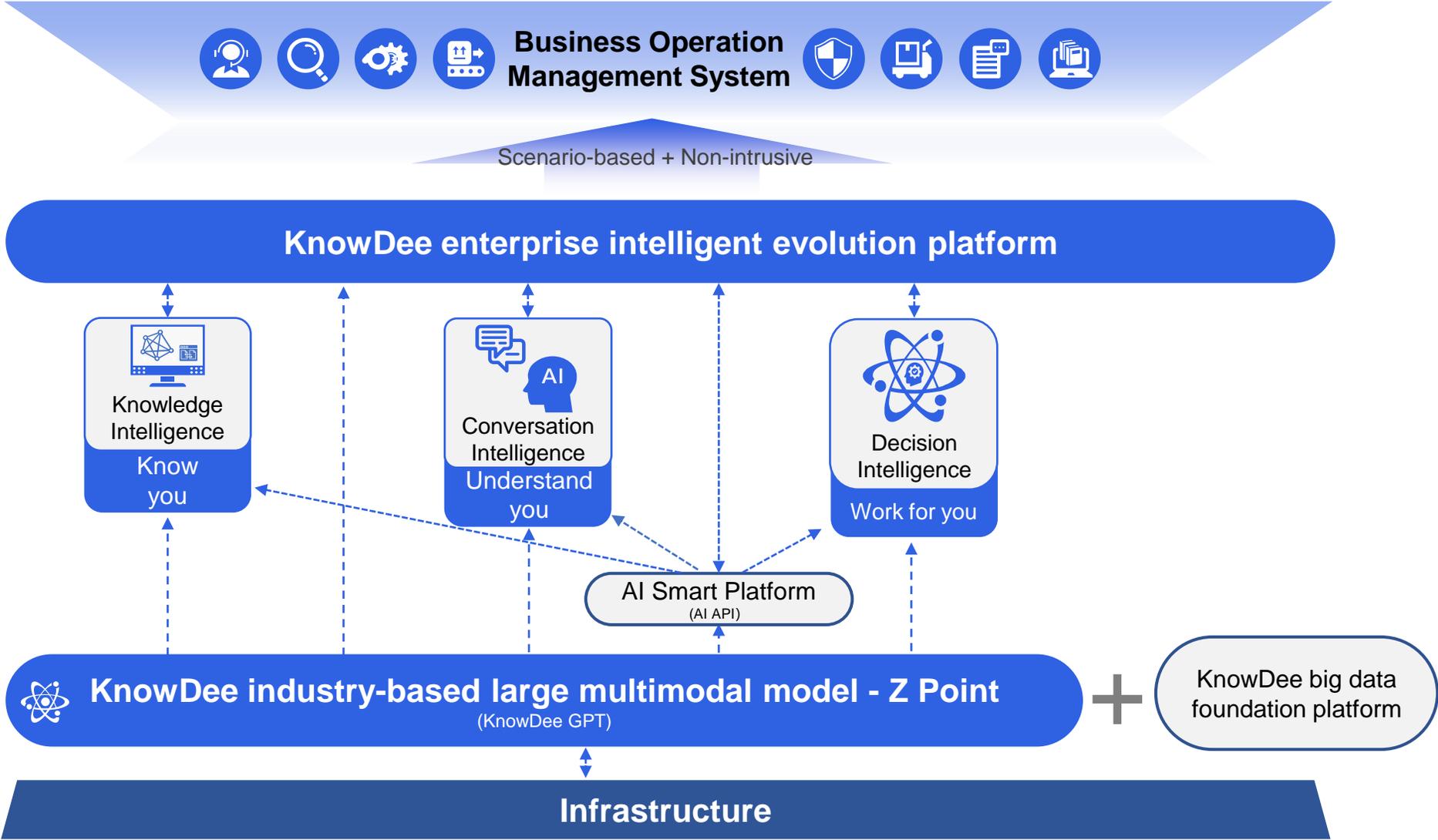
## Vision

Becoming the world's leading enterprise-grade AI provider by **performance-based billing(PB)**.

