

CASE STUDY



TRANSPARENCY-ONE

Transparency-One Offers Total Supply Chain Transparency to Large Retailers and Manufacturers With Neo4j

INDUSTRY

Consumer Goods / Logistics

USE CASE

Supply chain management

GOAL

Create transparency across supply chains

CHALLENGE

Manage and search large volumes of data with no performance issues

SOLUTION

Transparency-One collaborative platform, based on the Neo4j graph database

RESULTS

- Manufacturers and brand owners can share detailed information about all products, suppliers and facilities in their supply chain
- Companies can search for every product affected by specific raw materials or facilities issues, across several thousand products with no performance problems

Today's supply chains are vast, making them susceptible to fraud, product contamination and insecure production sites. To counter this, Transparency-One has created a Neo4j-based collaborative platform that enables manufacturers and brand owners to share detailed, traceable information about thousands of products and facilities.

The Company

[Transparency-One](#) brings together consumer products and supply chain expertise with cutting edge technology. The company has spent over 18 months developing their product and have a distribution and support partnership agreement with SGS, the world's largest testing and certification company. The company has offices in Boston and Paris.

The Challenge

Today's supply chains are vast and wide-ranging, which makes them fertile ground for risk: fraud, contamination, insecure production sites and unknown product sources, to name just a few. These are all factors that make transparency both more vital and more complex. For example, the recent food scandal, where horse meat in dishes was officially labelled as beef, which came to light in 2013, showed the need for manufacturers to have precise information about the products being used to create the finished product, as well as all participants in the supply chain. In fact, most brands only know their direct suppliers, with very poor visibility of the sub-contractors working for their manufacturers.

Recognising this problem, Transparency-One developed a platform which allows manufacturers and brand owners to learn about, monitor, analyze and search their supply chain, and to share significant data about production sites and products.

The Strategy

After 2013 it deemed necessary to expand this mapping to include more detailed information about all elements in the chain (products, the supply chain mapping, etc).

For example, if a product contains cocoa powder, it's important for the brand to know its origin. So if a crisis occurs, such as the 2011 civil war in the Ivory Coast, the brand can quickly evaluate the impact on production and supply capacity, as well as the risk of price increases.

Chris Morrison, Chief Executive Officer at Transparency-One, said: "The challenge was even greater as the area was very new to our clients, and no market solution offered real complete transparency."

CASE STUDY



“We tested Neo4j with dummy data for several thousand products and there were no performance issues. We got back results within seconds that we would not have been able to calculate without this solution.”

– *Chris Morrison,*
Chief Executive Officer,
Transparency-One

The Solution

Generally, the new solution involved addressing three major themes:

- **Discovery:** creating supply chain transparency for all products in partnership with manufacturers
- **Analysis:** ensuring the traceability of all products, suppliers and facilities
- **Search:** allowing users to search for each product affected by specific raw materials or specific issues with facilities

To develop the solution, Transparency-One initially turned to a classic SQL database-type solution. But it quickly realised that the volume and structure of information to be processed would have a major impact on performance, causing considerable problems.

So the Transparency-One team began to look at graph databases.

Chris Morrison noted: “As we had decided on a graph database, we looked at which databases of this type were used by leading players. The answer was clear and unequivocal: it was [Neo4j](#), the world leader in this field with an established reputation.”

The decision was confirmed when Transparency-One began using Neo4j, which requires no specific technical knowledge of graphs. Transparency-One also had the support of a Neo Technology partner, Ekino, for the implementation.

Transparency-One chose Neo4j because only a graph database could meet the requirements of the platform; the decisive factors were Neo4j’s capacity to manage large volumes of data, and the fact that it is the most widely used database of this type in the world, by both large companies and start-ups.

The project was soon up-and-running and a prototype was built in less than three months. Since then, Transparency-One has extended the solution with the addition of new modules, and it is currently being deployed by several companies.

The Results

“We tested Neo4j with dummy data for several thousand products and there were no performance issues,” said a delighted Chris Morrison. “As for the search response time, we didn’t have to worry about taking special measures, since we got back results within seconds that we would not have been able to calculate without this solution.”

He added: “Whenever we want to extend functionality, it always seems to be possible. This technology is accelerating our development as a company.”

About Neo Technology

Neo Technology is the creator of Neo4j, world’s leading graph database. Neo4j is a highly scalable native graph database that leverages data relationships as first-class entities to help companies build intelligent applications that meet today’s evolving connected data challenges including fraud detection, real-time recommendations, master data management, network security and IT operations.

Enterprises like Walmart, UBS, Cisco, HP, adidas and Lufthansa and hot startups like Medium, Musimap and Glowbl rely on Neo4j to harness the connections in their data.

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