



# INTELLICON LAB

**Executive Summary (2024.09.05)** 

# 1. Problem Statement

## **PROBLEM**

Inefficient legal search process, Unreliable, Inaccurate Results.

- Difficult to find laws and materials
- Overload of relevant materials
- Misleading or incomplete information
- Lack of personalized knowledge bases

# Hallucination Risk in Legal AI:

A Critical Problem

~33% Hallucination









Source: Hallucination-Free? Assessing the Reliability of Leading AI Legal Research Tools (2024.05)

# 2. Solution Overview

## **SOLUTION**

Accurate, Evidence-based, Tailored answers.

- Provides highly relevant materials
- Builds a personalized knowledge base.

# **LawGPT**

### Asia's First Legal QA-LLM

- Legal QA system that provides answers to legal questions
- All answers are supported by evidence (laws, precedents, documents)
- Equipped with an optimized AI module that eliminates hallucinations
  - Major Clients : Korea Electric Power Corp (KEPCO)

# **RESULT**

## Precision-driven results, Transforming inefficiency

- Effortless access to curated knowledge
- Accelerated legal discovery
- Maximized operational impact

# 3. Market Opportunity

\$138B \$404M \$54.9M

TAM

Al Software Market Size

SAM

Legal AI Software Market, CAGR of 27.64%

SOM

The SOM of \$54.9M reflects the school administration segment only

■ With expansion into other legal sectors, SOM is expected to increase significantly



0	Region	Provincial Offices	Local Support Offices
1	Total		176
2	Seoul		11
3	Busan		5
4	Daegu		5
5	Incheon		5
6	Gwangju		5
7	Daejeon		6
8	Ulsan		5
9	Sejong		2
10	Gyeonggi		25
11	Gangwon		7
12	Chungbuk		10
13	Chungnam		14
14	Jeonbuk		10
15	Jeonnam		14
16	Gyeongbuk		23
17	Gyeongnam		18
18	Jeju		2

**SOM Details** 

### 1. Target (54.9 M)

■ Total 12,209 institutions (2022)

### 2. Annual Goals

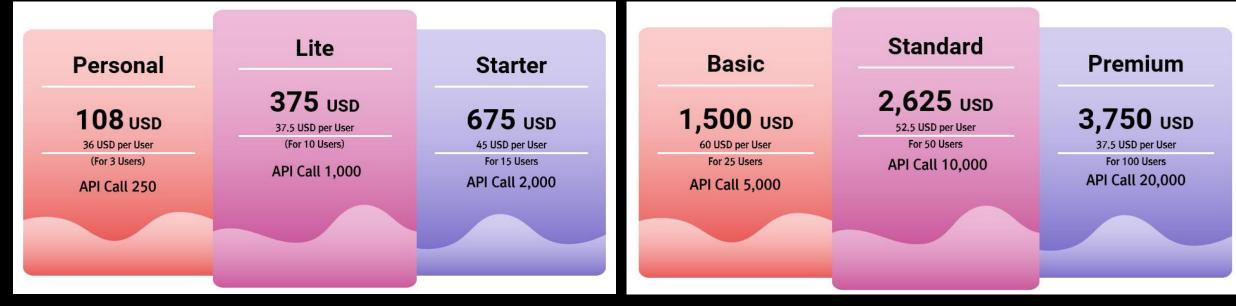
- 1) Contact 6 Provincial Offices and 60 Local Support Offices
- 2) 60% Meetings
- 3) 30% Pilot Programs
- 4) 10% Conversion to Paid Service

### 3. Back Data

■ Based on 10 users, USD 375 per month per user

# 4. Business Model

The service will be offered in Tiers, with differentiated API usage and charging, available in monthly and annual subscription models.