## Mission

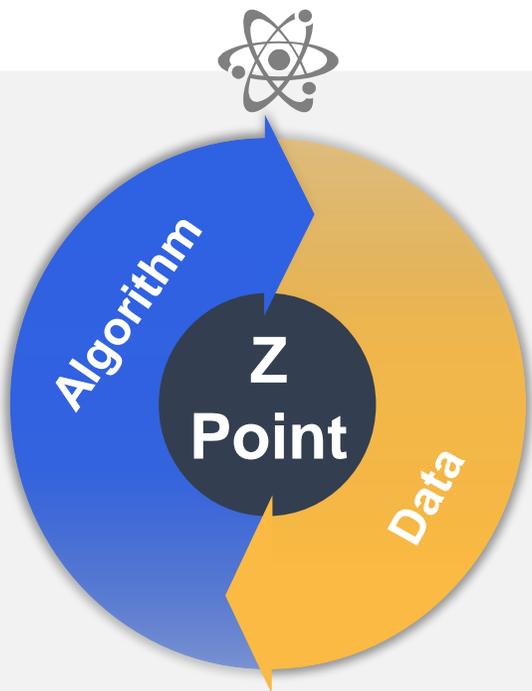
Provide top-quality, efficient, and cost-effective enterprise-grade AI solutions to empower intelligent evolution and adaptability of enterprise partners

# Core products and solutions



KnowDee enterprise intelligent evolution platform comprises AI (industry foundation LLM/GPT + industry optimization + scenario finetune) + product + solution

# Competitive edge – Technology



Hundreds of millions of dollar  
Lenovo investment

Open to **ALL** business scenarios

**EB level** industry data trained

**6 years** continuous refining



模型	测试方案	CMMLU	CEVAL(Val/Test)
Zpoint		<b>68.42</b>	<b>67.85/64.0</b>
Qwen-1.8B	Official	45.32*	56.1/56.2
Qwen1.5-1.8B	Official	57.8	59.7
MiniCPM-2B	Official	51.07	51.13/-
Zpoint	0-shot	<b>61.47</b>	<b>63.05/-</b>
Qwen1.5-1.8B	0-shot	50.62	52.99/-
MiniCPM-2B	0-shot	42.85	31.29
Zpoint	1-shot	<b>68.42</b>	<b>67.85/-</b>
Qwen1.5-1.8B	1-shot	63.95	63.09
MiniCPM-2B	1-shot	47.01	48.92
Zpoint	UltraEval	<b>59.03</b>	<b>60.74/-</b>
Qwen1.5-1.8B	UltraEval	53.83	48.68/-
MiniCPM-2B	UltraEval	51.07	51.13/-

**CMMLU, C-Eval  
World number 1**  
(Same size category on the ranking list)

Archer		
Model	Execution Accuracy	
	英文	中文
GPT-4o + zpoint-embedding KnowDee	42.18	42.94
GPT-4o + Deepseek-Coder-33b Harbin Institute of Technology	39.12	39.89
GPT-4o HITSZ-GDDW Tech	39.12	37.79
GPT-4o + deepseek IDMG (Beijing University of Posts and Telecommunications)	31.87	29.39
deepseek-chat JD	31.11	25.00
GPT-4o MI&TLab (Harbin Institute of Technology)	30.73	28.63
GPT-4o + all-MiniLM-L6-v2 NLDI	30.73	27.10
GPT-4o Foshan university	25.62	22.90

**2024 CCKS Archer Text-to-SQL  
Competition – Number 1**

Overall MTEB Chinese leaderboard (C-MTEB) 🇨🇳

- Metric: Various, refer to task tabs
- Languages: Chinese
- Credits: [FlagEmbedding](#)

Rank	Model
1	<a href="#">zpoint_large_embedding_zh</a>
2	<a href="#">piccolo-large-zh-v2</a>
3	<a href="#">AGE_Hybrid</a>
4	<a href="#">Yinka</a>
5	<a href="#">IYun-large-zh</a>
6	<a href="#">gte-Qwen1.5-7B-instruct</a>
7	<a href="#">acge_text_embedding</a>
8	<a href="#">OpenSearch-text-hybrid</a>
9	<a href="#">stella-mrl-large-zh-v3.5-1792</a>
10	<a href="#">stella-large-zh-v3-1792d</a>

**C-MTEB  
World Number 1**



**Small,  
medium,  
large**  
specialized language and  
multimodal models

**80%+**  
R&D  
personnel

**65%+**  
Master Degree

# Competitive edge – Industry Know-How



**World's largest**  
Multi-language 3C product  
industry database

- R&D
- Production
- Supply Chain
- Sales
- Service
- ...

