

# Patent Administration System in the Intelligent Information Age

CWS/11 | December 4-8, 2023 | Geneva

***Establishment mid-to long-term strategy for  
Informatization of patent administration***

# Overview

- **Establishment of strategy(2018)**

- Implementation of smart patent administration based on intelligence information
- Realization of consumer-oriented service that impresses the public
- Building an advanced information infrastructure for collaboration

# Overview

## Next generation KIPO-net(2019~2021)

*2019(1<sup>st</sup>)*

*Image Search System for  
Figurative Marks(POC)*

*AI Chatbot(POC)*

*Mobile Electronic Application System*

**13 tasks performed**

*2020(2<sup>nd</sup>)*

*Image Search System for Design(POC)*

*Improving the environment for  
preparing the examiner's notice*

**19 tasks performed**

*2021(3<sup>rd</sup>)*

*AI Figurative Marks classification  
Recommendation system (POC)*

*AI Similar patent Search (POC)*

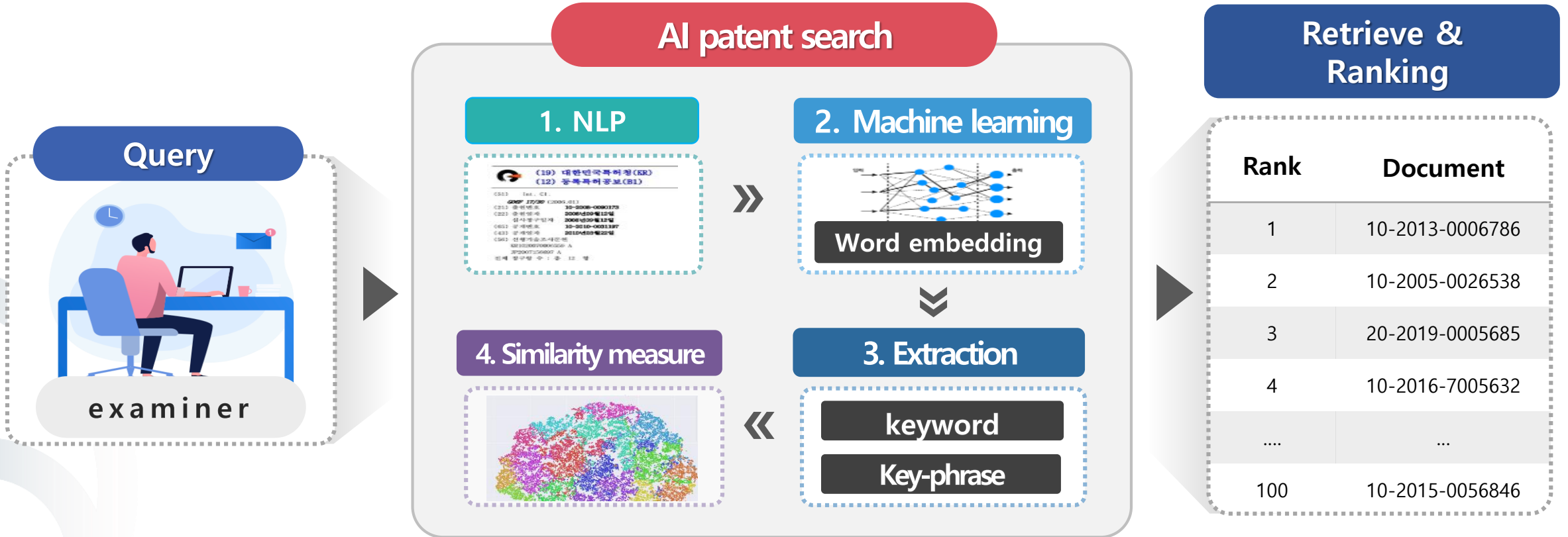
*Support System for  
Writing Examination Documents*

**13 tasks performed**

# ***AI Patent Automated Search System***

# Process of AI-aided Patent Retrieval

- Query(The number of Doc.) → Natural Language Process → Machine Learning → Keyword Extraction → Similarity Measurement → Retrieving the Closest Documents and Ranking relevant Documents

