Patent Administration System in the Intelligent Information Age

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

Korean Intellectual Property Office

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(1st)	2020(2nd)	2021(3rd)
Image Search System for Figurative Marks(POC)	Image Search System for Design(POC)	AI Figurative Marks classification Recommendation system (POC)
AI Chatbot(POC)	Improving the environment for preparing the examiner's notice	AI Similar patent Search (POC)
Mobile Electronic Application System		Support System for Writing Examination Documents
13 tasks performed	19 tasks performed	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**

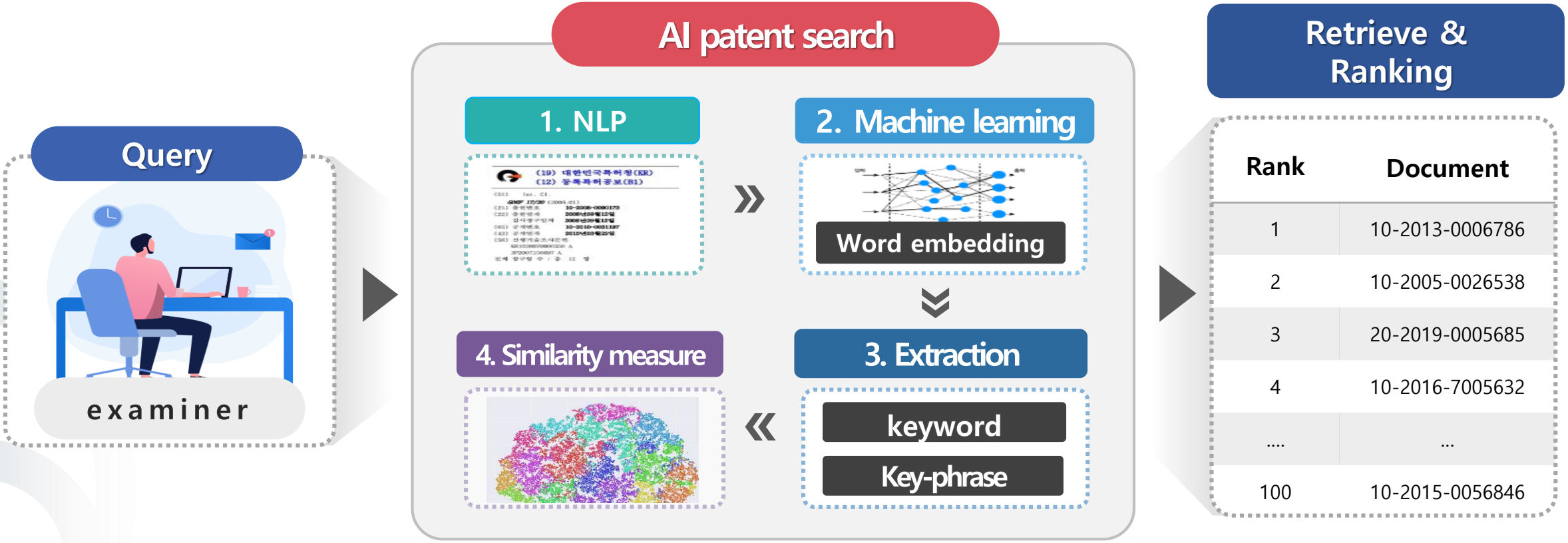


Image Search System for Figurative Marks

Overview

- **KIPO-net Roadmap Using AI technology**

Trademark(Figurative mark image)

Plan for Patent Administration Informatization

POC → **Pilot Service**

↓

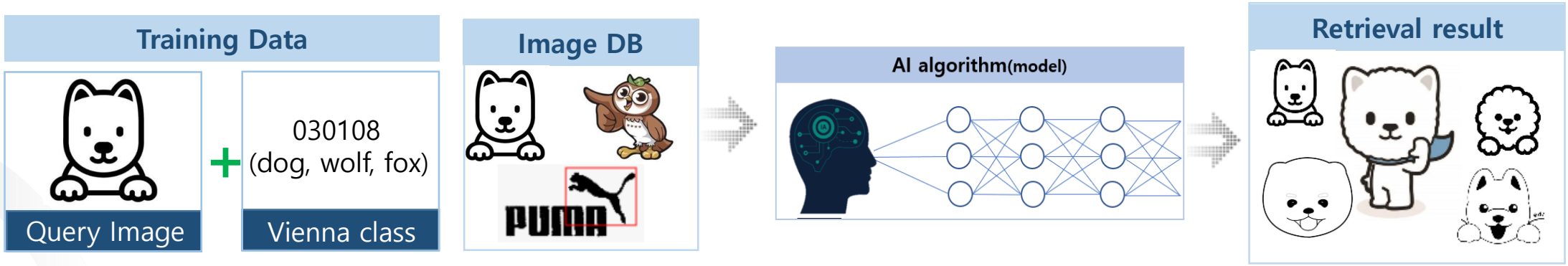
Advanced Search Function → **Service** → **Maintenance & Management**