## Manufacturing


...

## Other industries

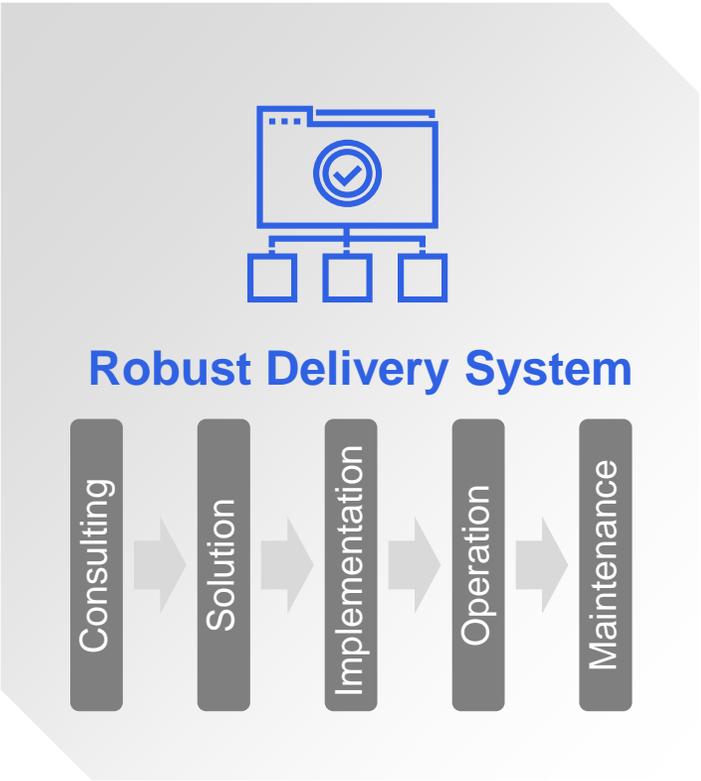

...

