Use of Various Tools, Including AI, for Effective Patent Examination Procedure

SCP36, 2024

Japan Patent Office

MORIOKA Toshiyuki

Overview

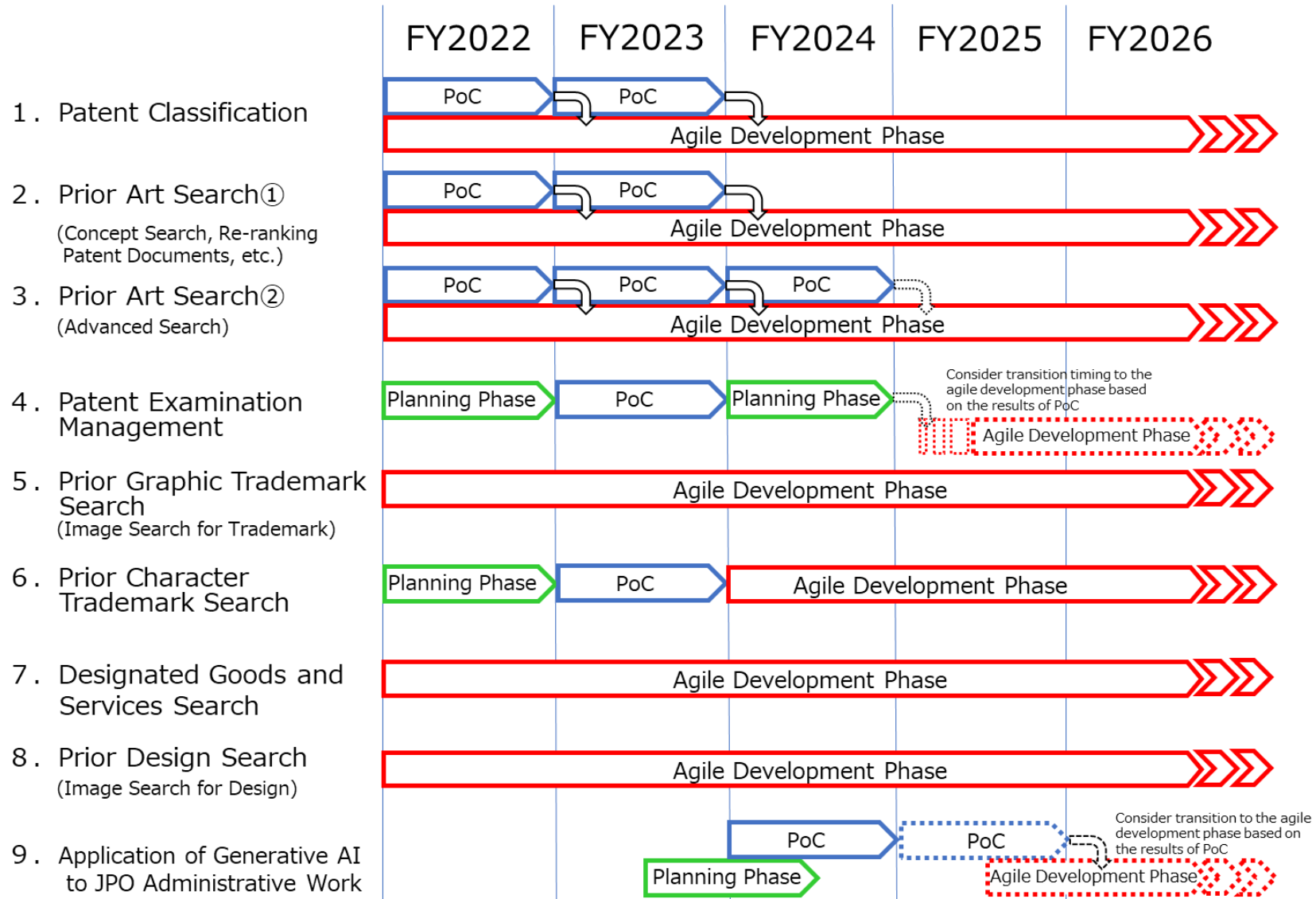# 1. Action Plan for Utilization of AI Technology

