Case Study LegalTech: the new Beck KRS data platform

Introduction

A few words about the project

The first economic information system in Poland dedicated to lawyers, which can actually be described as a modern legal tech solution - uniquely combining data from the National Court Register (KRS) and the Court and Economic Monitor (MSiG), the new Beck KRS. We have been creating it in recent months for the Polish branch of one of the most reputable and oldest legal publishing houses in Europe, C.H.Beck.

When the client came to us, he was perfectly aware of the limitations of the legacy system and wanted to develop the product (the first Beck KRS complied with the market

standards, but was created in 2010 and was based, like most solutions at that time, only on MSiG). After analyzing the technical audit we had performed, the client decided to entrust us with the construction of the new Beck KRS from scratch, thus opening the door for further, future product innovations.

Solution type: legal tech data platform
Year released: 2020
Project duration: 14 months of intensive work in close cooperation with the client

About the client

C.H.Beck is one of the oldest and largest European publishing houses, currently operating in Germany, Switzerland, the Czech Republic, Slovakia, Romania and Poland. The Publishing House has been operating on the Polish market since 1993 and cooperates with over 3,000 authors and specialists, publishing publications in the field of law, taxes, economics as well as academic, application and foreign-language literature.

In addition to the traditional, paper form of publications, C.H.Beck also makes them available in the Legalis Legal Information System, which is currently actively used by over 40,000 lawyers and whose specialist module is Beck KRS. The users of the system are people dealing with the practical aspect of applying the law in Poland: judges, attorneys-at-law, legal advisers and lawyers employed in legal departments of companies and enterprises. The Legalis system is also widely used in Polish courts, ministries, public prosecutor's offices and central offices.

For many years, C.H.Beck has been consistently implementing a strategy based on providing lawyers with innovative and top-quality solutions, helpful in their everyday professional work.

Problems of the previous version of the system (legacy system)

The first version of Beck KRS was a leading solution for the time in which it was created, i.e. 2010. However, a decade is a long time in IT. The technologies in which the system was written have expired and it began to fall away from the level of the modern Legalis System, of which Beck KRS is a module.

Moreover, the previous architecture of the system limited its development and adding new sources, and caused errors, which were fixed on an ongoing basis, but the work required a lot of effort.

As a result, the once well-designed product ceased to meet the needs of today's users - due to the fact that it was based solely on announcements from the Court and Economic Monitor (MSiG), it did not show all economic entities. The electronic system of the National Court Register (e-KRS) as we know it today was created much later than Beck KRS himself and therefore it was not included in the original version of the system.

What did the Customer expect from the new system version?

Speed, reliability and completeness of data. Improving the operation of the entities search engine. Enriching the system with new data sources and the possibility of quick product changes in the future, so that it can be developed on an ongoing basis along with the progress in the e-governance sector. Better system integration with the flagship Legalis System. Refreshed interface, in which, however, the existing system users will still find themselves without any problems.

Solution

What have we done?

The new version of Beck KRS has been created based on the hexagonal architecture, the modularity of which allows for flexible changes in the future, while ensuring very fast and reliable communication. The backend of the application was prepared in the latest version of PHP 7.3, and VueJS is responsible for frontend support. To maximize the speed and accuracy of the search engine for entities, people and document content, we used a proven and battle-hardened full-text search technology based on the Apache Lucene engine - it gave reliability and great possibilities in terms of query configuration and the volume of searched data.

We have implemented a completely new way of collecting data, expanding the list of sources used by the platform. The new Beck KRS aggregates data not only from the MSiG itself, but also from e-KRS (with original excerpts from the National Court Register and financial statements), thanks to which the current system includes absolutely all entities registered in the National Court Register. Additionally, the system has been enriched with information on EU subsidies and public procurement as well as information on the VAT status and debt exchanges.

The biggest challenges of the project

The biggest **challenges**

The mechanism of incremental updates of the platform with new data

Creating such a mechanism that will allow you to send the customer data at any time only from a given moment and not historical data.

Reverse engineering of Java class for logging after SSO

Knowing how all Legalis System works in JAVA, we had to find a way to decrypt and decode it in PHP.

Graphics of connections of people and business entities

The National Court Register contains over 4.5 million people and entities, and sometimes hundreds of personal and capital relations for a single organization. Our task was to create an interactive graph that loads quickly, allows you to view additional footnotes and move to the next levels of connections.

Technologies

Technology we used

Laravel (PHP 7.3)   MySQL 8   Redis   Elasticsearch 7

Client about cooperation in the project

'We evaluate the cooperation with Transparent Data very positively and we hope that it will be continued in subsequent years. In the project, we combined the knowledge and product experience of C.H.Beck with Transparent Data's competences in the area of aggregation and processing of economic data. The team from Poznań showed the technical skills and flexibility necessary for such the synthesis might work. As an additional advantage, I consider the flat team structure and direct contact with programmers.'

Paweł Oleszek - Legal Tech Manager, Wydawnictwo C.H.Beck