Cumulative serviced end users      Serviced countries and regions

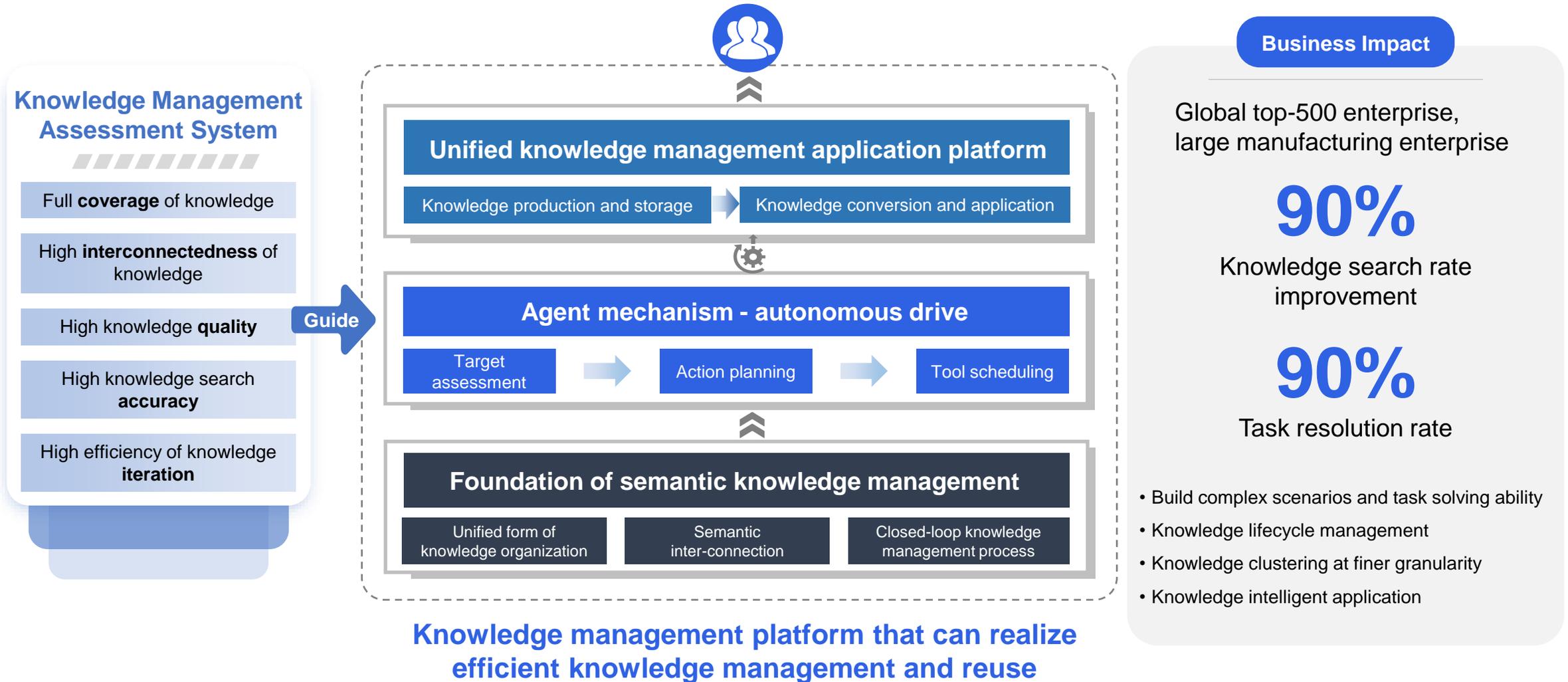
**Hundreds millions**

**180**

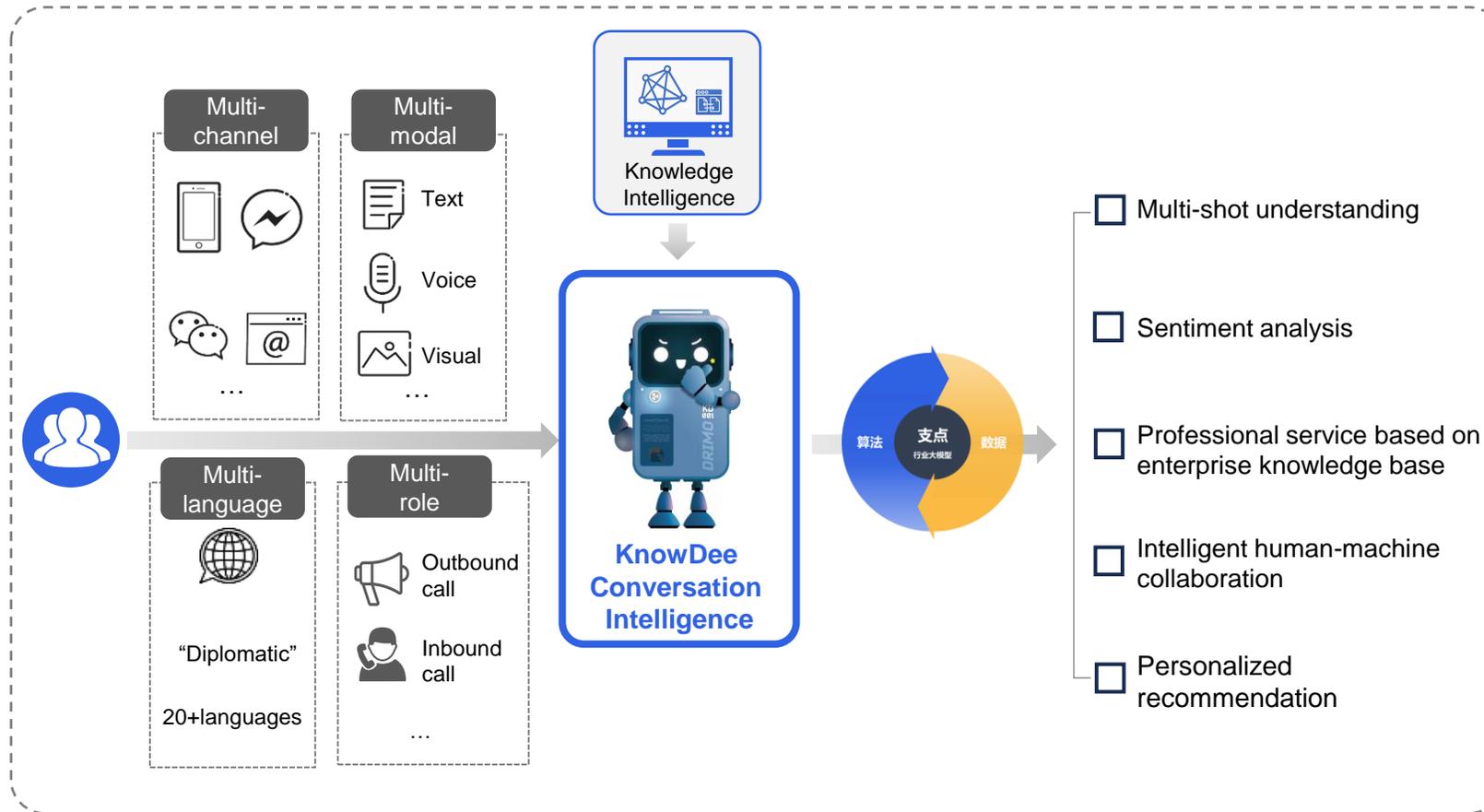
# Competitive edge – Delivery



# Use case – Knowledge Intelligence



# Use case – Conversation Intelligence



**Multimodal, multilingual, multimedia empathetic conversation AI platform based on Z Point LLM**

## Business Impact

Global top-500 enterprise, 3C manufacturer

