cx digital

DOING DIGITAL RIGHT

CEMEX Go: Setting a new standard for the construction industry

CASE STUDY

Excerpt from the upcoming book: *The Digital-First Customer Experience – Seven Design Strategies from the World's Leading Brands*

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DOING DIGITAL RIGHT

Overview

In the wake of the COVID-19 pandemic, understanding how to adapt your customer experience to reduce physical contact became an urgent requirement for stores and restaurants everywhere. But retailers were not the only businesses impacted. The construction industry, which has only seen a 1% growth in productivity over the last two decades from digitization, is another sector defined by labor intensive physical contact for employees and customers. Could a digital-first design provide an almost touchless experience while also exceeding customer expectations?

Say 'hello' to CEMEX Go.

CEMEX has literally set a new standard for delivering a touchless, digital experience, putting the customer in complete control of their journey. CEMEX is headquartered in Monterrey Mexico and provides Cement, Ready Mix Concrete, Aggregates, and Urbanization Solutions. With more than 46,000 employees and trade relationships with 96 nations, it is one of the world's top traders of cement and clinker.

In 2017, CEMEX launched CEMEX Go, a multi-device offering providing a seamless experience for order placement, live tracking of deliveries, and managing invoices and payments.

The Experience

Obviously, CEMEX could not foresee how advantageous providing a touchless experience would become given the coming pandemic. But having it in place clearly proved advantageous. Let's take a quick tour of how it works before we get into the details of how they got there.

Step 1 – Preparing to Buy

After becoming a customer and registering either via a tablet or mobile device, the customer can manage job sites and delivery locations in real time to improve visibility and accuracy of places where CEMEX will be delivering to their construction projects. The complete list of current contracts and quotations is easily viewed and can be filtered by job site to see detailed information for things like: Open Volumes, Products, Prices, Payment Terms – data which the customer can choose to view and filter. The Purchase Order integration feature means information is updated in CEMEX's backend systems, making the placement of future orders or reconciliations easier and faster.

Step 2 – Placing Orders

By visiting the online Order and Product catalogue the customer can select the type of product they want to buy: Ready Mix, Cement or Multi-products, as well as the delivery mode required. Customers can specify the type of concrete, quantity, requested date, frequency of deliveries, and any other relevant information such as security requirements or site access

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conditions. Once the order is complete, the customer receives confirmation of their order. To be clear, the customer still has not talked to a single CEMEX representative about their order.

Step 3 – Manage Delivery and Fulfillment

CEMEX Go allows the customer to track the status of their orders and deliveries either via the web using their laptop or by using mobile devices such as a phone, tablet or even a smartwatch. A Ready-Mix customer can see the delivery and pouring speeds to ensure seamless coordination between CEMEX and the job site supervisor. They can also track the truck waiting time and compare their pour planning against the final outcome. This is an enormous improvement in productivity because every minute a truck is not delivering Ready Mix, is a minute it isn't creating value, given conditions on construction sites, getting these delivery schedules right can be challenging. However, with CEMEX Go, the customer can manage order changes such as adding or reducing order quantity, requesting to put the order on hold, and resuming it in real-time. The customer can do all this digitally without the need to call a dispatcher or the Service Center, the CEMEX Bot can usually handle any additional customer questions about their order. Finally, CEMEX Go also provides the customer with electronic proof of delivery notifying CEMEX the customer received the product, and the delivery was a success.

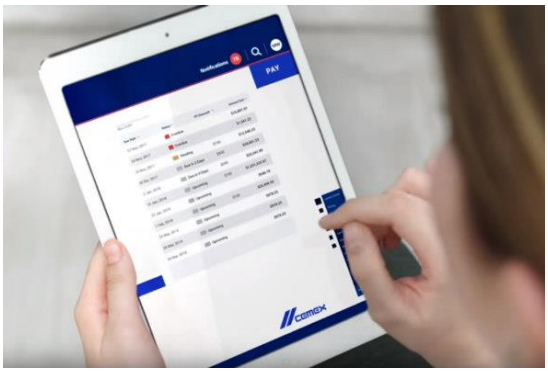

Figure 1 - Placing orders.

