EVENT STORE®

Holcim Case Study

Innovation and sustainability in the building sector

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About Holcim

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Holcim is one of the world's leading suppliers of cement and aggregates and is behind some of the most trusted brands in the building sector including ACC, Aggregate Industries, Ambuja Cement, Disensa, Geocycle, Holcim, Lafarge and Malarkey Roofing Products.

Global Leader In Sustainable Building

Holcim is the global leader in innovative and sustainable building solutions. They're constantly pushing the boundaries of their sector by developing disruptive solutions to decarbonize building. They achieve this through research and development and fostering a unique and open innovation ecosystem with hundreds of startups around the world.

Holcim has an Innovation Centre in Lyon, France which brings together over 200 researchers covering masons, engineers, material scientists, AI and data mining experts.

Leading Innovation

Playing a part in this innovative approach is Daniel Cano, Head of Application Transformation at Holcim. His team are responsible for taking specific use cases and working up a Proof Of Concept (POC) before handing over to the business for further development.

In this case study, we look at one particular use case Daniel and his team worked on, that was a game changer for the cement distribution sector.

They transformed the way payments were taken, and reconciled at point of collection by developing a fully automated cloud based credit solution using EventStoreDB.

However, prior to this use case, Daniel's team worked on a logistics use case that was their first project using EventStoreDB.

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Logistics Use Case

Logistics Use Case With EventStoreDB

The Application Transformation team initially started using an event-driven approach to a logistics use case for cement delivery. This solution required real-time data from more than 10,000 trucks in different locations across Europe.

The team needed to correlate the orders with the GPS locations of the trucks and carry out real-time analysis within the tool that had to be easy to deploy, maintain and operate.

As part of this POC project, the team carried out research into tools that would work with their event-driven architecture (EDA). Daniel had experience using other tools for EDA and dedicated logistics platforms but he found them difficult to operate, maintain and keep running.

They needed a tool that would reduce complexity and costs as well as being able to handle projections. The solution also had to sit behind their existing systems with auditing capabilities.

Choosing The Event-Native Database

Holcim chose EvenStoreDB due it being an event-native database, with the ability to handle projections, and provide the gold-standard in auditing and compliance.

Event Store could be implemented alongside existing legacy systems, providing a 'side-car source of truth'.

In addition, it had to be a managed service due to the operational team being small, which is where Event Store Cloud provided the perfect solution.

Logistics Use Case With EventStoreDB

Daniel and his team deployed EventStoreDB on-premise and carried out some POC testing before rolling it out on their first logistics use case, as Daniel explains, “EventStoreDB worked very well and was very simple to implement for this POC in one country. We got the geolocations of the trucks, provided by a third party, and entered the GPS data into EventStoreDB, connecting it to our logistics platform. We were then able to assign the order to the truck and make a follow up with some events”.

Daniel presented this POC to the European Logistics team who were impressed with the results and took it forward into Production.

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Credit Solution with Event Store

Credit Solution With Event Store

Following the success of using Event Store for the logistics use case, the team identified a new use case for a real-time, cloud based credit solution for the cement distribution sector.

The proposed solution was based on events, where credit was updated as soon as the events happened. It would be cloud based allowing information to be available 24/7. It would also provide all the relevant information in one transaction with the possibility to release block orders.

The Need For Real-Time Data

The original credit system was using SAP which ran batched processes overnight. Payments were manually checked in country specific systems before allowing customers to collect their order at the cement depot. The process was time consuming, inefficient and didn't provide a good customer experience.

Customer's would have to wait one day to see the credit in their account and if the overnight payment run didn't reconcile the customer's payment, they would be refused entry to the cement depot to collect their order.

The new solution needed to provide real-time credit data to each of the cement depot locations in order to allow entry and collection of the cement.

As Daniel explains, "We wanted to create a real-time service, a new credit solution because the solution we had for credit was in SAP in the ERP and it was not in real-time".

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Credit Solution With Event Store

With a business that sells to large corporations, where cement is sold in bulk with upward of $1 million being deposited to account to buy cement from different locations during a one month period, a system that operates in real-time was a game changer.

Holcim needed a more efficient way to take credit payments from customers that would enable a more seamless process.