**~USD 6M**

Average annual savings for enterprise customer service operation

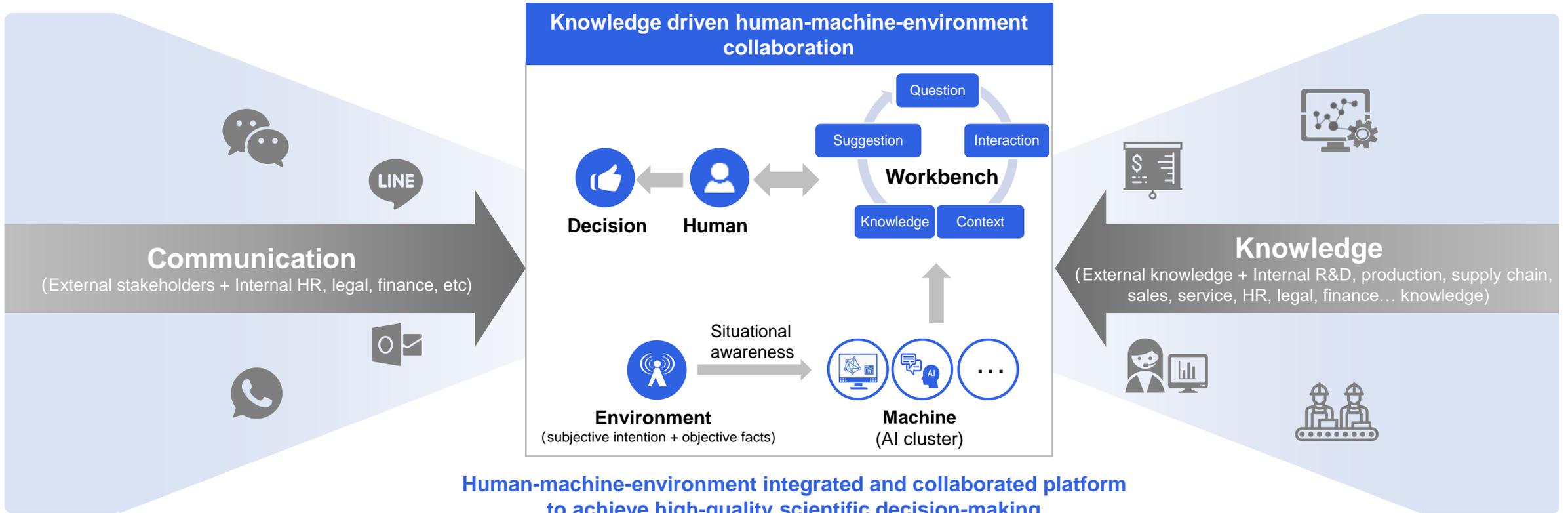
**95%+**

Intent recognition accuracy rate

**70%+**

Task resolution rate

# Use case – Decision Intelligence



**Human-machine-environment integrated and collaborated platform to achieve high-quality scientific decision-making**

Seamless integration of human value judgment and machine logic calculation |  
Scenario driven | 10x+ efficiency improvement