2. Advanced Search Tools

3. Examination Case Examples on AI-related Technologies

4. Support Team for AI Examination
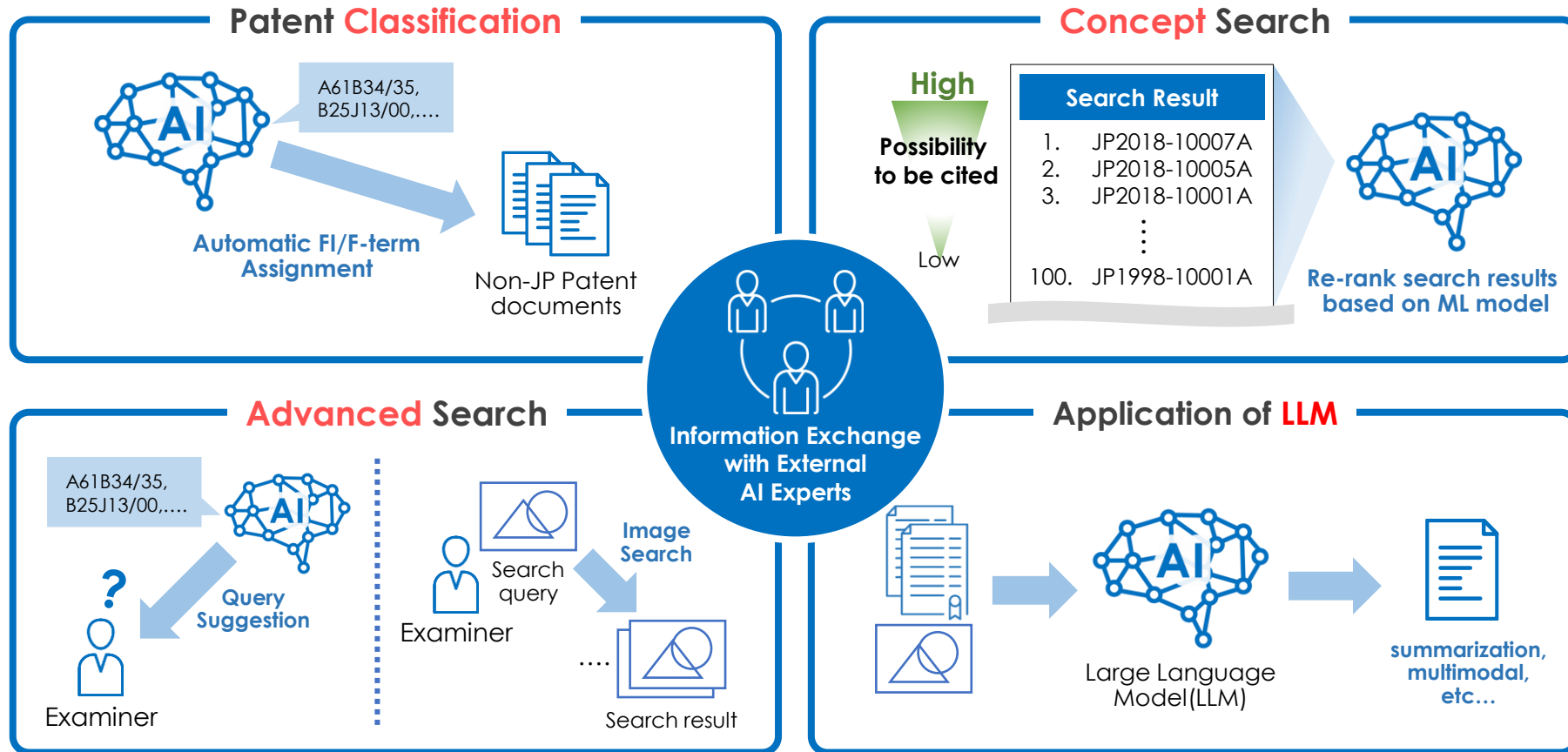
Action Plan for Utilization of AI Technology

Action Plan for Utilization of AI Technology (Rev.2024)

（※）The initiatives of each project are rough assumptions and may change in the future depending on the progress, budget conditions, and other various circumstances.