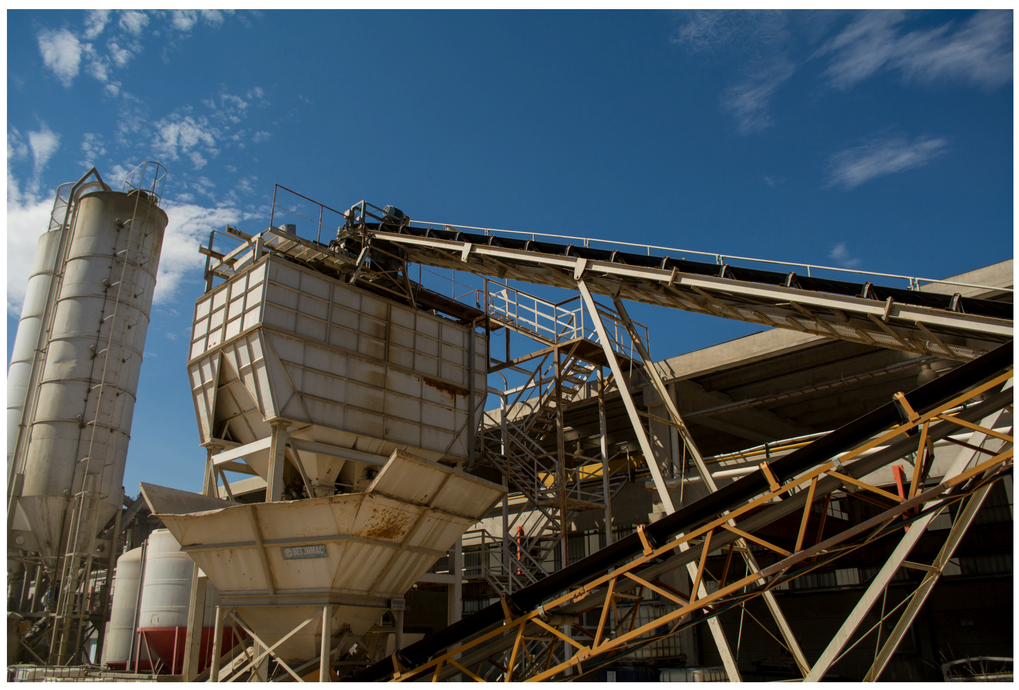
The solution needed to solve the problem of customers being turned away from point of collection due to payment reconciliation being done in overnight batched processes.

Improved Performance

At the end of each month Holcim carried out 24 hour maintenance on certain applications which caused issues with performance.

To solve this problem Holcim wanted to put the data that these applications were generating into a master database that digital applications or new applications were able to consume 24/7.

In addition, the solution needed to be resilient to failure. If there was any failure in the application Holcim would not be able to sell cement.



Credit Solution With Event Store

Advantages of a Credit Solution with Event Store

Using Event Store for the cloud based credit solution application provided Holcim with a number of advantages:

Benefits of Event Store

- Real-time view of credit payments.
- Historical view of data for compliance and auditing.
- Ability to integrate with other business systems.
- Ability to sit behind legacy systems.
- Reliability, stability and scalability.