The other side of the same coin however is the Driver Experience. Ask any truck driver how much time they spend just trying to find the right entrance to a site, or who to contact when they arrive or how they decipher the handwritten scrawl on a work order around what time they need to arrive by – and you will have a long conversation. CEMEX Go changes the driver's experience as much as it changes the customer's experience. Everything is digital and triggered safely by alerts when the truck is stopped. This includes making it easy (and touchless) for both customers and drivers by utilizing scanning and e-signature to confirm delivery at the site. Homero Reséndez, CEMEX's Vice President of Digital Enablement explains. "We are applying data science to improve the experience for our drivers as well. Our Driver Mobile App has a lot of capabilities such as measuring the different sensors from the truck, tracking their speed and location, as well as some features designed to minimize accidents."[1]

"We are applying data science to improve the experience for our drivers as well".

Jesus Caviedes Mondragon, CEMEX's Global Head of the Commercial business, emphasizes the importance of the driver experience:

> Our drivers have embraced CEMEX Go. They play such an important role in the experience and now with the paperless initiative it greatly simplifies things for them. They have more visibility on their round trips. They can review their tickets and manage

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their overtime and in countries where overtime is not allowed, this provides a level of compliance that is required.[2]

Step 4 – Make Payments and Review Transactions

Finally for invoicing and payments, CEMEX has developed a single source of information, the customer can review real-time credit limits and balance data to get a complete overview of all the invoices and documents related to them. By visiting the document section, they can review their invoices, credit and debit, notes, and payments. Imagine the amount of paperwork associated with any Bill of Materials on a large construction project. All of which needs to be stored and itemized for budgeting purposes but also for passing inspections. The CEMEX Go Dashboard can be customized to include any additional information the customer might need such as documents relating to contracts or purchase orders linked to invoices. CEMEX Go also allows the customer to make advance payments or online payments and once received, an email confirmation is sent to the customer.

Figure 2 - Dashboard

What makes this case example so compelling, is not just CEMEX's innovation in their industry, but the fact they executed CEMEX Go globally. Just consider the implications for design of the user interface from language set to language set. CEMEX's Head of UX and Product Design, Jonathan Holden Hernández explains: "It's one thing is to design one web or mobile application for one country but when you go globally you have to deal more than translation challenges. For example, the German language has longer words, so we needed to redesign the site navigation to accommodate for that. In Israel, their whole language goes from right to left. It is important not to underestimate the task of localization for each country."[3]

Let's go behind the scenes to uncover the details that have made CEMEX Go the new standard for customer experience in the construction industry.

Doing Digital Right

CEMEX applied a variety of tools and approaches to include the customer in the design of the solution, in combination with innovations in technology. Their competency in Lean and Agile Methods served as a strong foundation as they iterated prototype after protype to test and learn with customers. But the transition from 'waterfall-based' software development to Agile Project Management is challenging for any IT group. Several tools helped the designers focus on customer pain points including journey mapping that identified both challenges customers were having, as well as areas that would serve to differentiate CEMEX from competitors. While developing CEMEX Go however, CEMEX departed from the traditional Agile method of developing 'Minimal Viable Products' as this approach did not support their goals. Eventually

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they landed on the concept of testing a 'Minimal Lovable Experience.' Homero Resendez, explains why:

> We eventually started calling protypes of CEMEX Go "Minimum Lovable Experiences" because we wanted them to give us feedback about both the digital and analog experience since what we were delivering was truly omni-channel and we needed to ensure that our customers were really satisfied with the changes we were testing. We were working to exceed their expectations, not just meet them.[4]

Their approach followed three stages:

Stage 1 – Technology Benchmarking

An internal team was chartered along with other external stakeholders that included customers, consultants, and academic experts to better understand cutting-edge digital technologies and practices from other industries. This is a standard CEMEX practice. A decade earlier when CEMEX decided to provide a Service Guarantee to Ready-Mix customers in Mexico City, they didn't benchmark other cement companies, they studied US taxi and courier companies to better understand how they managed real-time routing through busy urban centers.

