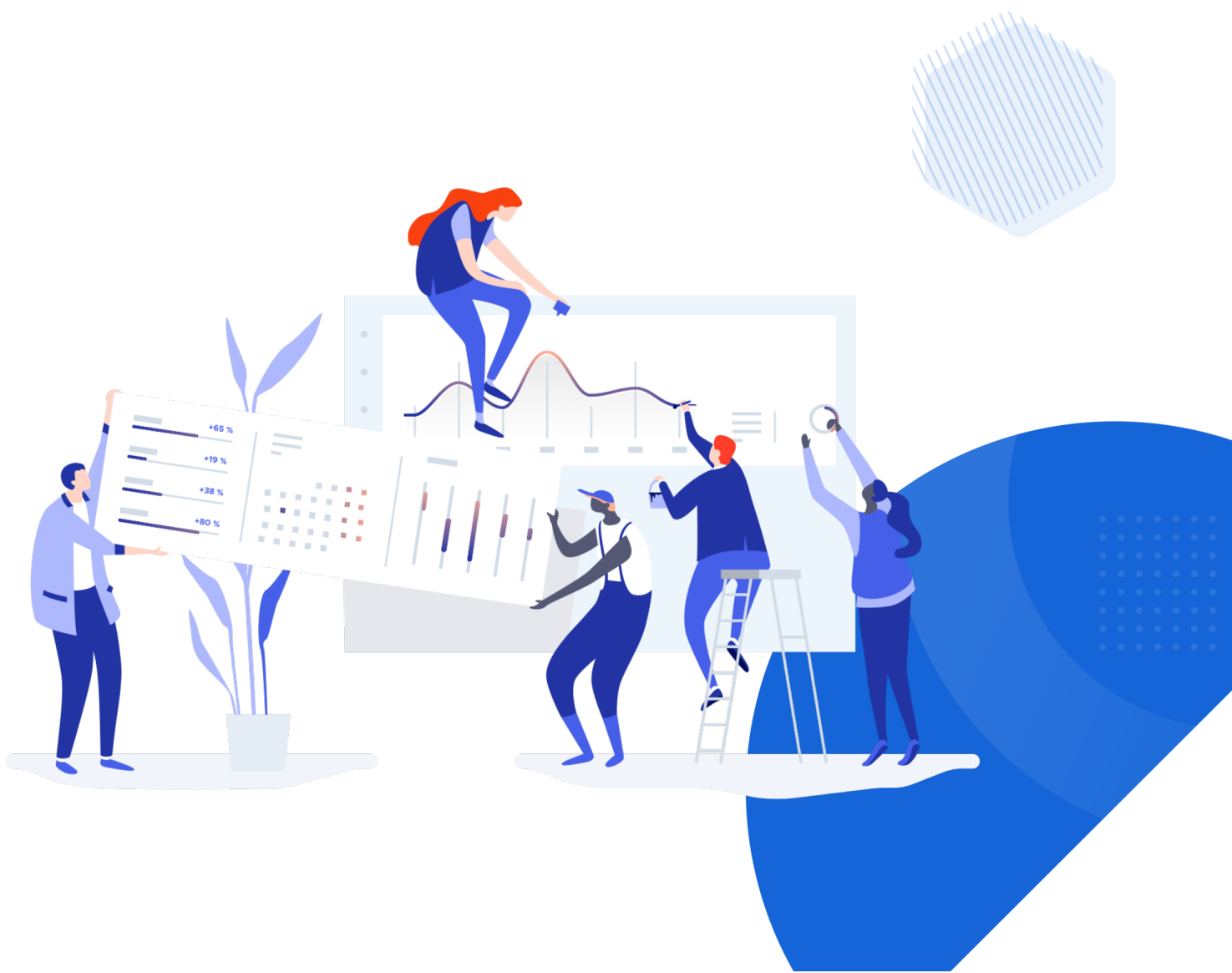


Integrating diverse documents into one fully searchable solution

Improving welfare outcomes by better use of case information



An efficient data infrastructure for social services

People receiving social assistance in the Flanders region of Belgium will benefit from a new integrated data management solution designed to speed up access to information about cases that is currently spread across many different sources and documents.