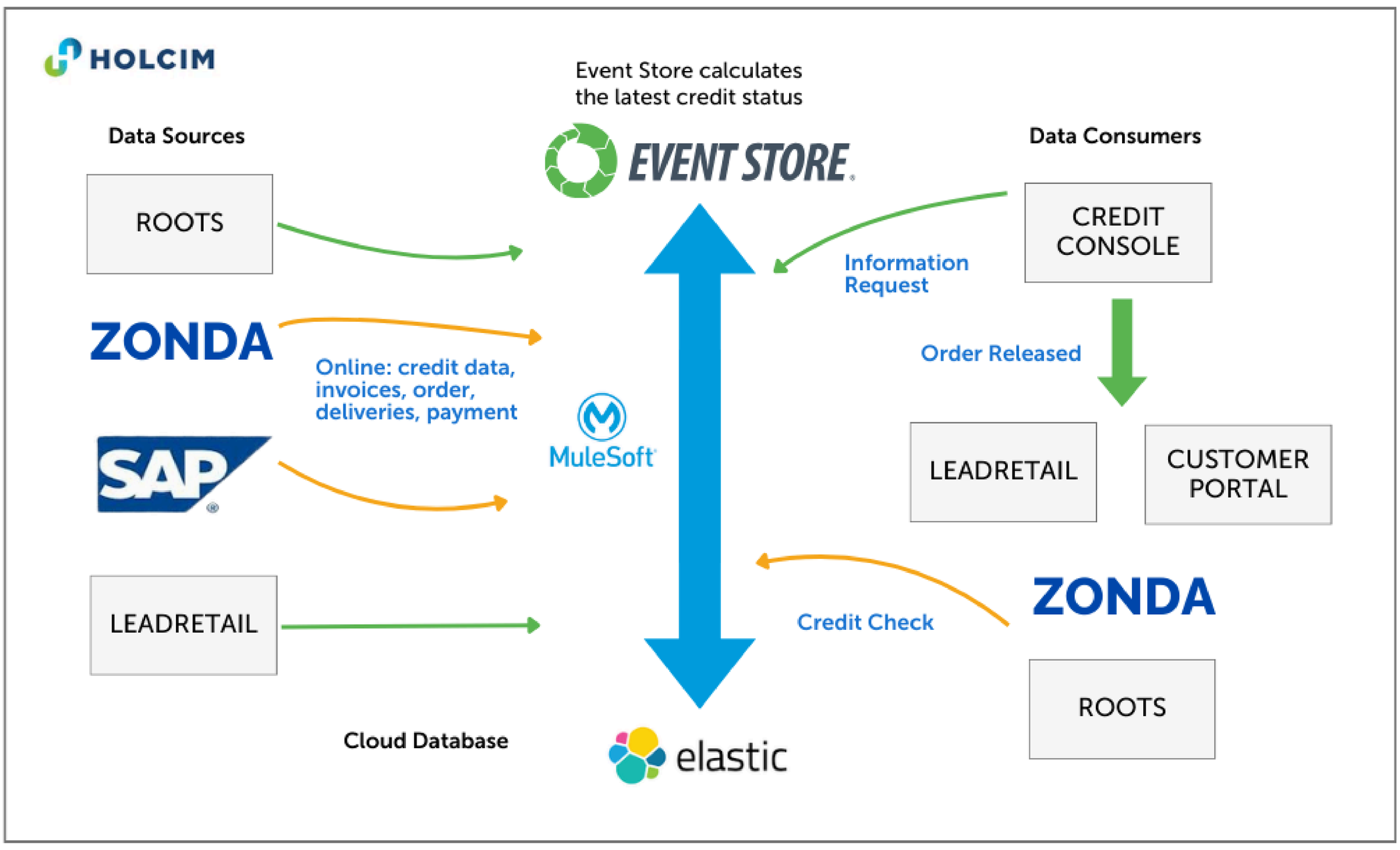
Event Store feeds into other systems enabling Holcim to implement a real-time credit check at point of collection that is fully automated, eliminating the need for manual credit checks.

SAP is the credit master data that holds all the payments, invoices and financial documents. There is then an integration layer which is MuleSoft and the digital platform where the new credit solution application resides creating a data connected backbone.

As Daniel explains, “In the data connected backbone we have a set of tools - Elastic, DynamoDB and Event Store to keep track. Event Store is specifically for real-time, Elastic for fast read documents and DynamoDB to have control of the state of a specific situation that can be deleted very, very fast”.

Credit Solution With Event Store

Other local applications deal with open orders and open deliveries which are connected to the operational backbone of the system.



Some of these applications include Roots, Zonda, LeadRetail (used specifically in Africa), as well as other smaller local applications connected to this operational backbone.

Holcim is putting the data from the operational layer to be available 24/7 to other applications. One specific component of this is Event Store, which is used to calculate the latest credit status.

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The Results

The Results

Using Event Store with an event-driven architecture has enabled Holcim to dramatically improve customer experience with real-time credit checks at point of collection.

“We’re using Event Store in 11 countries. We’re able to sync everything and in the last year, we haven’t had a single incident - the application is running 24/7 - which is a big achievement!”, says Daniel

The new credit solution has enabled their customers to move to a more Just-In-Time approach, thereby improving the customer’s operational cost efficiencies, transparency and improving overall customer satisfaction.

However, the biggest impact has been in Africa where in some countries the process was extremely manual. In some cases, customers would have to pay a cashier first in one location, prior to going to the plant in another location to collect the cement.

The credit solution Holcim has created, using Event Store, has completely transformed the way business is done in these African countries, enabling full automation and creating trust in the system.

Future Expansion

Holcim are now looking to expand their credit solution to the UK working with the team at Event Store to engineer the solution for the UK.

The UK will be Holcim’s biggest country and is one of the biggest contributors in EMEA, so will open the door to other countries adopting the solution.

This provides Holcim with a great opportunity for growth with a landscape of more than 35 countries where their operations can be significantly improved with Holcim’s cloud based credit solution and Event Store.

EVENT STORE®

To learn more about how Event Store can help your business succeed, visit us at eventstore.com.