Stage 2 – Customer Listening

Understanding the problem included listening to the voice of the customer through dozens of interviews and co-creation design sessions. They applied Design Thinking tools including Empathy Maps, Customer Journey Maps and Service Blueprints, three tools we describe in the Design Process chapter of the book, to reveal both the problems customers faced as well as the Touchpoints in the journey where the interaction with the customer could exceed their expectations with digital solutions. Jonathan Holden Hernández elaborated on value of prototype testing:

> We started using many new tools in addition to journey mapping including wireframing for protypes and tools for high fidelity prototypes before developing software in order to show these potential solutions to customers to validate if they would actually eliminate the pain points that were described in the customer journey maps. This led to a final "Digital Business Model Design" created by CEMEX in collaboration with their contracted technology partners.[5]

Stage 3 – Development

The CEMEX Go team took all these insights and rapidly developed a Minimal Lovable Experiences (MLE) for testing and iterating with customers. More than 500 programmers located in three cites: Monterrey, Mexico; Prague, Czech Republic and Chennai, India were involved, staffing 40 Scrum teams to dramatically reduce time and waste. The first version released to the market took 2 years to develop but was well received and followed with feature updates in subsequent releases adding the mobile app's live delivery truck tracking capability among other features. Conducting rapid experimentation allowed the development team to ensure the choices and the options presented by the User Interface were relevant and built commitment from their early adopter customers.

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Comments from CEMEX Go customers were extremely positive:

- "My favorite thing about CEMEX Go is the fact that it's a one-stop shop for everything we need in the concrete industry. The process is extremely seamless…what differentiates CEMEX is its personal approach and their willingness to go into the future with these technology advancements. The ready-mix industry is one that's not going to be stuck in the Stone Age it's going to be looking for ways to continue that improvement."
- "What I like best about CEMEX Go is how easy it is. Ordering cement is just one of the hardest things that I do in the day it's not something I want to spend a lot of time on. CEMEX has improved my business because it's made it easier for me to order. I just get on my computer – 'what do you need?' Boom, I order it and I'm done!"

One of the benefits of a digital-first experience isn't just the impact resulting from the initial deployment, it is what follows. Both incremental improvements, introduced through additional releases to the platform, but also step-change innovations that take the platform – and its broadening ecosystem of customers and partners - to new levels, and CEMEX is no exception to the rule.

As CEMEX Go began to scale globally, they continued to drive greater digital transformation through its Digital Innovation in Motion ecosystem, launched to apply their digital platform and advanced Artificial Intelligence (AI) tools to production, management, and commercial operations. Two examples of this include:

- **Improving Cement Production Mills through Artificial Intelligence:** Traditionally, mill operations were controlled by human operators and relied on manual processes. By applying AI, these operators become supervisors, fine-tuning the AI's behavior. Model-Based Optimization uses machine learning to generate models able to predict the performance of the mill, reducing the amount of energy consumed, while at the same time producing a higher quality product more efficiently.
- **PartRunner:** PartRunner is an advanced on-demand delivery solution platform that optimizes route planning for 'last-mile' delivery specializing in handling "big and bulky" items. It connects building materials suppliers, expanding the reach of CEMEX Go beyond cement and concrete to delivery of tools, machinery, and materials from their eCommerce site and retail operations: Promexma and Construrama stores. All of this was made possible through CEMEX's Open Innovation practice and their corporate venture capital arm: CEMEX Ventures.

Going Further Upstream

CEMEX didn't stop there. They have gone even further, bringing the power of digital transformation to build the "connected quarry" allowing for truck and machine efficiency optimization with the use of telematics data. Imagine drones fitted with high-definition cameras surveying every corner of the quarry. This allows CEMEX to create a "digital twin" of the quarry by overlay topographic information with machine learning data, increasing productivity by 15% and net profits by 50%.[6]

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A Conversation with Edson Santos, Global Head Digital Marketing, CEMEX

Edson, how would you say your marketing efforts have changed as a result of CEMEX Go?