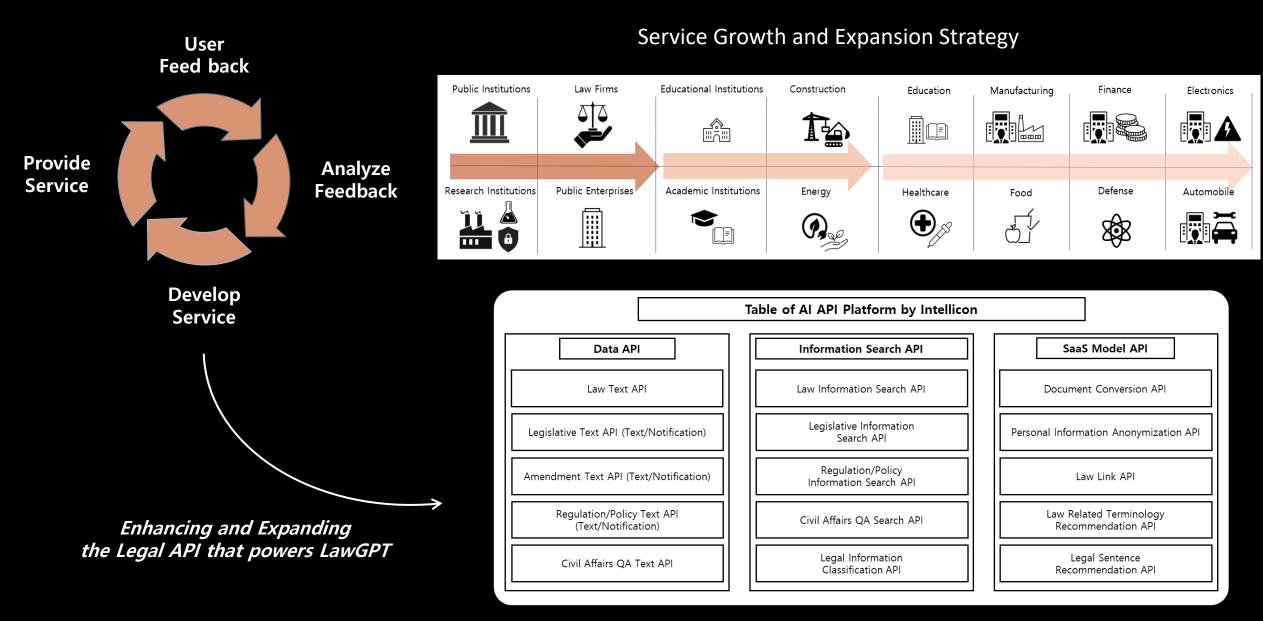
For Personal / Startups

Enterprise / Institution Plan

# 5. Competitive Analysis

Issue in LLM	ChatGPT	Mainstream service (Existing RAG-GPT)	LawGPT (Intellicon)
Minimized Hallucination	✓	✓ ✓	<b>✓</b> ✓
External Knowledge	×	×	✓
Real-time Access to Personal Documents	×	✓	✓
Multi-Document Al	×	×	✓
Automatic Document Conversion (HTML)	×	×	✓
HWP Document Process	×	PDF only	HWP, PDF, DOC, PPT, Image, etc
Legal Al Hybrid	×	×	✓

# 6. Product/Service Roadmap



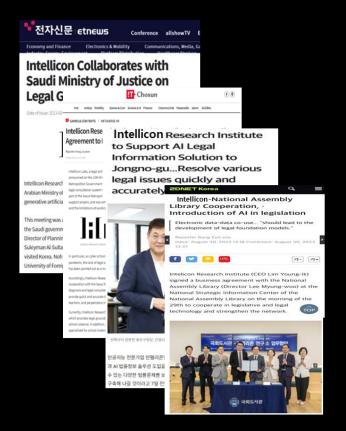
# 7. Marketing and Sales Strategy

### 1) Marketing Strategy:

- Media exposure
- Branding through exhibitions and conferences

### 2) Sales Strategy:

- Sector-specific goals
- Rapid expansion from existing customers





Broadcast on the Development of Legal GPT Based on Generative AI (SBS, May 2, 2023)



Broadcast Review of Legal GPT Based on Generative Al



0	Region	Provincial Offices	Local Support Offices
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5	Incheon		
6	Gwangju		
7	Daejeon		
8	Ulsan		
9	Sejong		
10	Gyeonggi		
11	Gangwon		
12	Chungbuk		
13	Chungnam		
14	Jeonbuk		
15	Jeonnam		
16	Gyeongbuk		
17	Gyeongnam		
18	Jeju	1	2

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# 8. CEO



### Young-Yik Rhim

**Major Accomplishments** 

### **Education**

UC Berkeley School of Law	IP/IPSL short-term course	completion
Completion of International Dispute Arbitration Expert Training	International Arbitration Act	completion
The 9th Intellectual Property Training Institute	Patent Law, etc.	completion
41 <sup>st</sup> Judicial Research & Training Institute	Passed the 51 <sup>st</sup> Judicial Examination	completion
Completion of Intellectual Property Special Training	Intellectual Property Law	completion
Seoul National University	Life Sciences	Bachelors

### **Selected Publications & Academic Activities**

2016	An Ensemble Based Legal Information Retrieval & Entailment System	JURISIN 2016
2016	A.l. & its impact on legal profession: FUTURE LAWYER	2016 International Judicial Symposium (Supreme Court International Academic Conference)
2016	A.I. & Legal Technology	2016 SNU & Berkeley Law School Joint Workshop
2016	The Use of Technology in Legal Practice	KBA-FCLRF Academic Conference (Jointly hosted by the Korean Bar Association and the Russian Federal Chamber of Lawyers)
2017	Artificial Intelligent Attorney	Korea University Brain Science Department Colloquium
2017	Multiple Agent Based Entailment System (MABES) for RTE	COLIEE 2017
2017	Ontology Modeling for Criminal Law	MIREL 2017
2017	Legal Content Fusion for Legal Information Retrieval	ICAIL 2017
2017	A.I.& Future	2017 International Ad Tec Conference 2018 Busan International Advertising Festival
2019	The Applicability of Artificial Intelligence in International Law	YIJUN Institute of International Law