Classification Recommendation System

POC → **Pilot Service**

Process of AI-aided Image Retrieval ™

- **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™

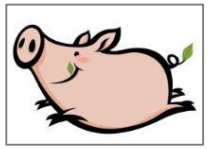
40-1531485

- 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

whole vs whole

part vs part



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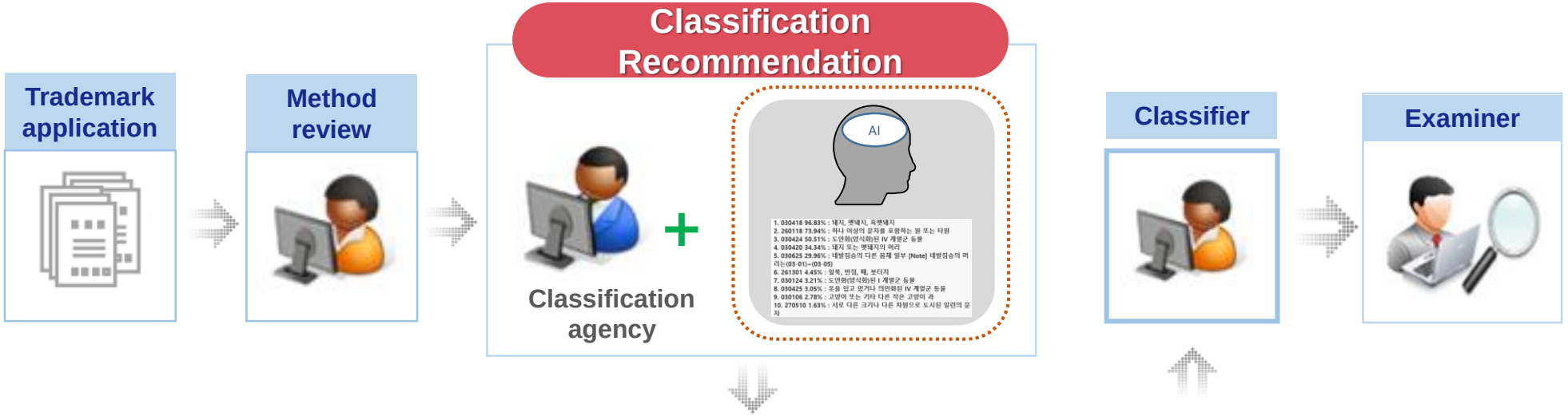
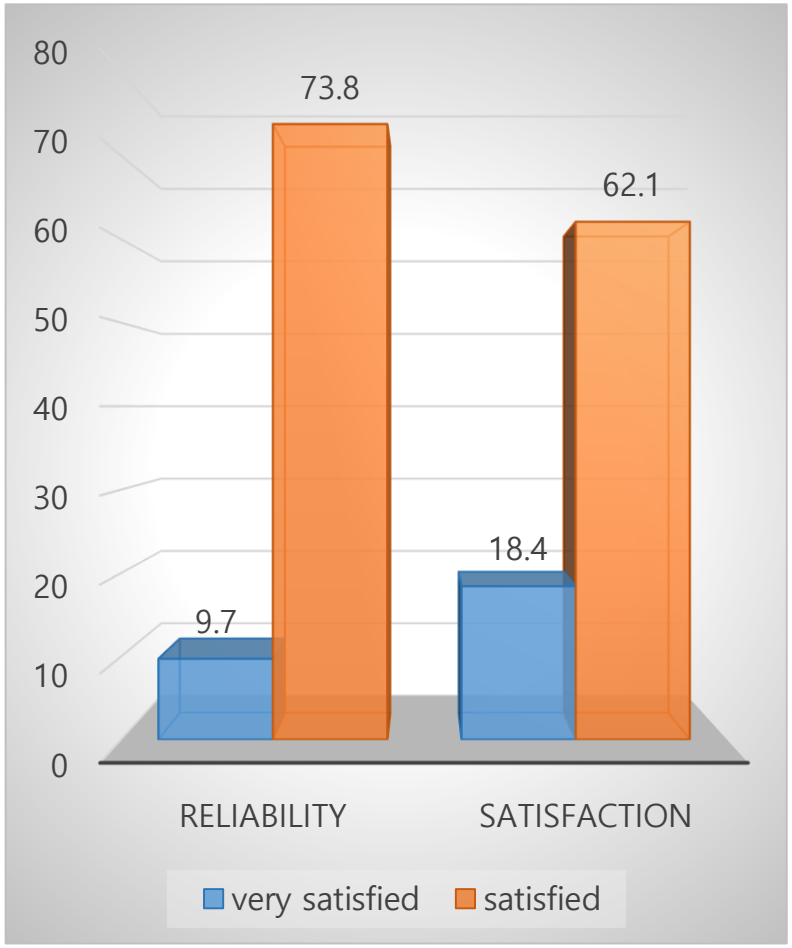
Process of AI-aided Image Retrieval ™