Before CEMEX Go, our marketing strategy was quite traditional. We conducted activation programs and campaigns in a few markets. Our buildings were properly painted, our trucks were properly painted with our logo with our brand. But that was as far as we went. CEMEX Go was really the catalyst to re-think marketing completely and so we decided to focus entirely on a digital marketing framework that included segmentation, channels, technologies, operational mandates and architecture – all aligned to the customer journey.

That is interesting, so digital marketing isn't just about lead gen and conversions?

Far from it. When you create so many digital touchpoints to interact with customers a few different things become possible. First, you learn a lot more about your customers through analyzing both their online and offline behavior, so we are able to hyper-personalize our digital messaging to them. Secondly, we apply machine learning to the database of customers with similar profiles and predict future purchasing needs and align our promotions and offers based on predictive analytics versus just past purchasing behavior. Third, with so much data, it is much easier to weight what we promote in different regions based on a variety of factors from product market share to operational constraints. Finally, what I think many companies may not realize is when you aggressively pursue a Digital first Customer Experience you learn a lot about your customers, but the reverse is true also – they learn a lot about you. So, we have invested in digital interaction tools that make it really easy for customers to provide us with feedback that both improves their experience and how we market to them.

Is it fair to say you spend more on digital marketing now than before CEMEX Go?

Oh significantly, I mean, before CEMEX Go, we probably allocated about 10% to digital marketing. Today that number is closer to 80%. But it makes sense, not just because of how we digitalized the customer experience, but it also helps us with our social media strategy in support of our Net-Zero commitment. We have very aggressive targets and really innovative green products that help our customers achieve their own ESG goals. Digital channels allow us to control the narrative and are by far the most effective way to get that messaging across.

Edson, can you point to any results from digital marketing you are particularly proud of?

Sure, a couple stand out. One is that because of CEMEX Go, we are able to serve a customer segment that includes smaller contractors which have been underserved by the bigger cement providers as they tend to focus on larger customers. CEMEX Go makes it possible for us to deliver and support those customers profitably. This is actually quite an important innovation in our industry. Secondly, our Digital Marketing efforts contributed an incremental $250 million revenue to the company over the past four years against an investment of approximately $5 million in digital marketing. So that is something I feel particularly proud of, besides the amazing digital marketing team we have assembled that work on behalf of our customers around the world.

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Not Ignoring the Back Office

Working Smarter, announced in late 2021, is CEMEX's initiative to digitize mission-critical business services in its finance, customer support, human resources, and information technology operations. At the core of this program is the redesign of its shared services operating model, implementing virtual Fulfillment Centers that accommodate a remote workforce, retaining high quality talent pools regardless of their geographic location.

There is a lesson from CEMEX that should not be missed by any organization pursuing a Digital first customer experience effort. Even though their Service Center processes were not part of the original feature set, they established SLAs to ensure staff could fulfill a customer's digitally generated requests. This avoids investing in improvements that customers do not truly value while ensuring their expectations aren't missed when introducing new digitally migrated interactions. But at some point, those backend processes need to catch up. As Jesus Caviedes Mondragon, explains:

> Transforming our 17 global Service Centers to Fulfillment Centers is our next big transformation. It is massive. As digital interactions with customers increase it requires more coordination, better integration of systems, more visibility into supply chain capacities for remote dispatching. You need to design new chatbots, new call routing and reskilling so that one person can handle different lines of business. But this creates capacity so staff can take on more fulfillment duties. It is a total metamorphosis that will take time but is essential.[7]

Commitment to Net-Zero

Like their alignment around delivering a digital first experience, CEMEX's commitment to Net-Zero is industry-leading. "We conceive of sustainability as the only safe way to do business…Sustainability is embedded in CEMEX's strategy, and thus, it is linked to all functions across our business lines."[8] This also extends to product development. Recently, CEMEX introduced a new product line called Vertua: Their first net-zero CO2 concrete offering developed by their Research and Development team. This product:

"We conceive of sustainability as the only safe way to do business…Sustainability is embedded in CEMEX's strategy, and thus, it is linked to all functions across our business lines."