The system has been commissioned by Cevi, a market leading software company supporting infrastructure across a number of provinces, cities, municipalities and police districts, with the aim of improving the connection between local authorities and citizens.

Built by Consono and based around its 'Dynizer' technology, the system provides a new data infrastructure to a range of social services, including benefits and housing. These areas can create a huge number of documents – pdf, Excel, Word etc. – which were previously not being handled efficiently.

The new solution brings previously difficult to retrieve documentation together in one rapidly searchable environment, which means a more efficient use of time for civil servants and faster benefits outcomes for citizens.



Faster access, targeted search, deeper investigation

Systems within the benefits environment deal with an enormous number of documents, usually assigned to a case. Each case is in effect a person or family. One case can have many documents assigned to it. While many are quite short, some of the documents can run to hundreds of pages. Previously there was no way of searching them quickly and efficiently.



Each document was run through Consono's unique unstructured document pipeline – essentially a series of language processing steps - and a summary created, making it easy to skip to the essence of each document. Summaries are made available in one comprehensive overview.

The new solution reduces the time to access information by at least 50 per cent and, while it offers a complete overview of the available data, searches can be made against a single benefits case, or widened to cover multiple cases. The system automatically flags the number of times a search term appears within documents. Potential follow-up subjects are also flagged automatically to facilitate deeper investigation into case information.

Initially trialed with a relatively small sample of a few hundred documents covering two or three cases, the system quickly demonstrated the new opportunities offered by the underlying Dynizer technology via a simple browser-based user interface.

The UI shows a case name, document type, file name, summary of the document, first name, last name, national security number etc. Sensitive information can be pseudonymized through the tokenization of data which is an integral part of the Dynizer's capability.

The Dynizer simplifies data infrastructure, without replacing existing data architecture, because it links seamlessly to existing systems without affecting the data already contained within. Cevi plan to integrate the Dynizer into their existing system but also to migrate from older software to newer applications with the Dynizer at the heart of them.

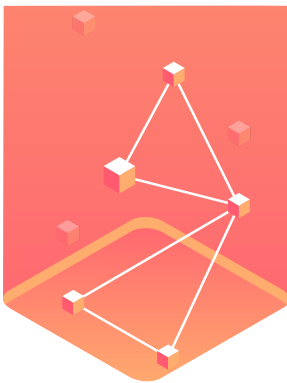


New data is assimilated into the system in real time and can be interrogated in exactly the same way, however it is delivered, thanks to the system's extended query tool, which greatly enhances the existing functionality of standard Structured Query Language (SQL).

Furthermore, the now integrated model is self-extending, with any new data being loaded into the system adding to the 'intelligence' of the model.

Cevi plan to extend the system beyond documents alone, to include the entire benefits dataset. This will allow further extensive analysis of cases and the patterns that may emerge between them and the citizens involved.

Creating integrated information from diverse sources



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 integrate huge amounts of unstructured data from a number of disconnected sources and simplify that information within one comprehensive structured solution.

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.

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.

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 Belgium's national rail network by integrating multiple structured databases into one coherent model, the Dynizer has also helped improve stakeholder communication by providing anonymized insight from surveys for one of the country's leading trades unions and provided a means for the Court of Appeal to find usefully connected data in thousands of court cases. In both of these cases, the solutions made extensive use of the Dynizer's capability to tokenize information about people, organizations, companies, and places on the fly, to pseudonymize the information in real time

Contact us

Website: www.consono.ai | Consono, Schillerstraat 8, B-2050 Antwerp |
michael.brands@consono.ai | Mobile: +32 496 51 97 61