### **Career Highlights**

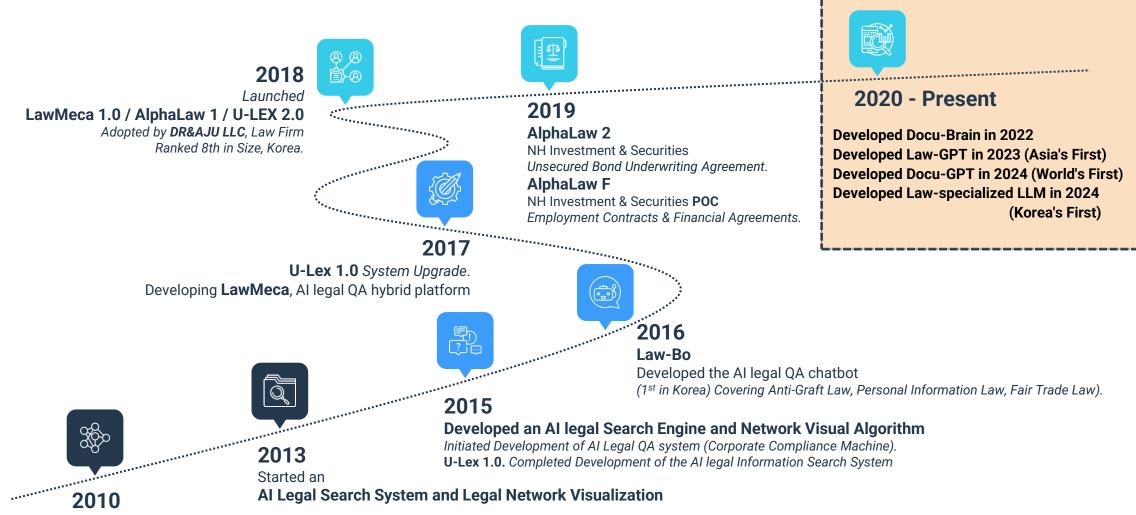
		Year	Institution	Position	Remark
2010	Establishing artificial intelligence legal convergence lab, The 1st in Korea	2012-2013	Seoul bar association	Member	Special committee on jurist training
2015	Developed i-LIS (Intelligent Legal Information System) and studying computational jurisprudence t	2013-2014	Korea creative content agency	Consultant lawyer	Dispute mediation committee
2016	heory, The 1st in Korea  Developed legal chatbot (Law-Bo), The 1st in Korea	2013-2015	Soongsil cyber university	Adjunct professor	Brain science and knowledge convergence
2010	Developed legal charbot (Law-Do), The 1st in Rolea	2015-Current	Korea bio-technology industry Association	Special member	
2016	COLIEE, Competition on Legal Information Extraction-Entailment(Tokyo, Japan, 2016) Champion	2015-Current	Korean bar association	Special member	Lawyer special committee for judicial reform
2017	COLIEE, Competition on Legal Information Extraction-Entailment (London, UK, 2017) Champion	2015-Current	Convergence research institute for forensic safety	Research lawyer	Researching on Al safety system
		2015-2016	Ministry of Science, Information & Communications Technology (ICT) and future planning	Consultant	A.I. Technology and policy
2017	Complete developing legal map algorithm, The 1st in Korea	2016-Current	Korean Patent Attorneys Association (KPAA) Intelligence information strategy committee	Vice-chairman Consultant	
2018	Received the Minister's Award for Contributions to the Advancement of Science and Technology	2017-Current	Intellectual Property Support Center (i-PAC)	Consultant	
2018	Received the Grand Prize in the Legal Tech category at the '4th Korea Enterprise Awards'	2017-Current	Patent court	Lawsuit structure patent attorney	Infringement of patent/litigation for cancellation of a trial decision deputy
2019	Received the Korea Excellent Patent Award	2016-Current	National assembly social contribution forum	Legal member	Study on Al legal policy
2019	Developed Asia's first contract analyzer (Alpha-Law)	2016-Current	International association for artificial intelligence and law, IAAIL	Regular member	
2010	Production Constitution of the London Constitution of the Constitu	2015-2017	Korean bar association	Vice president	48 <sup>th</sup>
2019	Received the Grand Prize in the Legal category at the Korea Artificial Intelligence Awards	2015-Current	Grad school of mass communications at Konkuk University	Adjunct professor	Artificial intelligence and media/copyright law
2019	Selected as a Next-Generation World-Class Product (Ministry of Trade, Industry and Energy, KOTRA), Contract Analyzer (Alpha-Law)	2018-Current	The National Assembly Library of the Republic of Korea	Consultant	
2019	Received the Minister's Award from the Ministry of Trade, Industry and Energy at the Invention Patent Expo, Intelligent Legal Inference Search Engine (U-LEX)	2018-Current	Korean association for artificial intelligence and law, KAAIL	Vice-chairman	
		2012-Current	Intellicon law firm	Representative Attorney	
2019	Received the Grand Prize (AlphaRo), Gold Prize (LawMeca), and Silver Prize (Ulex) at the Seoul International Invention Exhibition	2019-Current	4th Industrial Revolution Commission (Presidential Organization)	Science and Technology Innovation Commission member	
		2013-Current	Intellicon lab co., Ltd.	CEO	





# APPENDIX

# "Intellicon has developed AI technology for over 10 years."



(1st in Asia) Initiated Research on Legal Informatics and Legal Reasoning Theory

# **History**

# "Intellicon has won many awards, including the AI World Championship."



**Winner Global Legal Al Competition** Tokyo, Japan.

Venture Company Certified
Korea Venture Capital Association



Winner
Global Legal Al Competition London,
UK.