- Reduces the carbon footprint of concrete by up to 70%.
- Neutralizes the remaining 30% of carbon through offsetting efforts.
- Generates less heat and fewer cracks.

Critical Success Factors

It begins with a focus on Customer Centricity as its foundation:

Top Management Support and Involvement

It cannot be emphasized enough how big a difference the CEO and leadership team's commitment and involvement made such a difference in the launch and scaling of CEMEX Go

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globally. But this commitment is built on the previous CEO's commitment to technology. Jonathan Hernandez explains:

> Lorenzo Zambrano, the former CEO, was an advocate for technology so at some point the company already had the seed to take this step into digital. So, that combination of a focus on Customer Centricity on top of our foundation in valuing technology helped a lot. The new CEO really set the example. He visited the Scrum Teams in Monterrey, in Prague. He met with the service design leads and the Agile leads to learn about what their challenges were.[9]

Executive Education

To ensure that this support was felt through the organization, CEMEX invested in educating the top 100 leaders in what digital transformation was about and the change management strategies that would underscore successful implementation. The company partnered with the Massachusetts Institute of Technology (MIT) to customize and facilitate a 5-day residential program. Homero Resendez explains the impact achieved from the program.

> We launched a program to train all the executive committee and all leaders of the whole operation from the different countries where we operate, but mainly the commercial leaders and the country Presidents. All attended a 5-day program that was designed with MIT to understand digital transformation but also addressed change management. After that training, you cannot imagine the number of requests we started to receive from different people with more specific use cases referencing relevant technologies.[10]

CEMEX executives believe the investment in the program paid off in spades. With a more profound understanding of both the 'what' and the 'how' of digital transformation, CEMEX's senior leaders provided more direct support to the Design and Agile Team Leaders across all three stages.

Technology that Solves Problems

Often the final technology stack you end up with is quite different than the one imagined, even after the research and prototyping steps. CEMEX Go was no exception and Jonathan Hernandez describes a typical example:

> We need to apply technology to solve a real customer pain point. For example, we tested several new technologies including a chatbot we call Olivia that we launched with some artificial intelligence and machine learning behind it. It was a good experiment, but in the end, it really wasn't addressing a customer pain point so now it is used to handle basic support questions. We have learned that the latest technology only matters if it solves a real customer problem.[11]

Reinforcing Feedback

Like any journey, it is important to look for milestones that reinforce you are on the right path or consider pivoting as income data suggests. In the case of CEMEX Go, early on in its implementation, management monitored the digital channels customers were being offered and discovered adoption rates grew rapidly. Cost-to-Serve metrics for some interactions

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improved as much as 50% over previous analog methods. In some cases, person-to-person interactions were still preferred, and their results became more consistent as they developed integrations that kept a Service Representative in the middle of the interactions when it was required.

Customer Measurement

As CEMEX Go rolled out, it became clear that different parts of the business measured customer satisfaction differently. There was little consistency and the roll out of CEMEX Go presented the opportunity to change that. Homero Resendez explains:

> Over the past 5 years we have created a standard measure: NPS (Net Promoter Score) has been adopted by call countries using the same methodology with the same time frame. We added some of the attributes associated with the CEMEX Go into what we were measuring, and it was embedded in the actual experience.[12]

As a result, NPS has improved significantly and CEMEX's NPS score is in the 68 to 72 range, allowing CEMEX to command premiums in most of the markets they operate.

IT Organization

Speaking of details, one of the most important was the fact that CEMEX re-structured their IT organization to remove any barriers between service designers and software developers. As Homero Resendez told us:

> I have been in IT for many years, but I never thought I would have service designers and user researchers reporting to me. This is a totally new practice that we have been maturing over the past five or six years now. The other example is our global data science team. At one point in my past, I was a statistics and mathematics professor, but I honestly never expected I would lead a team of statistical experts, mathematical experts however, what I can tell you is that they are very much needed.[13]

CEMEX eliminated any potential communications failure point by integrating the design and IT teams together.

