

Case Study



BILLES

Billes Makes a Fluid Technical Transition to Digitalization in the Printing Industry with Neo4j

INDUSTRY

Printing

USE CASE

Order management / IT Operations

CHALLENGE

- Increase of online customers
- Must be able to handle large amounts of small print orders
- Numerous acquisitions have led to a patchwork of IT systems

STRATEGY

- Conducted a preliminary study with technical partner, NetConsult
- A new hub was built replacing all source systems

SOLUTION

- New system Poff – planning, ordering, shipping and invoice
- Neo4j Enterprise handles large datasets and complex relationships

RESULTS

- Billes now has a unique automation process
- Approximately 60 percent of all customer orders are now made online
- Billes can now take the focus off the administration of online orders

The print industry has undergone major turmoil in recent years. Today's customers want to do everything from small to large orders online – and a variety of mergers and acquisitions have led to a patchwork of tools and parallel IT systems. Billes Printing, in Gothenburg, Sweden, decided to face that challenge head on while growing their company. Instead of buying a completely new technology platform, they built their system with Neo4j as a hub for all of their other tools.

The Company

Billes has been owned and operated by the Bille family since its inception in 1939. It began with outdoor advertising and has since grown into a modern full-service printing house with everything needed for both printed and digital material. Billes has offices in Gothenburg, Stockholm and Karlstad, and has annual sales of approximately SEK 200 million per year.

The Challenge

For years, printers have focused on print quality, reliability and attractive prices. In today's world it is even more important to have the right IT support to provide customers with added value. This progress from pure product sales to solution sales presents a major logistical challenge for a modern printing house.

Even for a single print order, there are a number of interconnected deliverables, which requires a significant amount of planning ahead. In order to handle a multitude of orders from the web, Billes needed to adapt, streamline and prepare a number of internal systems.

To survive in a competitive market, printers also must leverage all of their data in order to give customers all the information they want in real time.

Over the last four years, Billes has completed a number of acquisitions in which the acquired companies have a diverse array of their own IT systems. One option was to replace everything against a new system that would be used by all, but after an extensive feasibility study Billes chose instead another route.

The Solution

Together with partner NetConsult, Billes built a technology hub based on Neo4j, which connected all of the other IT systems. It became a more flexible solution because operations of the acquired companies could be adjusted gradually – a fluid transition.

The system is known by its acronym: Poff, which stands for planning, ordering, shipping and billing. It is built for graphics companies with a mixed set of systems and has been in operation since May 2014.

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"Just two years ago, we did not have a single web order and now 60 percent of all jobs are coming in via various ordering systems."

*- Fredrik Bille,
Owner and Vice CEO,
Billes*

Poff completely administers the flow from the time a job comes in until the booking of deliveries and invoicing. All work is either completed in Poff or instructions are sent to other internal or external systems for performing the task. Poff is connected to the Billes ordering system, customers' businesses and shipping portals.

The Poff system is built on the Neo4j graph database, which is optimized for complex relationships and extremely large datasets. Neo4j can also be integrated – and co-exist – with other systems until you choose to phase them out.

Another advantage of Neo4j is its flexibility. The Billes and NetConsult teams didn't have to determine the database structure from the beginning. Rather, they expanded the functionality and capacity of Neo4j gradually.

The Results

Today, Billes has an automation process that is unique in the printing industry. 60 percent of Billes' orders are dealt with minimal manual intervention – without any prior monitoring all. All the data comes directly from customers, and it is structured so that the can go to press without manual control by Billes.

"Just two years ago, we did not have a single web order," says Fredrik Bille, owner and vice CEO, "and now 60 percent of all jobs are coming in via various ordering systems. All orders from the web go directly into Poff, and we also have it linked to our workflow system that handles printing files, orders and deliveries."

Billes has 107 employees who use Poff on a daily basis. To make the task easier, Billes and NetConsult created four digital departments in the system with different tracks and process milestones. These allow staff to focus only on things that affect them, while the rest is taken care of by the system. The goal is to reduce manual administration to zero.

In addition, customers have their own systems and e-commerce tools that are directly connected to Poff. In total, around 40 different external systems receive orders around the clock and process them through Poff.

Operational reliability is also central to Billes. They chose to have Poff be two mirrored systems with a load balancer that directs data traffic between two parallel systems.

In late 2015, Billes will also launch a completely open online shop where anyone can order their own prints online and create effective campaigns. Today this option is only open to business partners, but when consumers are admitted, it will open the door to a giant market.

All pricing will be done in real time depending upon customer choices. This dynamic pricing feature required even more that the system always be running and available when a customer wants to make an order.

"Putting up an online store is one thing," says Bille, "but behind it you have to have an incredibly rational administrative flow, and you need an organization that's ready to receive many small orders from the web."

Neo4j is the leader in graph database technology. As the world's most widely deployed graph database, we help global brands – including [Comcast](#), [NASA](#), [UBS](#), and [Volvo Cars](#) – to reveal and predict how people, processes and systems are interrelated.

Using this relationships-first approach, applications built with Neo4j tackle connected data challenges such as [analytics and artificial intelligence](#), [fraud detection](#), [real-time recommendations](#), and [knowledge graphs](#). Find out more at [neo4j.com](#).

Questions about Neo4j?

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