- **Scheme of KIPO's Classification Recommendation System Aided by AI**



User Satisfaction



Total Positive Reliability (83.5%)

·Very reliable 9.7%
·Reliable 73.8%

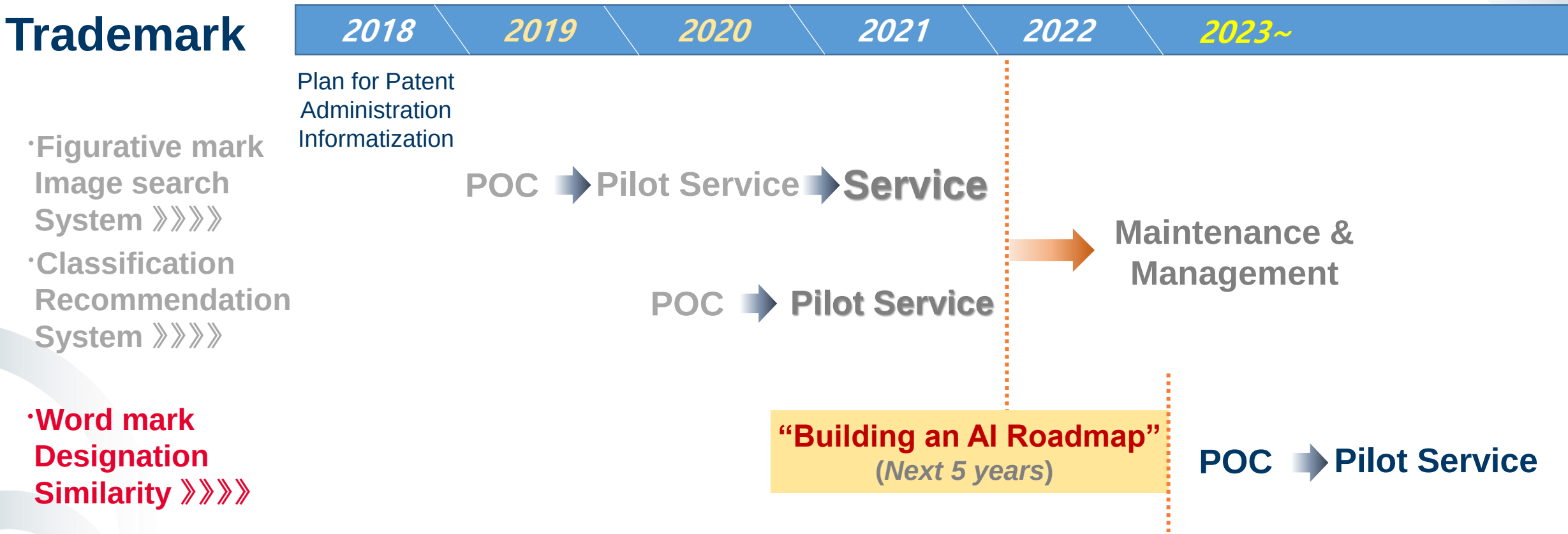
Total Positive Satisfaction(80.5%)

·Very satisfied 18.4%
·Satisfied 62.1%

Response Rate 61.2%

Roadmap ™

- **KIPO-net Roadmap Using AI technology**



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!