CEMEX Go Governance

Lastly, a global implementation as comprehensive as CEMEX Go obviously required some extensive governance. There were eight different dimensions, with specific Key Performance Indicators (KPIs) each with different maturity levels depending on the region or business line. Every quarter their results were reported to the CEO and financial resources allocated to support the effort in working with leading consultants or subject matters as needed. This allowed them to speed up decision-making so they could move fast. Secondly, CEMEX created Customer Experience Offices in every region. These teams of 5 to 10 members coordinated CEMEX Go locally as well as customer complaints, measurement, and Service Center projects.

Now, if we broaden our gaze, we can see how CEMEX Go has provided CEMEX with a unique position in the global construction industry.

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In 2021 CEMEX announced it had joined a global initiative to develop OpenBuilt, a new platform designed to securely connect fragmented construction industry supply chains. Through OpenBuilt, the participating companies including CEMEX, IBM, Red Hat, Cobuilder and others, aim to offer new digital solutions to help innovate and drive more efficient, sustainable, and safer construction projects. OpenBuilt is designed to allow companies across the globe to securely connect their current technology platforms and digital solutions to partners, suppliers, or subcontractors in their supply chain via a single integration hub. Again, Homero Resendez explains:

> We realized that CEMEX Go was really only solving 2% or 5% of the pain points that those customers were experiencing day-to-day so with OpenBuilt, we hope to create something much bigger. And that is also the idea of CEMEX Ventures. Taking the digitalization of our internal processes, commercial operation, production, supply chain transformation and solve some significant pain points in the industry. CEMEX Ventures is looking for innovations in many dimensions in the construction supply chain, but not around how we deliver Ready Mix or Cement. But OpenBuilt and CEMEX Ventures are two of the ways we are working to address the pain points of the industry.[14]

Results

CEMEX had grown the user base of CEMEX Go to well over 42,000 and at a year-on-year rate, CEMEX reported a 16.9% growth in its revenues for the first quarter of 2021, to $3.4 billion and improved net profit over the same period to $665 million. But that is not the whole story. CEMEX obtained efficiencies in both customer-facing and internal processes including:

- Reduced time from customer spent ordering.
- Reduction of the time spent by the sales representative on the management of invoices and payments.
- Reduction in the number of calls received in the call center to track the delivery truck.
- Reduction in the time spent by the sales representative/dispatcher who monitors the delivery truck.
- Reduction in the number of credit notes.
- Improvement in working capital.
- Cut in the courier service for physical deliveries of product delivery tests.
- Their Net Promoter Score (NPS) for fiscal year 2021 was 68 with a target to get to 70 by 2030 which they have already surpassed.

Summary

The CEMEX Go experience speaks to a company with a strong foundation of leadership, innovation and a relentless focus on their customers, their employees, and sustainability goals. It underscores that a successful Digital first customer experience transformation is about far more than technology, and if careful attention is paid to its implementation, a company can do more than just delight customers, it can set a new standard for their industry. Where will CEMEX Go be in 20 years? We asked that very question to Jesus Caviedes Mondragon. Here is what he said:

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In 20 years, projects will all be managed digitally. The physical part: the trucks; the holding; the warehouses – they may never be fully integrated, so I don't know if it's more a digital challenge or a physical challenge. CEMEX will participate but it will be part of a conglomerate of solutions. It will be a full integration of four or five mega levels of functionalities with an open platform and API's. That is for me, the ultimate.[15]

Order your copy of *The Digital-First Customer Experience: Seven Design Strategies from the World's Leading Brands* today.

[1] Author interview, August 2, 2022.
[2] Ibid
[3] Ibid
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[5] Ibid
[6] CEMEX (2022) https://alteia.com/customer/cemex/#results (archived at https://perma.cc/K2U6-NG6Z).
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