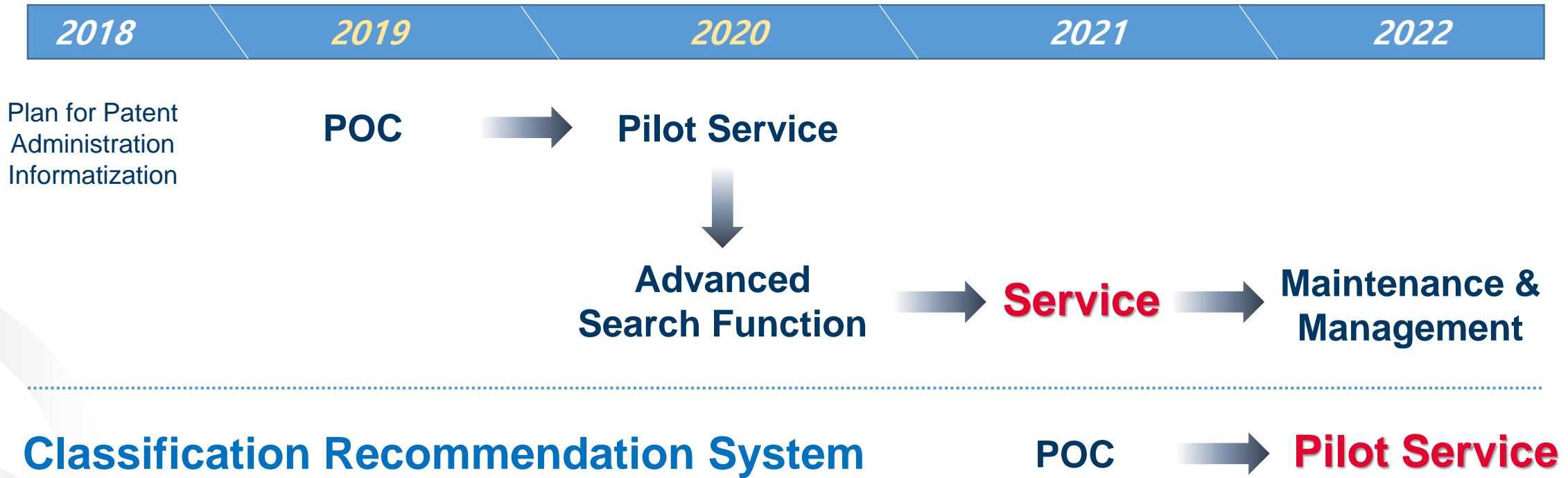


# ***Image Search System for Figurative Marks***

# Overview

- KIPO-net Roadmap Using AI technology

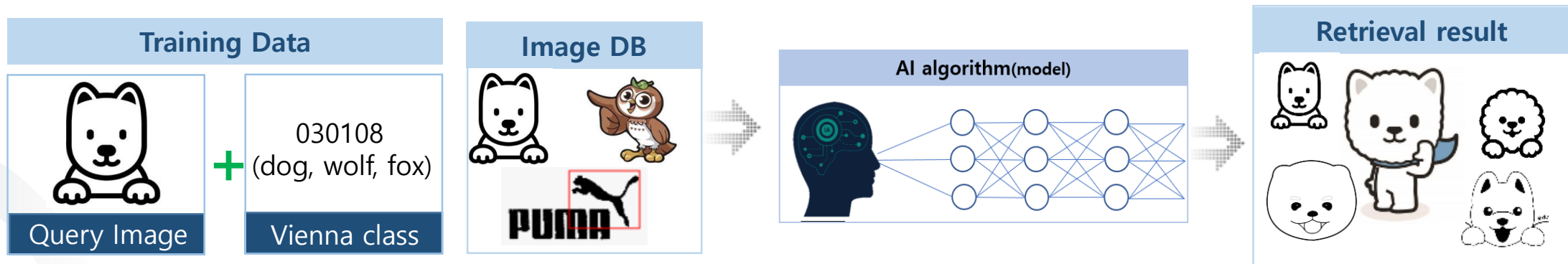
## Trademark(Figurative mark image)





# Process of AI-aided Image Retrieval <sup>TM</sup>

- Input of TM images & class. → Training of algorithm to detect features from image data → Comparison of features of registered TMs and newly filed TM → Retrieval of similar TMs



# Example™



40-1531485

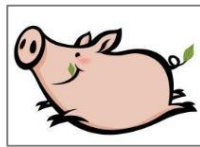
- 1. 030418 63.7% : 돼지, 멧돼지, 흑멧돼지
- 2. 240309 44.6% : 기타 다른 형태의 인장 또는 도장, 스탬프
- 3. 030424 35.77% :도안화(양식화)된 IV 계열군 동물, 그림자 또는 실루엣
- 4. 050313 10.1% : 도안화(양식화)된 나뭇잎
- 5. 030404 8.17% : 들소, 황소
- 6. 030420 3.37% : 돼지 또는 멧돼지의 머리