# Stay Connected

# THANKS

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# Problem Diagnosis Assistant for Call Center



## Challenge

- Remote diagnosis with no device available, could only rely on experience, tools or knowledge base
- Not every customer could describe their issues correctly
- Low diagnosis accuracy results to high service cost

## Solution

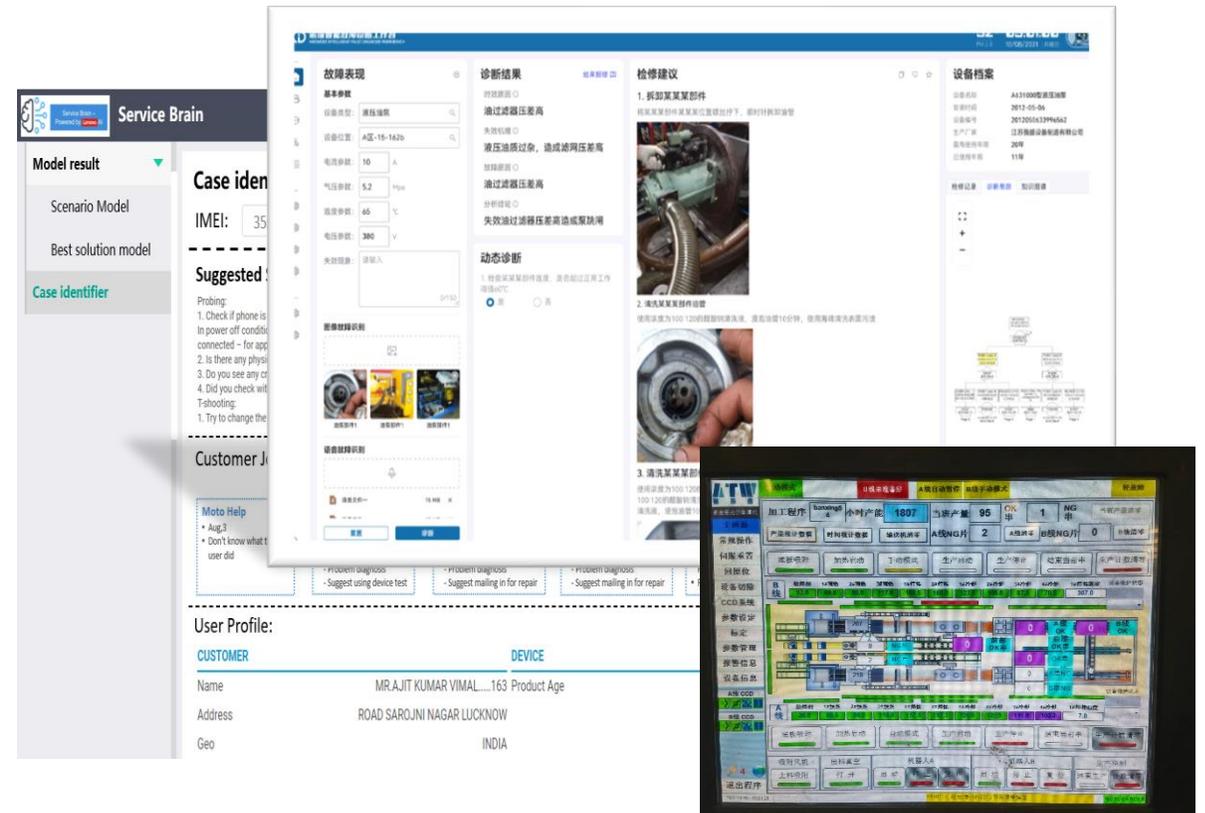
- Import expert experience into knowledge graph to provide diagnosis based on domain knowledge
- Learning from experience and KB to provide diagnosis analysis
- Conversational interaction and provide step by step instructions

## Result

**90%+**  
Diagnosis Accuracy

**30%-**  
Repeat Repair Rate

**Improve** case handling efficiency  
**Reduce** operation cost



# Unified Knowledge Platform for Car Manufactory



## Introduction

Establish a customer care knowledge platform for one of the world's leading car manufacturers. Utilizing NLP technology and knowledge graph, we construct an AI-driven knowledge lifecycle management platform. This empowers the client with capabilities for knowledge sharing, application, and reuse.



