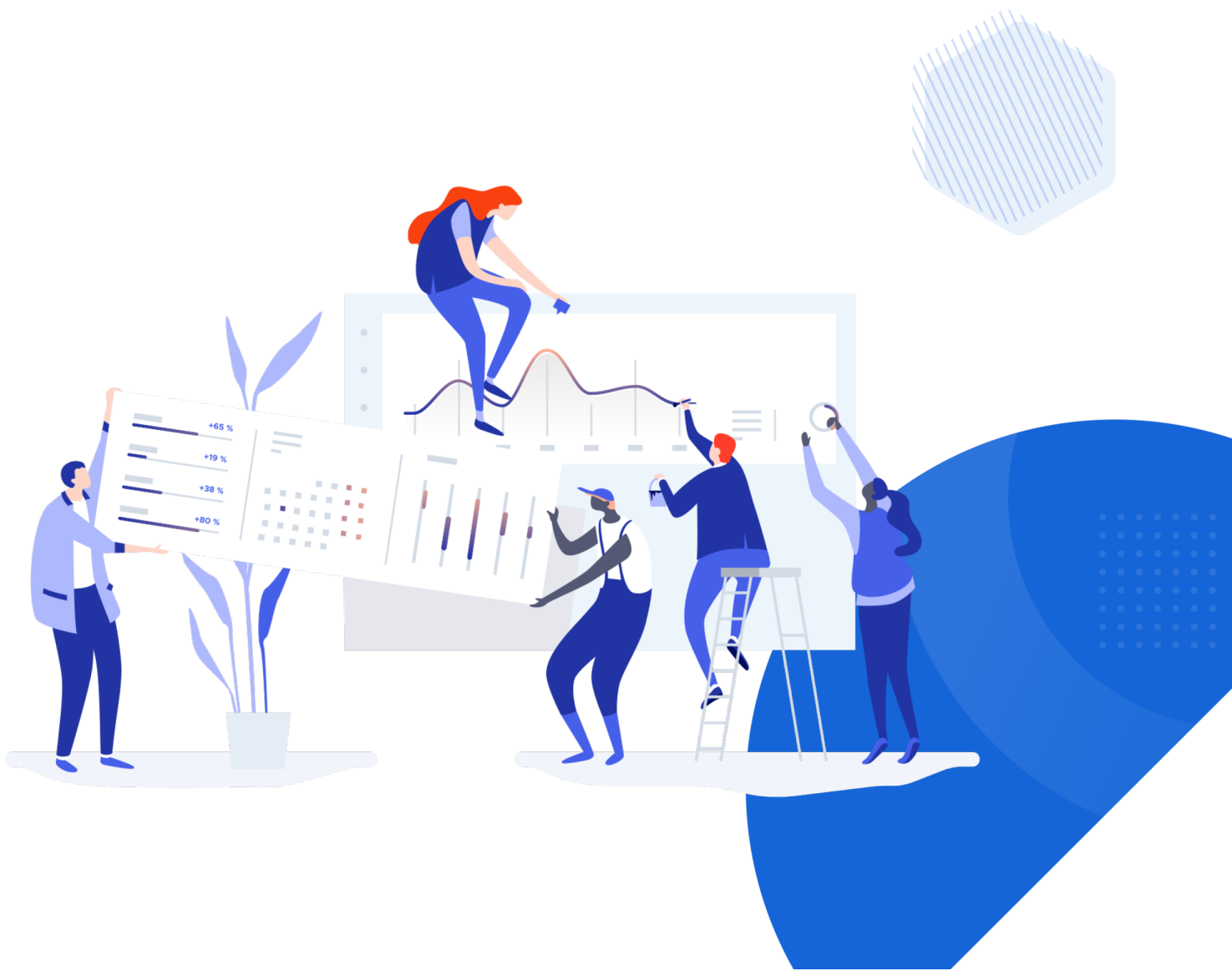


Creating searchable structured data from high-volume textual documentation

Anonymized access as a way of unlocking information in court cases



Fast insights from the past - and for the future



Judges and lawyers are gaining quicker and more accurate insights into previous cases and judgements thanks to a new system for managing the kind of information that is usually locked in digital court documents.

Before, finding information about the outcomes of cases, the reasoning behind judgements and the connections between cases, and the people, the organizations, the companies, and the places involved meant hours of painstaking trawling through the documentation.