Winning Two Years in a Row

**U-LEX** 

Next-Generation World-Class Product Ministry of Trade, Industry, & Energy

**Good Content Service** GCS Certified



**Awarded** 

Minister's Commendation for Science & Technology Ministry of Science & ICT

Winner

4th Republic of Korea Corporate Awards in Legal Tech

**Grand Prize, ICT Sector** 

Republic of Korea Digital Business Innovation Awards

**Grand Prize, Legal Sector** Republic of Korea Al Award



Gold, Silver, & Grand Prize Winner Triple Crown Seoul International Invention Fair

Winner

Republic of Korea Excellent Patent Awards

Winner, AlphaLaw 1st Al Competition

**AlphaLaw**Next-Generation World-Class
Product

Ministry of Trade, Industry, & Energy

Minister's Award Ministry of Trade,
Industry, & Energy.

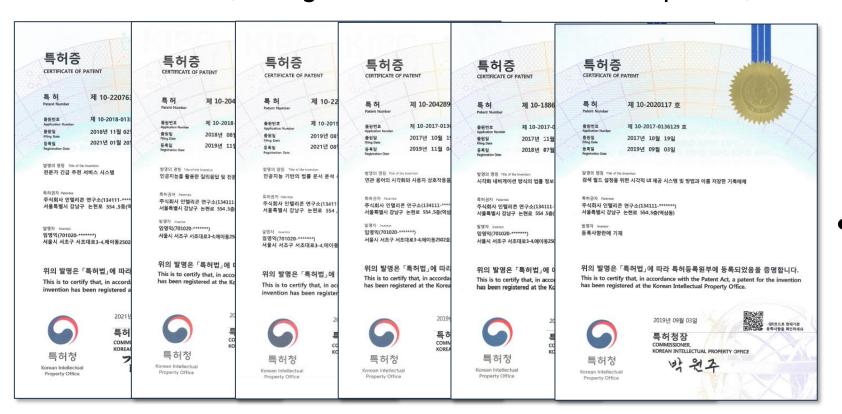


2023 Seoul International Invention Fair Gold Medal and Special Award (2 awards)

2016 2017 2018 2019 2023 ~

# "Intellicon holds about 20 AI-related IPs, including international patents."

"Technical Patents (Holding both domestic and international patents)."







# **Companies**

- Acquired technical patents in Japan
- Japanese companies including Rosetta
- SoKandai University, Japan

## **Overseas Institutions**

- International Legal Technology Association (Canada, Japan)
- Standford LawSchool
- Alberta Univ (Canada) AMII

### **Domestic Univ.**

- Yonsei University Industry-Academic Cooperation Foundation
- Ulsan University Industry-Academic Cooperation Foundation
- Ewha Womans University Law School
- Hanyang University Law School
- Chungnam National University Law School

### NLP+ NLU+ LLM

- Multi RAG Generative Al
- Multi-document Automatic
   Knowledge Extraction
- Legal Document Analysis
- Contract Analysis
- Legal Counseling Q&A Analysis
- Legal Precedent DB Analysis
- Legislative Revision Tracking

### < Core Tech >

- Legal Inference AI Technology / Multi-Agent RAG Technology / Legal LLM Technology
- Compatibility Technology for Knowledge Tech. & Legal Tech.
- Legal Network Knowledge Extraction Technology

### Legal NLP

- Application of Legal Natural Language Processing (NLP) & Legal Linguistics
- Composed of General NLP + Legal Language Optimization Technology

# Core Sentence Recommendation Tech, within Document

 Technology that automatically finds & recommends intended clauses or important sentences within long legal sentences, (ex. laws & precedents), and highlights them

### Legal Logic-based Search Technology

 Technology that fuses multiple search models according to the semantic relationship between legal & general language, and the legal logical structure of sentences & search documents

### Adaptive Evolutionary Learning Technology

- Al continuously learns user question patterns & generated data to optimize
- Evolves like Google search, adapting to changes in the legal environment over time & with increasing data

### Legal NLU

- Extracting information from sentences
- General Natural Language
   Understanding + Legal Element
   Extraction Technology

# Legal Inference & Ranking Technology

- Inferring the relationship between query documents & results through legal principles & logic
- Technology that ranks legal information based on the reliability of inference

### Simulation-based Multi-information Concurrent Exploration Technology

- Technology that enables simulation of laws & exploration of related precedents
- Application of Computational Law & Meta Law Analytics theories
- · Core technology of Intelligent Legal Optimization Search Engine

- Leading AI-based legal tech and securing global competitiveness
- Providing generative AI technology and solutions for augmented knowledge (API platform)

# **Table of AI API Platform by Intellicon**

### Data API

Law Text API

Legislative Text API (Text/Notification)

Amendment Text API (Text/Notification)

Regulation/Policy Text API (Text/Notification)

Civil Affairs QA Text API

### **Information Search API**

Law Information Search API

Legislative Information Search API

Regulation/Policy
Information Search API

Civil Affairs QA Search API

Legal Information Classification API

### SaaS Model API

**Document Conversion API** 

Personal Information Anonymization API

Law Link API

Law Related Terminology Recommendation API

Legal Sentence Recommendation API

## **Key Facts for Solution and Platform**

# **U-LEX**

ulex.co.kr



AI Legal and Case Law Search Engine

## Lawmeca

lawmeca.com



**AI Legal Consultation Platform** 

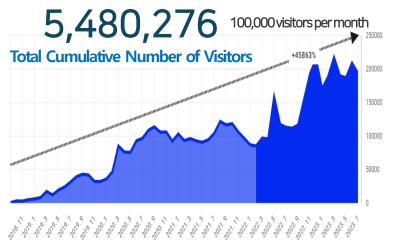
# Alpha-Law

ailaw.co.kr



Al Contract Analysis and Management System

# 



# 3 billion

National R&D Project: Customized Contract Analysis Service for Small and Medium-sized Enterprises (Ministry of Trade, Industry and Energy)