## Highlight

### Accurate Search

Empowered by AI technology, we offer precise search results through entity extraction, embedding calculations, and ordering optimization.

### Knowledge Relationship

Leveraging knowledge graph technology, establish relationships and knowledge that can be applied across all application scenarios.

### Auto-Knowledge Generation

Extract key elements from documents and generate question-and-answer pairs.



## Achievement

- Build-up the knowledge graph foundation
- Product comparison at the specification level.
- Visualization of the distributors
- Data source synchronization and knowledge service provision.



# Supply Chain Risk Analysis and Management



## Challenge

- Managing the complexity of extensive manufacturing supply chains.
- Various factors, including politics, economy, climate, and environment, can impact the stability of the supply chain.
- Relying solely on human effort is insufficient for timely monitoring; risks can result in substantial losses for the company.

## Solution

- Collect and process raw data from websites.
- Develop a risk analysis knowledge graph for automated information classification.
- Establish risk alert models to notify managers and close the loop with supplier feedback.

## Results

99%

Accuracy on Info-collection and risk sensing

10x

Efficiency Improvement

Billions\$+

Cost saving



# Customer Success | Lenovo Global Intelligence Service Moli/Lena



## Introduction

To deliver online customer service for Lenovo 3C customers globally, customer service staff collaborates with AI robots. This approach enables 24/7, full-life-cycle, high-quality service that is accessible anytime, anywhere, in a manner and language that our customers prefer.



## Highlight

### Multi-language

Supports 20+ languages, including Chinese, English, French, German, Spanish, Portuguese, Japanese, Italian, Hindi, Polish, Turkish, and traditional Chinese

### Multi-channel

Supports the connection of Lenovo internal and external 16 channels, including WeChat, DingDing, Teams, Facebook, Lync, PC, Google, Moto Help and other channels

### KG support

Knowledge Operations and Management can accurately pinpoint user inquiries within complex semantic environments and deliver knowledgeable responses.



## Achievement

- Serve **20+** language users
- Serve **160+** countries and regions users
- **16+** channels for customer reach
- Service order **2000W+**
- Service user **1800W+**



# Customer Success | National Park Tourist Service Platform



## Introduction

The integrated machine offers intelligent voice customer service and online call center services for 5A-class parks. Visitors can directly interact with remote customer service staff within the park using the all-in-one computer. Additionally, they can make park reservations and inquire about the park's operating hours through the online customer service platform.



## Highlight

### 7\*24 Intelligent customer service

Multi-channel access, improve customer service efficiency, save costs

### Intelligent Agent platform

ASR Real-time translation, intelligent assistance, intelligent search, emotional monitoring, work order assisted management

### Intelligent routing

Intelligent queue with one number



## Achievement

- Service efficiency increased by **50%**
- Response time **< 1s**
- **Data visualization** of park services



# Customer Success | E-commerce Intelligent Customer Support Platform



## Introduction

To provide global intelligent call center services for an overseas e-commerce enterprise, KnowDee offers customers impeccable and robust third-party interface capabilities, enabling the customization of cloud call centers by swiftly and securely integrating with the customers' business system data.