AI Utilization to Improve Quality and Efficiency

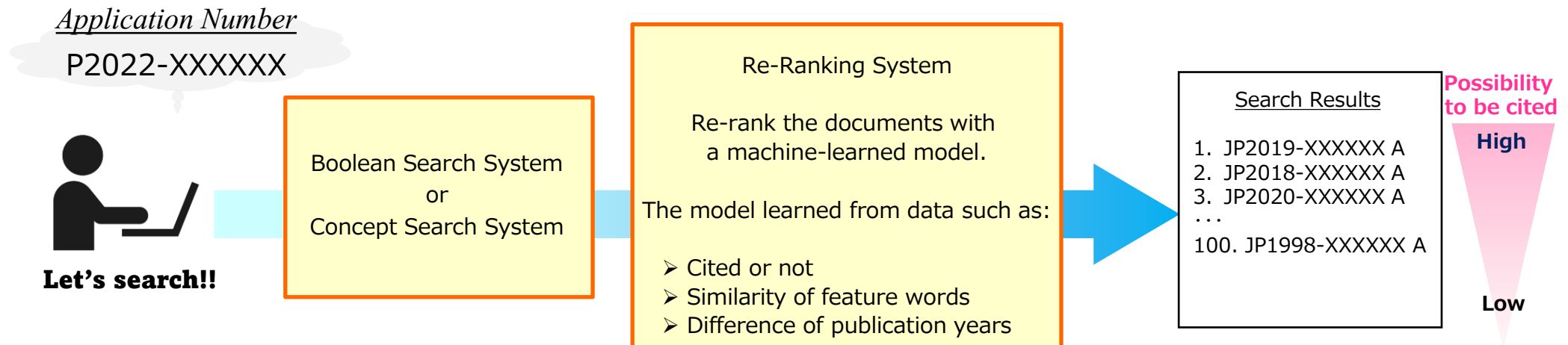**In-house** development of patent examination support system using **AI**

Patent Classification

A61B34/35, B25J13/00,....

Automatic FI/F-term Assignment

Non-JP Patent documents

Concept Search

High

Possibility to be cited

Low

Search Result
1. JP2018-10007A
2. JP2018-10005A
3. JP2018-10001A
⋮
100. JP1998-10001A

Re-rank search results based on ML model

Information Exchange with External AI Experts

Advanced Search

A61B34/35, B25J13/00,....

?

Query Suggestion

Examiner

Examiner

Search query

Image Search

....

Search result

Application of LLM

Large Language Model(LLM)

summarization, multimodal, etc...

https://www.jpo.go.jp/e/system/laws/sesaku/ai_action_plan/index.html

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Advanced Search Tools

Advanced Search Tools ~ Concept Search and Re-Ranking ~

◆ It is hard to read a vast number of the relevant documents retrieved.

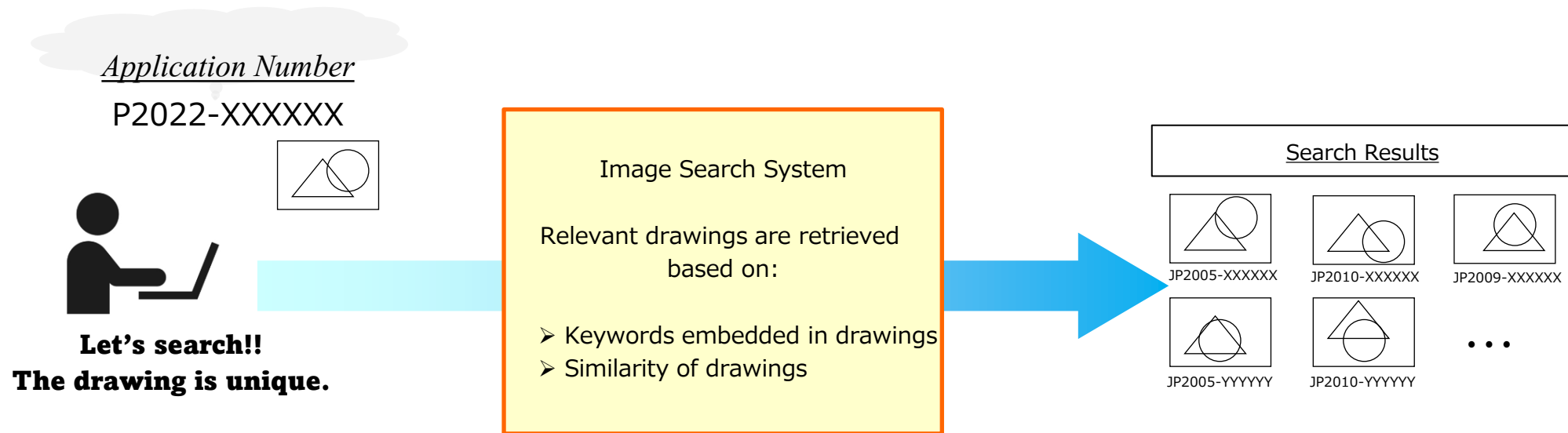◆ The "Concept Search and Re-Ranking System" enables examiners to read the most important documents first.