The new system now means that thousands of existing court documents – and any created subsequently – become not only historical records, but searchable guidance for future decision-making.

It's a capability the courts have never had before. There was little or no opportunity interrogate documents to gain insight and certainly little opportunity to do so without compromising private information.

From scoping to delivery in just six weeks

This new system was delivered in only six weeks, the majority of which was spent tuning the analysis of data that had taken just a week to gather. The remaining time was spent creating a visualization of the data in an easy-to-use dashboard.

Once up and running, the process keeps rolling. New data is assimilated into the system in real time and can be interrogated in exactly the same way, however it is delivered, thanks to the system's extended query tool, which greatly enhances the existing functionality of standard Structured Query Language (SQL).



The system has helped to simplify the courts' existing data infrastructure, without the need to replace it, because it links seamlessly to legacy systems without affecting the data already contained within.

Creating 'structure' from information

The new system not only reads the documents digitally, but for the first time converts the textual information into elements in a database that becomes fully searchable almost immediately. In doing so, it enhances the information by adding descriptive metadata – information about the information - that helps to clarify what the data contains. Importantly, access to the information is fully compliant with European GDPR legislation. As it is processed, the data can also be anonymized.



The system was created by Consono in conjunction with the University of Gent, initially for the Court of Appeal in Antwerp. It is built around Consono’s ‘Dynizer’ technology.

The Dynizer is described as a ‘Dynamic Semantic Index’. The technology, which does not exist elsewhere in the data management environment, was chosen because of its ability to handle different types of data in the same way, thanks to a kind of artificial intelligence based on natural language processing combined with Consono’s own linguistic analysis capabilities.

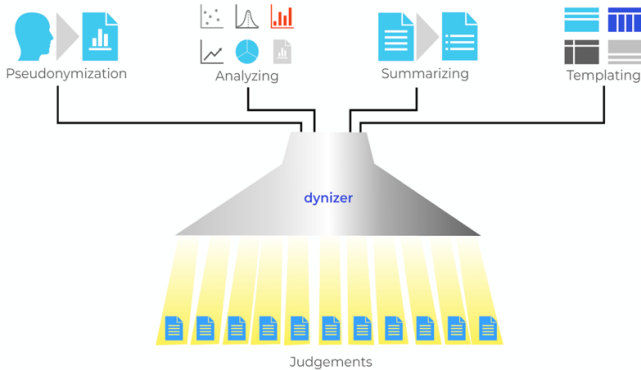
In this way it is able to transform the kind of ‘unstructured’ data found in documents into a more regimented form, as would be more usually found in ‘structured’ row/column data.

The Dynizer makes productive associations between different data elements because it not only recognizes them as one of four simple types, but then reveals the context surrounding those elements because of the way they fit together. People, things, places, and events that appear in one context will be automatically linked to other people, things, places, or events with which they also appear in other contexts.

Seeing the big picture

Current systems offer limited scope for discovery or insight, and little ability to anonymize the data once found. Consono’s Dynizer technology is a single comprehensive solution that simplifies data architecture and makes information readily available.

The Dynizer can be thought of in the traditional ‘funnel’ concept, where data is poured in at the top and somehow comes out as insight at the bottom. More accurately, it can be seen as a spotlight, where data is the power the Dynizer uses to create the light of information and insight.



The way the Dynizer works, where it can tokenize information makes it possible to substitute specific information in the data that might identify particular individuals for tokens that won’t – a technique known as pseudonymization.

It does that through a process where intelligent AI-driven pipelines process structured or unstructured data to create a model that identifies all the names, roles, addresses, dates, actions and outcomes contained within documents.



It creates insight into the links between people, organizations, companies, places, outcomes, and judgements on the fly. All of this data can be fully pseudonymized, all in real time.

Wider possibilities

There are three key factors that make the Dynizer different: Actions, which store the essential Who, What, Where, and When information that binds any data, and automatically creates the links between them, wherever they may appear; Augmented querying via the Dynizer's extended SQL; and Pipelines, the intelligent mechanism that recognizes the fundamental elements in structured data then takes it a step further by combining the elements in unstructured data into interconnected Actions, revealing more in the data than could be otherwise discovered.

Already benefitting the Court of Appeal, the Dynizer has also helped integrate multiple structured databases into one coherent model for Belgium's national rail organization, and improved stakeholder communication by providing anonymized insight from surveys for one of the country's leading trades unions.



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