Brand name



출원번호	상표명(안과)	상표명(명칭)	류	출원인	수	출원(승인일자)	최종권리자	최종지부	소멸일자	주요관료명	도청코드
4020180160752	호소먹는돼지	호소양	44	(주)호은농업회사법인	1	20181119	(주)호은농업회사법인	등록결정(일반)	20291014		030418 030424 050313 240309
4020180160751	호소먹는돼지	호소양	43	(주)호은농업회사법인	1	20181119	(주)호은농업회사법인	등록결정(일반)	20291014		030418 030424 050313 240309
4020180160749	호소먹는돼지	호소양	35	(주)호은농업회사법인	1	20181119	(주)호은농업회사법인	등록결정(일반)	20291016		030418 030424 050313 240309
4020180160748	호소먹는돼지	호소양	29	(주)호은농업회사법인	1	20181119	(주)호은농업회사법인	등록결정(일반)	20291016		030418 030424 050313 240309

whole vs whole

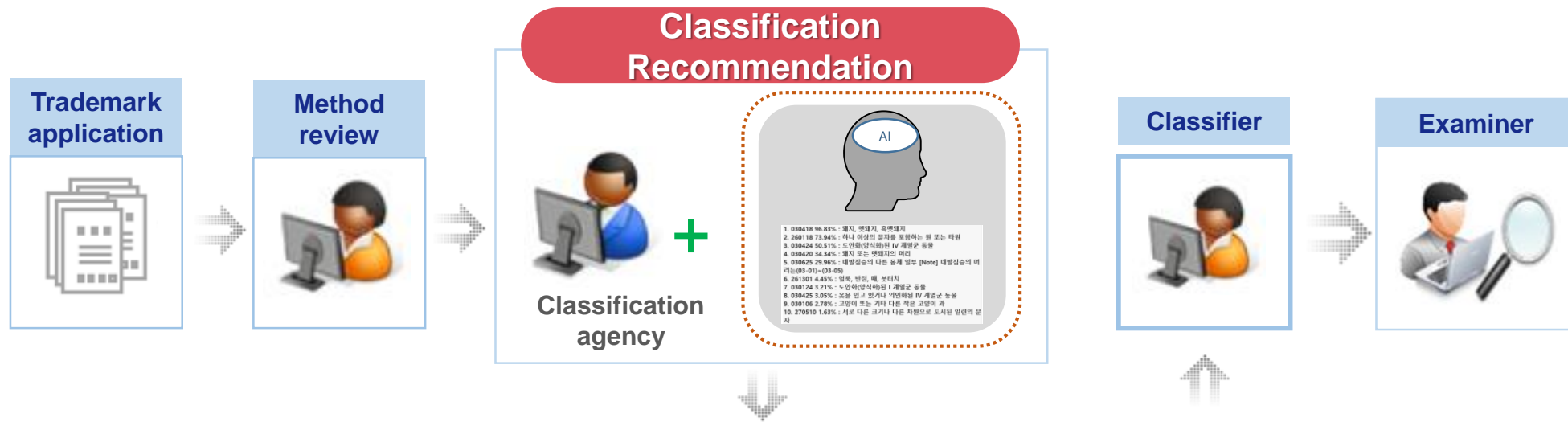


part vs part



# Process of AI-aided Image Retrieval <sup>TM</sup>

## ● Scheme of KIPO's Classification Recommendation System Aided by AI



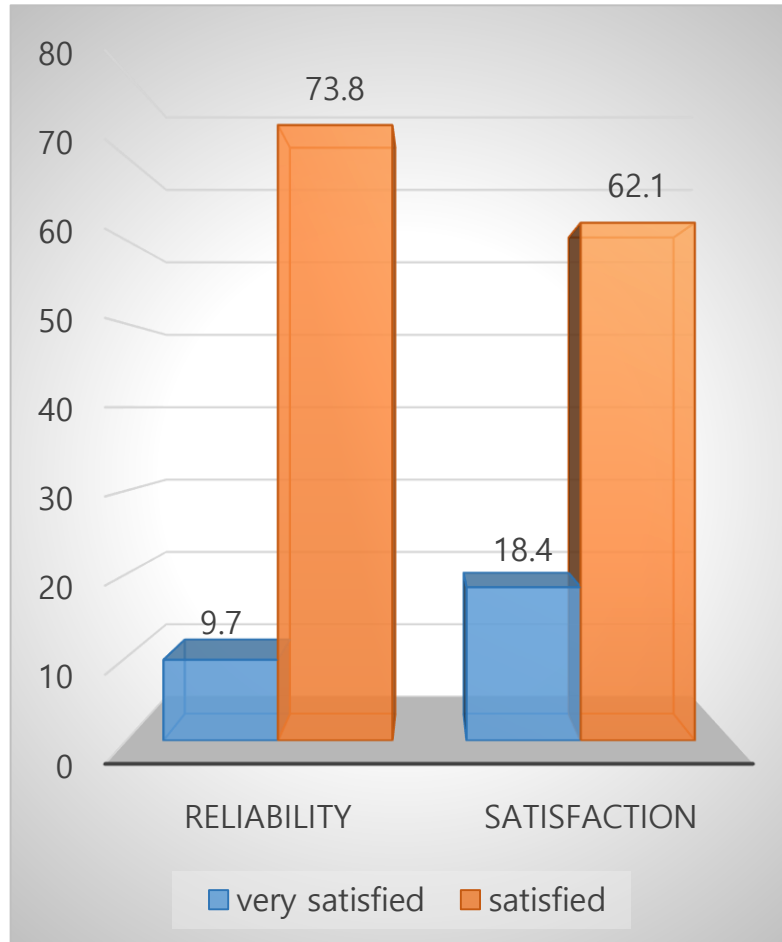
**Classification Recommendation**

Classification agency + AI

- 030418 86.83% : 내지, 면지, 표지, 표지대지
- 260118 79.94% : 하나 이상의 문자를 포함하는 원 또는 타원
- 030424 50.51% : 도안화(명사화된) IV 계영군 등록
- 030403 34.34% : 필지 또는 필지상의 패턴
- 030625 29.96% : 대명칭상의 다른 용체 일부 (Note) 대명칭상의 머리는 (03 01)~(03 05)
- 261301 4.48% : 일목, 방점, 해, 보너지
- 030124 3.21% : 도안화(명사화된) I 계영군 등록
- 030425 3.05% : 붓을 입고 있거나 의인화된 IV 계영군 등록
- 030106 2.78% : 고양이 또는 개와 다른 작은 동물 고양이 귀
- 270510 1.63% : 서로 다른 크기나 다른 차등으로 도식된 일련의 문자

번호	선택	우선심사	출원번호	출원일자	상표구분	류	상표명(국문)	상표명(영문)	이미지	도용분류코드	조사명	분석여건	처리일자	납품일자	분류기준