Application Number

P2022-XXXXXX

Let's search!!

Boolean Search System
or
Concept Search System

Re-Ranking System

Re-rank the documents with a machine-learned model.

The model learned from data such as:

➤ Cited or not
➤ Similarity of feature words
➤ Difference of publication years

Search Results

1. JP2019-XXXXXX A
2. JP2018-XXXXXX A
3. JP2020-XXXXXX A
· · ·
100. JP1998-XXXXXX A

Possibility to be cited

High

Low

Note:
✓ **Examiners can find the most important documents quickly.**
✓ **Using this tool is not sufficient to carry out an adequate search.**
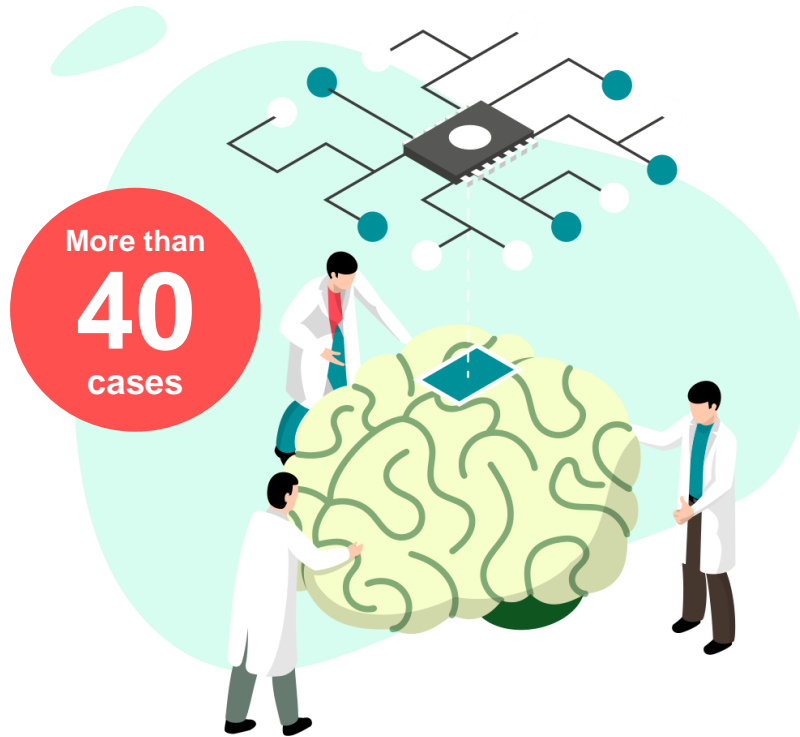
Advanced Search Tools ~ Image Search ~

◆ Sometimes drawings contain very important information, so text search queries are not so effective to retrieve such useful drawings.

◆ The information originating from drawings of the application is thought to be useful to obtain the relevant drawings.

Application Number

P2022-XXXXXX

Let's search!!
The drawing is unique.

Image Search System

Relevant drawings are retrieved based on:

➢ Keywords embedded in drawings
➢ Similarity of drawings

Search Results

JP2005-XXXXXX   JP2010-XXXXXX   JP2009-XXXXXX

JP2005-YYYYYY   JP2010-YYYYYY   · · ·

Examination Case Examples on AI-related Technologies

Examination Case Examples on AI technologies

Patent Examination Case Examples on AI-related inventions

More than 40 cases

Clear understanding of examination practices

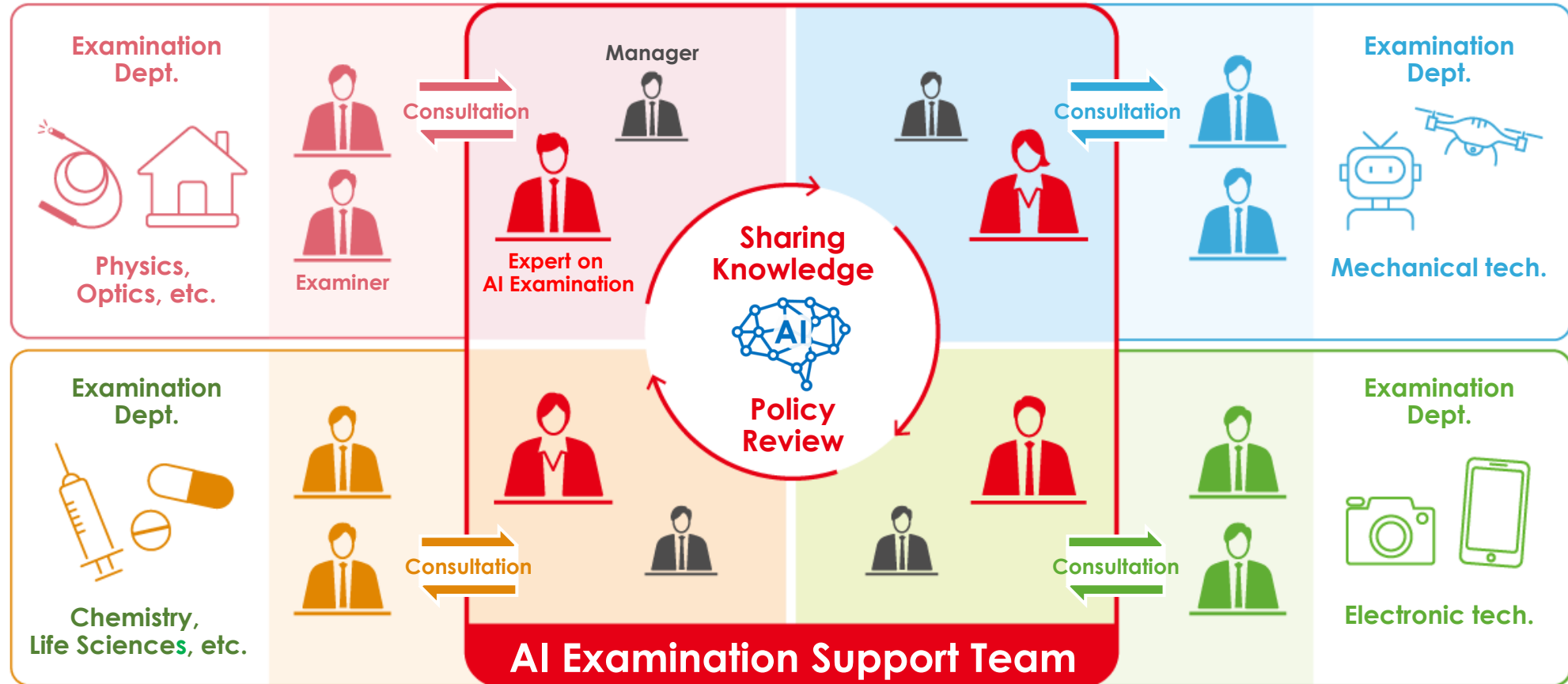Patent eligibility, Inventive step, Description requirements...

◆ Patent Examination Case Examples pertinent to AI-related technologies

https://www.jpo.go.jp/e/system/laws/rule/guideline/patent/ai_jirei_e.html

※These case examples are hypothetical.

Support Team for AI Examination

Support Team for AI Examination

https://www.meti.go.jp/english/press/2023/0921_001.html

https://www.meti.go.jp/english/press/2024/0328_002.html

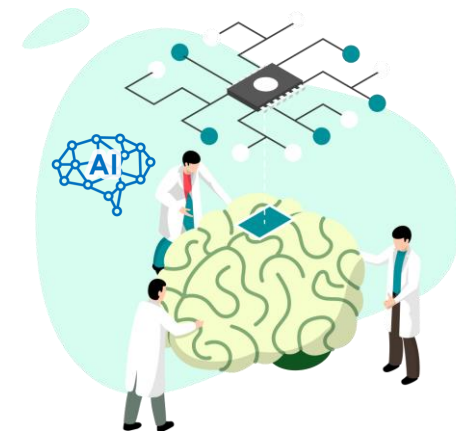# Enhancing a system for the team

◆ On October 1, 2023, JPO increased the number of experts on AI examination from 13 to 39, and assigned at least one expert on AI examination to all examination offices.

⇒The team appropriately supports examinations of AI-related inventions even in fields where AI technology has not been frequently used.

◆ On April 1, 2024, JPO established a new position for external experts called AI advisors who provide support (e.g., technological training and responses to inquiries) to patent examiners, including experts on AI examination, in accessing expert knowledge on AI-related technology.

https://www.meti.go.jp/english/press/2023/0921_001.html

https://www.meti.go.jp/english/press/2024/0328_002.html

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Thank you!