5%

Market Share, Next Generation World-Class Product Certification (Ministry of Trade, Industry and Energy, KOTRA)

10 seconds

Analysis per Contract, Winner of Contract Analysis Competition (Judicial Policy Research Institute)

Winner

Grand Prize at the Seoul International Invention Fair among 625 inventions (
Korea Invention Promotion Association) 17



# **Core Solutions of Intellicon**

### Convergence System of Document AI & LLM

- · Winner of the Gold & Special Prize at the Seoul International Invention Exhibition (2023)
- · Solution that combines Document AI, RAG, & LLM

At a Glance

- · Capable of analyzing Big Document Data in real-time
- · Conversational AI that analyzes documents & converts them into knowledge
- · Analyzes all types of documents regardless of file format



**DocuBrain** 

### **LawGPT**

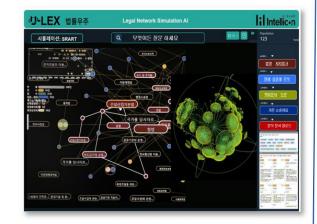


### Asia's First Legal OA-LLM

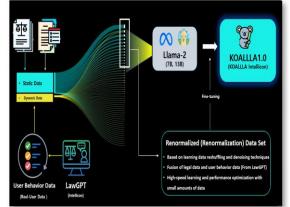
- · Legal QA system that provides answers to legal questions
- · All answers are supported by evidence (laws, precedents, documents)
- Equipped with an optimized AI module that eliminates hallucinations
- Currently used by Korea Electric Power Corp(KEPCO), Korea Occupational Safety and Health Agency(KOSHA), law firms, and others

### **Legal Knowledge Network Simulation**

- · Internationally patented & World-Class Product selected
- · Provides visual answers to legal questions
- · Network of laws, precedents, commentaries, & papers
- Allows users to simulate knowledge structures directly



**U-LEX** 



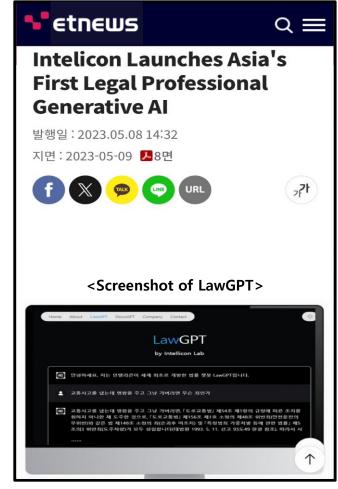
**KOALLLA(Law-specialized LLM)** 

### **Korea's First Legal Specialized LLM**

- · Fine-tuning technology for Legal RAG optimization
- Data re-normalization technology to reduce hallucinations
- · Learning technology that incorporates user behavior data
- · Model that can be developed to meet the specific needs of individual organization.

# **LawGPT**

"Development of Asia's First Legal GPT"



Report on Asia's First Launch (ETNEWS, May 8, 2023)



Broadcast on the Development of Legal GPT Based on Generative AI (SBS, May 2, 2023)



Broadcast Review of Legal GPT Based on Generative Al (Yonhap News, May 28, 2023)

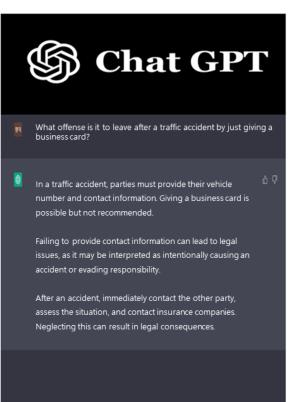
# **Overview**



## **Evidence-based Generative AI for Legal Queries with Citations from Laws, Precedents, Documents, and Knowledge**

### <ChatGPT>

- Vague answer
- No legal evidence provided for responses

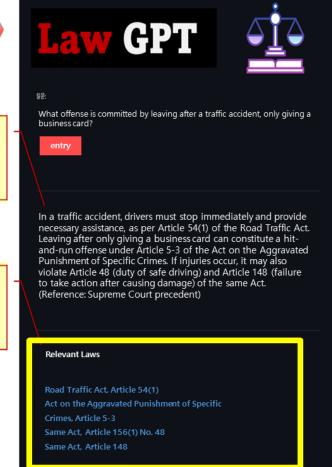




Provides highly precise answers based on Korean laws and precedents

Recommends or presents relevant legal provisions

Links to detailed legal content for further reference



### <LawGPT>

- Highly precise answers
- Provides evidence for responses (laws, precedents, etc.)