4	<input type="checkbox"/>		40-2021-0097391	2021.05.12	도출특허	41		STUDIO PP			광용지	○	2021.05.17	2021.05.21	(주)웹스
5	<input type="checkbox"/>		40-2021-0087401	2021.05.12	도출특허	45	(주)보로빅	SECURITY LICENSE NUMBER 196 CHUNGBUK PROVINCIAL POLICE AGENCY & AUTHORIZATION PRIVATE SECURITY			광용지	○	2021.05.17	2021.05.21	(주)웹스
6	<input type="checkbox"/>		40-2021-0097406	2021.05.12	도출특허	26		ATPLAY		020901.27030 0.270502.2709 01.270916	광용지	○	2021.05.17	2021.05.21	특허정보진흥원

# User Satisfaction



Response Rate 61.2%

**Total Positive Reliability (83.5%)**

- Very reliable 9.7%
- Reliable 73.8%

**Total Positive Satisfaction(80.5%)**

- Very satisfied 18.4%
- Satisfied 62.1%

# Roadmap™

## ● KIPO-net Roadmap Using AI technology

### Trademark

2018

2019

2020

2021

2022

2023~

Plan for Patent  
Administration  
Informatization

·Figurative mark  
Image search  
System >>>>

·Classification  
Recommendation  
System >>>>

·Word mark  
Designation  
Similarity >>>>

POC → Pilot Service → Service

POC → Pilot Service

Maintenance &  
Management

“Building an AI Roadmap”  
(Next 5 years)

POC → Pilot Service

# Building a digital patent trial system('23)

① Improving the convenience of preparing judgment documents

② AI-based referee method task automation

③ Building a digital delivery system

④ Improving online submission of evidence

*Thank you!*