

Professional Services
DRUG DISCOVERY & DEVELOPMENT

Case Study: Information Managers at a Global Pharmaceutical Company

Automated retrieval and processing of new drug and disease data streamlines analytic workflows



SUMMARY

Thorough literature monitoring for new information about diseases, drug targets and drugs involves regular updates of internal databases. Retrieving and processing new information is a time-consuming task. Elsevier's R&D Solutions Professional Services team has developed techniques to automate these repetitive tasks.

Automating certain data processing tasks frees experts to do analytical work that is worth more to the company.

TIME-CONSUMING DATA PROCESSING

Monitoring the biomedical literature for new information about diseases, drug targets and drugs is a huge task. Queries for updates must be submitted regularly to retrieve all of the relevant information. The results then have to be processed to make them suitable for downstream analysis. Doing all of this work “by hand” can take up to a day, depending on the size of the result set, and must be done regularly for the updates to remain valuable.

In the case of one global pharmaceutical company, they found that the task of re-querying for updates and processing the results tied up one of their information managers for four to eight hours every two weeks. Duplicate results had to be removed and then the results (in the form of literature metadata) were transformed into a format that could be used by the customer’s chosen literature monitoring systems.

Although recognized as an absolutely necessary task, it was not seen as being equal to the value that this expert could deliver in the same time if they were doing other literature analytics work.

THE UNIQUE ADVANTAGE OF THE CHOSEN DATABASE

The customer uses Embase® as their research solution for monitoring the literature for disease, drug target and drug updates. They are very satisfied with the comprehensive coverage that Embase offers and its ease of use, recognizing

the advantage of having query forms for systematic reviews and dedicated indexing for diseases, targets and drugs.

Unbeknownst to the customer at the time, Embase also offers something that could greatly reduce the information management team’s repetitive metadata processing work: an application programming interface (API). It supports the programming and implementation of automated

AUTOMATING DATA RETRIEVAL AND PROCESSING

The customer wondered if there was even more benefit they could get from Embase, specifically in the area of reducing the time information managers spent on de-duplication and processing.

Aware that Elsevier’s R&D Solutions Professional Services team specializes in helping out with customized data integration and analytics, search design, text mining support and other tasks, they contacted the team. They were delighted to hear about the Embase API and the potential for automating the most repetitive and time-consuming aspect of literature monitoring.

This was seen as particularly interesting because they had recently discovered that two teams were doing very similar searches using Embase. With the support of the Professional Services team, the customer could have both searches and the necessary processing running automatically.

A CUSTOM-PROGRAMMED SOLUTION

The Professional Services team designed an automatable query that runs at regular intervals through the Embase API. Each run retrieves the literature metadata covering both customer teams' queries in a custom-built KNIME® workflow, which takes care of de-duplicating the data and stores it in a central database. Both teams can access this resource, and directly use the stored information in their analytics workflows.

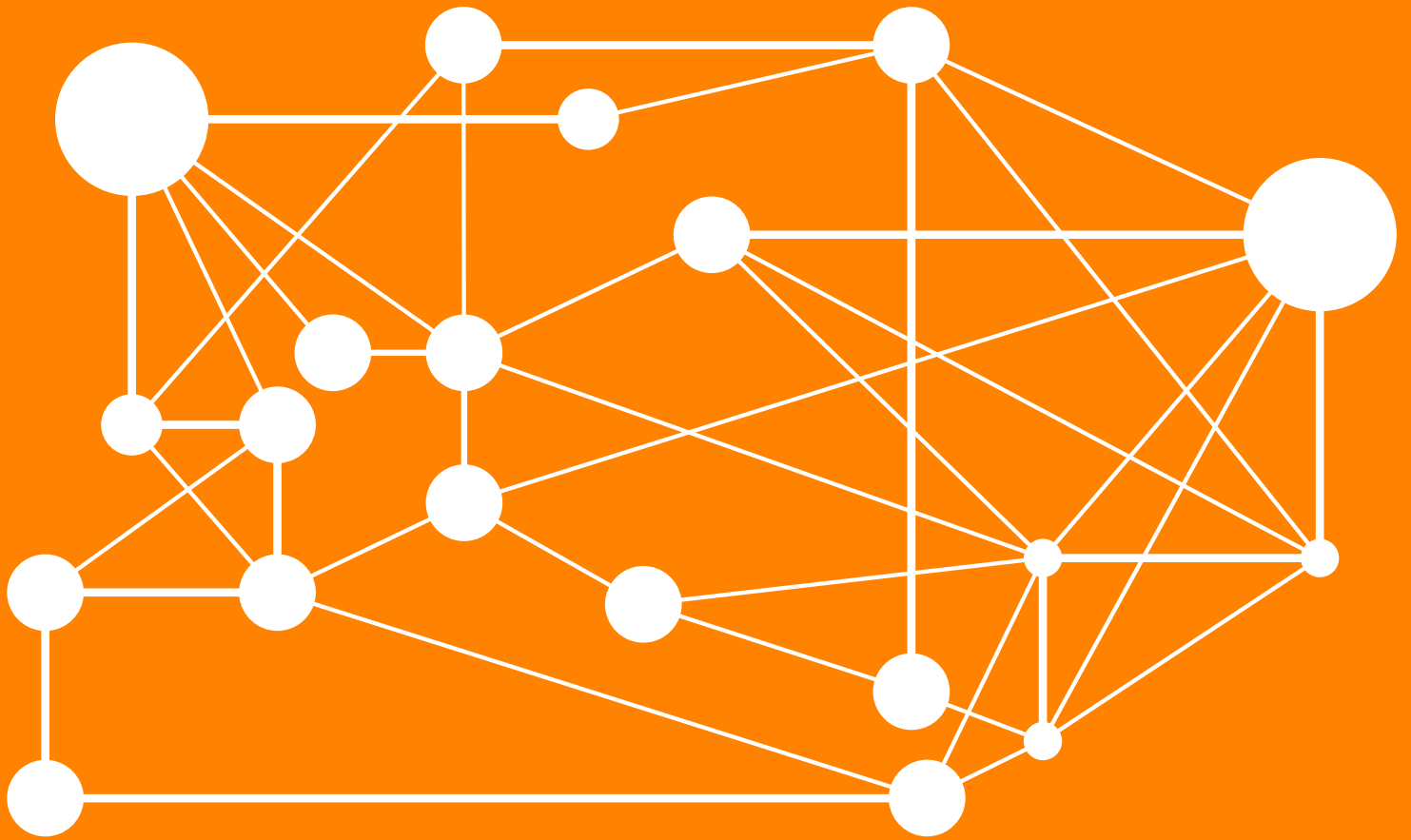
The customer teams have their own interface for these analytics workflows. Through it, they can access not only this database with the information retrieved from Embase, but also their own internal databases.

TIME SAVED AND INFORMATION SHARED

The customer is very satisfied with the results of their project with Elsevier's R&D Solutions Professional Services team. The groups involved in literature monitoring have more time for tasks that add greater

value. In addition they've made a further move toward de-siloing information, meaning that multiple tools do not have to be used to reach the necessary conclusions.

The Professional Services team combines customer domain knowledge, in-depth knowledge of Elsevier content and data integration expertise to deliver greater value. Our flexible approach helps to ensure that our customers get everything they need from our research solutions, and always feel supported with specialist requests.



Professional Services

Elsevier's Professional Services team helps customers drive innovative pharmaceutical research by resolving challenges with data quality and integration and making data easier for researchers to compare, analyze, interpret and share.

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