Solution: **IBM Cloud** Industry: **Industrial Products**

CEMEX S.A.B. de C.V.

Enabling continuous global customer engagement with application programming interfaces

CEMEX built a global system of engagement with a more flexible IT environment based on cloud technology, application programming interfaces (APIs) and microservices. CEMEX uses IBM Integration Bus software to integrate SAP enterprise software with cloud services and IBM® API Connect™ software for efficient API creation and management.

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Business challenge

CEMEX S.A.B. de C.V. sought to improve customer engagement by revamping a widely distributed IT architecture that slowed delivery of customer solutions and fragmented logistics and distribution processes.

Transformation

CEMEX built a flexible, global system of engagement based on the IBM® Cloud™ platform, IBM API Connect software and IBM Integration Bus software.

Results

Facilitates continuous customer service

with near real-time visibility into critical processes and transactions

Increases agility

with APIs supporting a microservices architecture

Streamlines data

and information sharing with internal and external customers

Business challenge story

Increasing architectural agility

The IT architecture at CEMEX, which was supporting more than 40 SAP systems across five continents, presented a challenge to an organization that ranks maximizing customer value as its top priority. According to Jose Lorenzo Cuencar, Solutions Architect at CEMEX, the environment's range and complexity fragmented logistics and distribution processes and compromised the company's ability to deliver customer solutions in a timely manner.

"Our customers come to us because we are the number one supplier in the world. But as we gauged customer sentiment, we discovered that we were sometimes difficult to do business with," Cuencar recalls. CEMEX needed to deconstruct and improve all the traditional pain

points for its customers, such as processes related to invoicing, disputes and payments. “Companies like Amazon have elevated customer expectations across all industries. That was our starting point as we began redefining and redesigning our customer journey and revamping our architecture,” he says. “Our customers are buying building materials from us, but they expect an experience similar to what they get when they buy a pair of shoes on the internet. They want everything—the complete quote-to-cash process—in real time.”

In short, CEMEX sought to be more customer-centric. To achieve that objective, the business needed a platform that would support agility and speed. “In the past, we struggled to deliver customer apps in even 3 – 6 months. So everything we did with APIs [application programming interfaces] had to allow us to deliver our apps faster and provide our customers with the ability to engage us over multiple channels.”

> “We’re using IBM Cloud and API Connect to deliver faster to our customers.”
>
> **—Jose Lorenzo Cuencar, Solutions Architect, CEMEX S.A.B. de C.V.**

Transformation story

Adopting cloud and microservices

CEMEX instilled greater responsiveness in its IT environment by adopting cloud technologies and a microservices architecture.

Using the IBM Cloud platform for as-a-service access to development tools and other resources, Cuencar and his team quickly initiate new development projects and incorporate new technologies and capabilities. Moving to the cloud facilitates a shift from monolithic application architectures to a microservices architecture that employs smaller sets of functionality—services—that integrate with one another to perform like a full application. The microservices approach allows for faster and easier functionality refinement or extension by updating individual microservices, or incorporating new ones, rather than updating code within a full application.

CEMEX uses IBM API Connect software to create and manage the APIs that integrate its microservices. APIs are software as a service (SaaS) solutions on the IBM Cloud platform,

providing automation that helps accelerate API development and publication. Additionally, the solution delivers analytics that help CEMEX understand how internal and external customers use its systems, offering insight into where CEMEX can improve performance. “With API Connect, we’re leveraging the API economy,” explains Cuencar, “and we have started to build a microservice and service-oriented architecture model, constructing and building reusable APIs.” The company has deployed many APIs internally, and its customer-facing apps use APIs to connect to internal systems. “APIs are the foundation for our system of engagement,” says Cuencar.

To enable integration between SAP software systems of record and its new data layer in the cloud, CEMEX uses an on-premises instance of IBM Integration Bus software. It automatically conveys triggered events from the SAP environment to the applicable cloud-based services, meaning actionable information now propagates across the organization’s global environment much faster. And to facilitate data security across the integrations, CEMEX uses an IBM DataPower® Gateway appliance and the cloud-based IBM Secure Gateway for IBM Cloud service.

Results story

Providing real-time capabilities

Cuencar notes that not everything CEMEX has done with the API economy to date lends itself to a direct ROI analysis—that the act of innovation alone is often enough justification. That said, he points to a few early and important metrics demonstrating measurable, positive operational and customer-facing impact.

For instance, by using the IBM solutions, CEMEX tracks its fleet of more than 25,000 trucks and 60,000 customer invoices in near real-time worldwide. Automated push notifications drive messaging to customers and CEMEX drivers alike, alerting customers to order updates and drivers to tracking application updates. Additionally, customers can track deliveries from the CEMEX shipping location to the job site in near real-time and automatically receive all transaction notifications, reducing reliance on phone calls or emails to CEMEX customer support call centers.

“Our customers know where their product is, where the truck is, and if the delivery to their job site is delayed for any reason,” Cuencar explains. “In the past, customers didn’t have flexibility to make any real-time changes to their delivery schedules or orders, but now we’re informing customers in real time of all the transactions they’re doing and all the

important notifications that they must receive. We are taking the initiative by going directly to customers to inform them of everything happening relating to their order, from delivery to invoicing."

As the API transformation at CEMEX continues, Cuencar anticipates growing value internally and in the customer experience. At the same time, such a fundamental shift to the cloud requires an ongoing commitment. "Everything that was previously modeled to be on premises now must be adapted to the cloud, so I need to build more skill sets all the time," he says. "With so many new possibilities and technologies with the cloud and APIs, the game changes every day. You need to be studying all the time, building skill sets, embracing failure. From my perspective, though, it's well worth it; I've seen tremendous improvement across the organization."

About CEMEX S.A.B. de C.V.

Headquartered in San Pedro, Mexico, and founded more than a century ago, CEMEX is the world's second-largest building materials company. Its 44,000 employees deliver cement, ready-mix concrete, aggregates, and other materials to customers and job sites in over 50 countries.

Take the next step

To learn more about the IBM solutions featured in this story, please contact your IBM representative or IBM Business Partner, or visit the following websites:

- IBM® API Connect™

- IBM Cloud™
- IBM DataPower® Gateway
- IBM Integration Bus
- IBM Secure Gateway for IBM Cloud

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