## Achievement

- Work order processing efficiency increased by **70%**
- Serve customers in **20+** languages
- Customer satisfaction increased by **80%**



## Highlight

### Smart work order

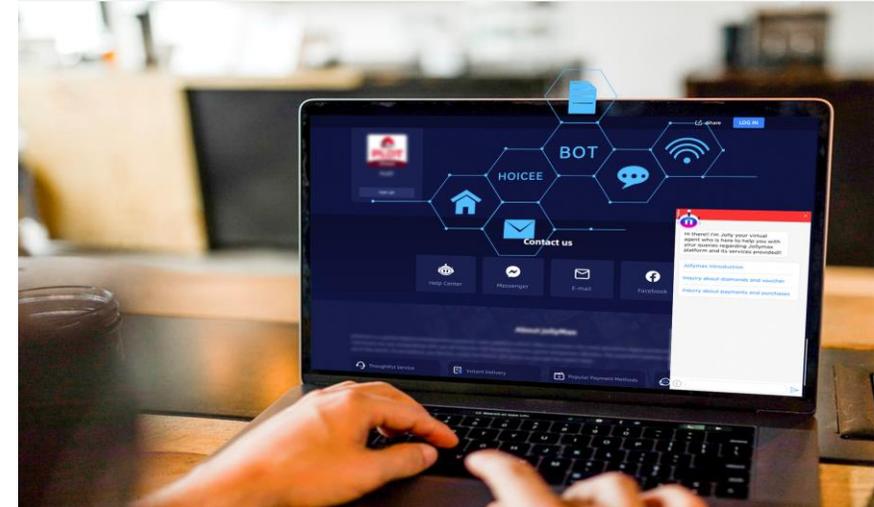
Leveraging customer email content, we utilize NLP technology to perform information extraction and summarization. This process intelligently generates work orders, merges information based on email communication, reduces repetitive work orders, and provides an efficient operational mode.

### Intelligence process management

Based on an intelligent process engine, we achieve comprehensive intelligent matching of audit personnel and maintain a record of the audit process.

### Monitoring

The server employs a load balancing mode to ensure the system's high availability. Furthermore, the cloud storage system and cloud server can be scaled up based on monitored traffic, thereby providing highly scalable services.



# Lenovo Product Marketing AI Analysis



## Challenges

- The rapidly changing external environment demands a high level of industry information in manufacturing.
- Limited information channels and staff constraints impede industry analysis, thereby hindering the comprehensive insights required for decision-making in product development, service, and sales.

## Solution

- Collect and process raw data from websites.
- Construct a product analysis knowledge graph for automated information classification.
- Integrate competitor analysis to derive key insights.
- Synthesize industry research, financials, and feedback into a comprehensive competitor analysis platform.

## Results

**300+**

Analysis Dimensions and Source Websites

**LLM Based Conversational Analysis**

Market Analysis  
Portfolio Analysis  
Product Competitive Analysis  
Industry Dynamic Analysis

**AI Triggered Analysis and Actions**

华硕超薄型笔记本在 2023 年第一季度的季度同比增长率是多少?

View the build process

- Determine the language of the user's question
- Summarize the user's current intent based on the overall context
- Determine the question type
- Determine if the user's question meets the query conditions
- Based on the current query logic, combine business knowledge to write query statements and execute data queries
- Answer the user's question based on the data query results

华硕超薄型笔记本2023年第一季度季度同比增长率 - sell\_in

季度	当前销量/Mu	过去销量/Mu	同比增长率/%
2023Q1	1.56	1.99	-21.4

Total 1 items < 1 >

根据数据, 华硕超薄型笔记本在2023年第一季度的销量为1.56百万单位, 相较于去年同期的1.99百万单位, 销量有所下降。具体而言, 销量下降了21.4%。这表明在2023年第一季度, 华硕超薄型笔记本的市场表现不如前一年同期, 出现了较为明显的销量下滑。

PC market trend

Please Enter to message; Press enter key to send...

# Fraud Work Order Detection For Service Repair



## Challenge

- Manufacturing businesses, which operate across diverse areas and regions, face challenges in providing one-on-one services.
- The daily high volume of service tickets cannot be promptly reviewed or authenticated by staff, leading to increased operational and parts costs.

## Solution

- Construct business data models utilizing big data and knowledge graphs, encompassing work order information, spare parts application information, customer information, supplier information, audit rules, and so on.
- Employ graph mining algorithms for anomaly detection and risk level assessment.
- Implement a human-machine collaborative operation management system to assist operational personnel in decision-making, highlighting relevant risks and providing a basis for judgment.



## Results

**~100**

abnormal risk identification  
models

**95%+**

abnormal risk cases  
identified

**\$5M / Year**

reduced business losses