# Korea's 1st Legal sLLM (KOALLA, Feb 2024)





Korea's 1<sup>st</sup> Korean Legal sLLM Developed Domestically

Gold Award at International Invention Fair for DocuBrain (Nov 2023)

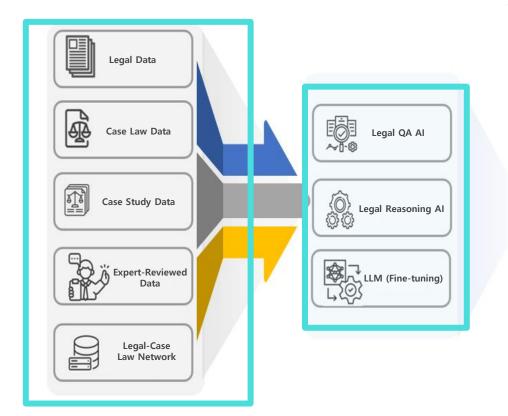


Korea's First\_Multi-Document GPT Wins Gold Award

# **Answering-Al::** DocuGPT & LawGPT

### Intellicon's Legal AI System Based on Generative AI (LLM)

Hybrid of Legal AI System and LLM: Asia's First Legal AI Powered by Generative AI



# Answering - Al

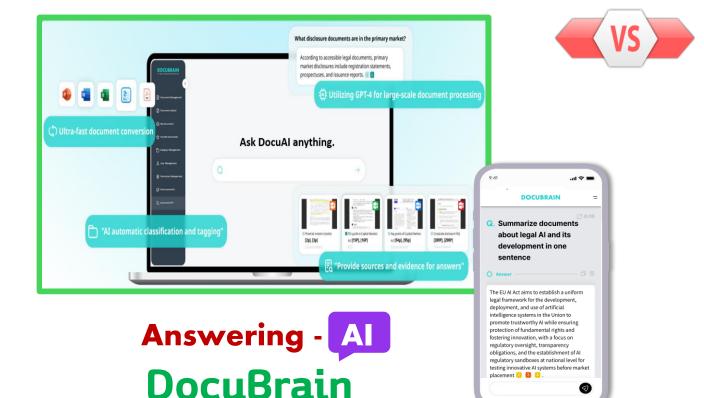




# DocuBrain: A generative AI system for interactive search and analysis of all documents in the world

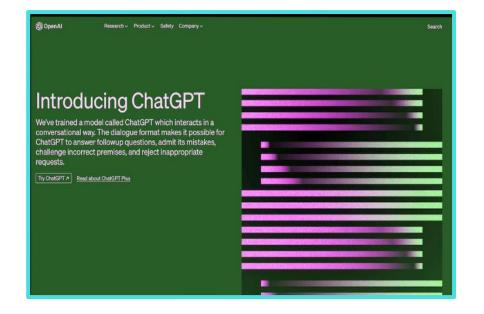
# Dynamic GPT

Custom GPT with Client Data



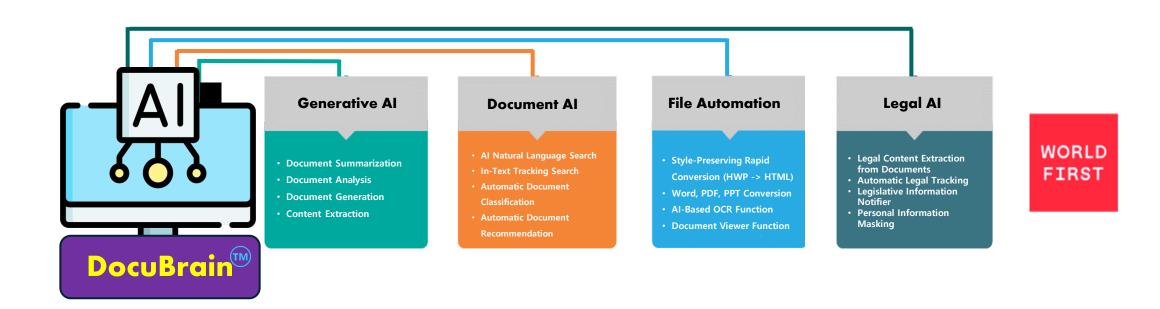
# Static GPT

General chatbot with Prompt Skills



**ChatGPT** 

# **DocuBrain**:: Modular AI ( DocuAI + Auto Converter+ LLM +Legal AI)



# **Main Clients**

### **Public Institution**











**Research Institution** 









DR&



Law Firm SANHA

**DAERYOOK & AJU** 



🥋 조세통람









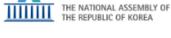


























# **Summary**

# "Intellicon is the Top Leader in Generative AI & LegalTech"

- ✓ Secured AI source technology through 10 years of dedicated research
- ✓ Unparalleled technology born from winning the World Legal AI Competition (2016 in Japan, 2017 in the UK)
- ✓ Holds the most legal AI IPs, including international patents
- ✓ Ongoing expansion of client network to public institutions, law firms, and corporations
- ✓ Solution and consulting brand provided to public institutions such as the Constitutional Court,
  National Assembly, Gangwon Research Institute, Occupational Safety and Health Agency, and
  Korea Electric Power Corporation
- ✓ LawGPT technology that provides legal grounds (first developed in Asia, 2023)
- ✓ Multi-document based RAG-generative AI toolkit, DocuBrain (first developed in the world, 2023)
- ✓ Self-developed legal specialized sLLM (first developed in Korea, 2024)
- ✓ Holds the largest amount of legal big data in Korea (over 3.5 million cases)



