# Major Achievements of the Action Plan to Date

## Patent Classification

Predict JPO patent classifications (theme codes, FIs, F-terms) for foreign patent documents using machine-translated Japanese text as input. By assigning the classifications, it has become possible to search foreign patent documents using JPO classifications and Japanese text queries. The assigned theme codes can be used for searches on J-PlatPat.

## Prior Art Search (Patent Image Search)

・Based on the "Drawings" and the brief description of drawings in the "Description" of the application being examined, patent documents with highly relevant drawings are displayed preferentially.

・Efficiency and quality of the prior art searches by examiners have been improved.

## Prior Art Search (Re-Ranking Patent Documents)

・Calculate scores representing the similarity based on text data and meta data (claims, description, bibliographic information, patent classifications, number of citations, etc.) contained in the application being examined and the target prior patent documents and re-rank the documents in order of the scores.

・Efficiency and quality of the prior art searches by examiners have been improved.

## Search for Prior Graphic Trademarks (Trademark Image Search)

・Calculate scores representing the similarity based on the image feature of the applied trademark and that of the prior trademarks and display them in order of the scores.

・Machine learning competition was held in FY2021 to improve search accuracy. The predictive models of the top winners will be integrated into the image search system of the JPO.