### **Performance**

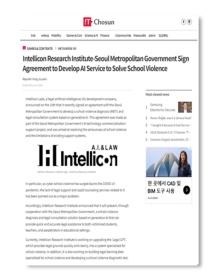
Category	Name of Organization	<b>Technology and Solutions</b>	Remarks
Public Institution	Constitutional Court	Al Constitutional Adjudication System	Development Completed
Public Institution	Board of Audit and Inspection	Al Audit Support System (POC)	Development Completed
Public Institution	National Assembly Library	Al Legislative Support System	Agreement Completed
Public Institution	National Information Society Agency	Al Learning Data Construction	Agreement Completed
Public Institution	Seoul City	Al School Violence Counseling System	Agreement Completed
Public Institution	Jongno District	Al Administrative Support System	Agreement Completed
Public Institution	Ministry of Government Legislation	Al Legislative Support System	Under Discussion
Public Institution	Ministry of Justice, Saudi Arabia	Al Judicial Support System	Under Discussion
Public Institution	Gangwon Research Institute	Al Document Analysis Management Solution	Agreement Completed
Public Institution	Korea Occupational Safety and Health Agency	Al Document Analysis Management Solution	Agreement Completed
Public Institution	Defense Technology Promotion Research Institute	Al Document Analysis Management Solution	Pilot Use
Law Firm	DR&AJU LLC	Al Document Analysis Management Solution	Introduction Completed
Law Firm	SANHA LLC	Al Document Analysis Management Solution	Introduction Completed
Law Firm	SANU LLC	Al Document Analysis Management Solution	Introduction Completed
Law Firm	WON LLC	Al Document Analysis Management Solution	Introduction Completed
Law Firm	Kim Han-kyu Law Office	Al Document Analysis Management Solution	Introduction Completed
Law Firm	Jipyong LLC	Al Document Analysis Management Solution	Scheduled for Discussion
General Company	Curiod Co., Ltd.	Al Document Analysis Management Solution	Introduction Completed
General Company	Ban Architects Co., Ltd.	Al Document Analysis Management Solution	Introduction Completed
General Company	ThinkBlank Co., Ltd.	Al Document Analysis Management Solution	Introduction Completed
General Company	IronBox Co., Ltd.	Al Document Analysis Management Solution	Introduction Completed
General Company	JoseTongram Co., Ltd.	Al Document Analysis Management Solution (API)	Introduction Completed
General Company	POSCO	Al Document Analysis Management Solution	Pilot Use
Research Institution	Ewha Womans University Law School	Industry-Academic Cooperation	Agreement Completed
Research Institution	Hankuk University of Foreign Studies Law School	Industry-Academic Cooperation	Agreement Completed
Research Institution	Hankuk University of Foreign Studies Department of Information and Records	Industry-Academic Cooperation	Agreement Completed
Research Institution	Gyeongin National University of Education Legislative Center	Industry-Academic Cooperation	Agreement Completed







구축해 나갈 것이라고 7일 전했다.



인공지능 전문기업 인텔리콘연구소(대표 임영약)가 지난 3일 종로구행(구정장 정문한) 과 AI 법률정보 솔루션 도입을 위한 업무협약을 체결하고 행정서비스 과정에서 일어날 수 있는 다양한 법률론제를 보다 신속하고 정확하게 해결할 수 있도록 상호 합력체계를

# Collaborators & Clients -









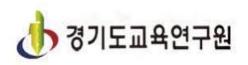






















# Collaborators & Clients



















THINK BLANK











### **Public Institution**











Research Institution























DAERYOOK & AJU

































# **Major Certificates and Awards**





2018

Minister's Award for Meritorious Service in Science and Technology Promotion

MinistryofScienceandICT

### 2016~2017

 $World-Class \ Product \ Certification for 'Intelligent \ Legal \ Information \ System'$ 

Good Content Service (GCS) Certification for 'Law-Bo'

Winner of the Competition on Legal Information Extraction/Entailment (COLIEE)

Winner of the Competition on Legal Information Extraction/Entailment (COLIEE)

MinistryofTrade,IndustryandEnergy

**KoreaDataAgency** 

**ICAIL2017** 

**ICAIL2016** 

# **Major Certificates and Awards**



**2020**Youth-Friendly Small hidden champion MOEL



### 2019

World-Class Product Certification for 'Intelligent Contract Analyzer'
Minister's Award at Invention Patent Exhibition for 'U-LEX'
Grand Prize at Seoul International Invention Fair for 'Alpha-Law'
Gold Award at Seoul International Invention Fair for 'U-LEX'

MinistryofTrade,IndustryandEnergy MinistryofTrade,IndustryandEnergy

**KIPA** 

**KIPA** 

**KIPA** 

✓ Securing Public Sales Network

"Selected as 2022 Innovative Product"







"Building an Innovation Procurement Ecosystem

Based on Creative Innovation "

# Intellicon, Selected as World-Class Product 77



Bridgehead for Global Market Entry

"Selected as World-Class Product" "Recognized as Good Content Service"







세계일류상품



"Obtained Good Content Service Certification"

- ✓ Awards at International Patent Exhibition
- ✓ Awards at Intellectual Property Exhibition

"Won Grand Prize, Gold, and Silver Awards"







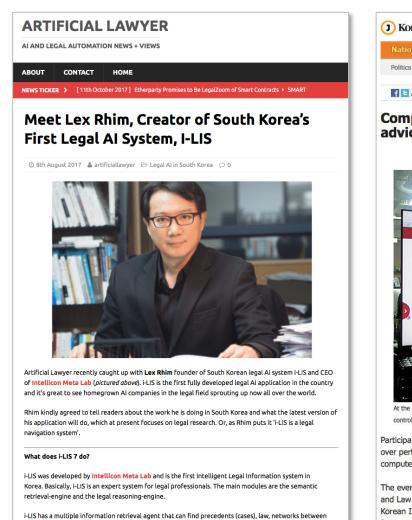
# Two Consecutive Championships at World Legal AI Competition COLIEE 2016 (Tokyo) & COLIEE 2017 (London)







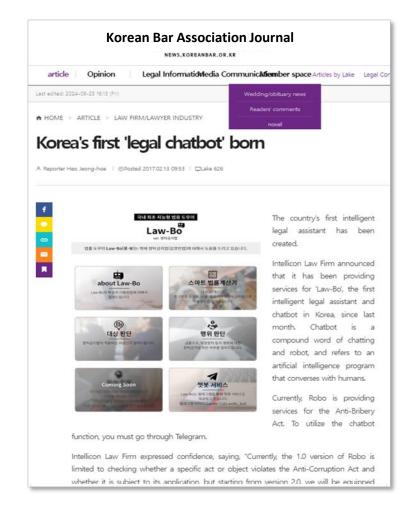
## "Korea's First Legal Al System"



laws and cases all spontaneously when asked.



# "Development of 'Law-Bo', Korea's First Legal Chatbot"





# "Development of Korea's First Intelligent Legal Information System (i-LIS)"







## "Completion of Korea's First 'Al Legal Map' in 2017"





## "2017년 차세대 세계일류상품 선정"



Economy : General Economy

Intelligent Legal Information System
'Iris (i-LIS)' Selected as NextGeneration World-Class Product

JoongAng Ilbo | input 2017.11.30 16:13

Reporter Kim Min-sang





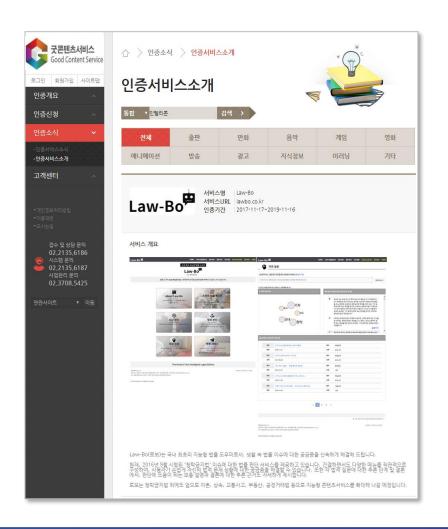
[Photo Intellicon Research Institute]

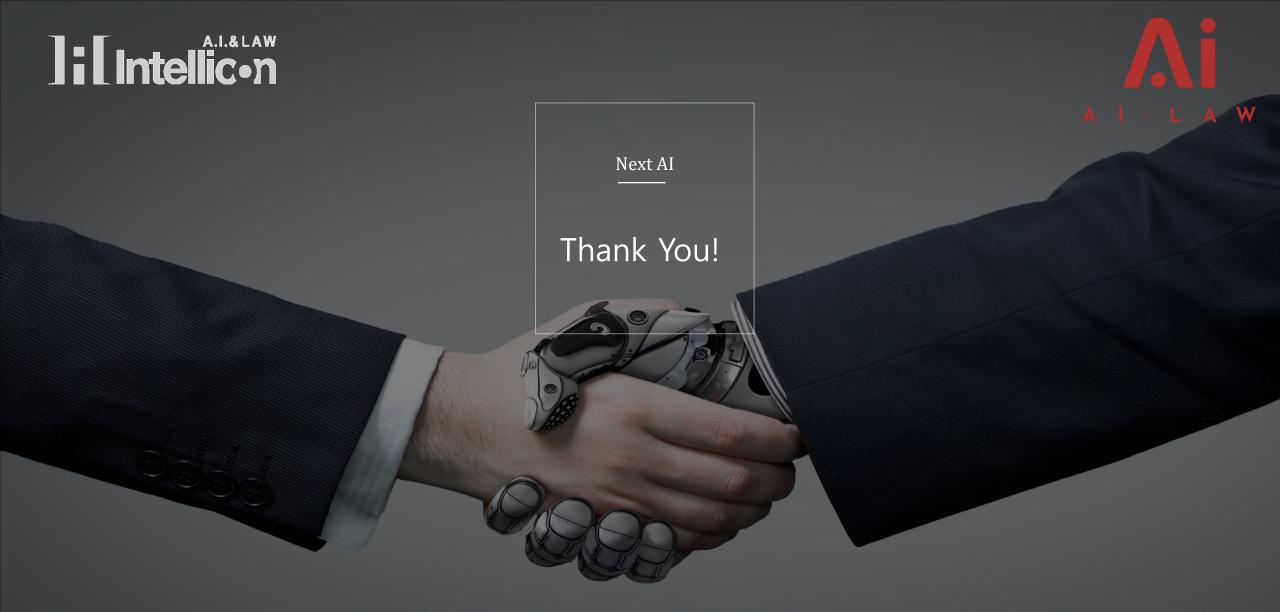
The intelligent legal information system 'Iris (i-LIS)' developed by Intellicon Research Institute was selected as a next-generation world-class product at the 2017 World-Class Product Selection Certificate Award Ceremony held at the Intercontinental Hotel in Samseong-dong, Seoul on the 23rd.



### "Obtained Good Contents Service Certification in 2017"







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