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PREMIUM

The inside story of how \$16 billion DoorDash worked an intense all-nighter and overcame a perfect storm of engineering challenges to save millions of orders for desperate restaurants as the pandemic began

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- DoorDash, a food-delivery startup with a \$16 billion valuation and pending IPO suddenly faced a tidal wave of traffic in March.
- The company's app was bogged down and restaurants were requesting faster payment, and engineering VP, Ryan Sokol, knew the company needed to complete its systems overhaul as soon as possible.
- DoorDash huddled with Cloudflare and, in a furious all-nighter, the companies wrapped up the revamp, which may have saved millions of orders from being lost, Sokol says.
- The engineering triumph culminated in a memorable moment with the Simon and Garfunkel classic, "The Sound of Silence."

In March, when restaurants across the country were closing their doors and turning to pickup and delivery orders to survive the coronavirus pandemic, DoorDash vice president of engineering Ryan Sokol – a former pizza delivery guy used to hustling – realized he was facing a perfect storm.

DoorDash, an on-demand delivery startup with a \$16 billion valuation and initial public offering expected soon, began receiving a tidal wave of needs from restaurants, delivery people (which the company calls "dashers"), and consumers.

Sokol's team needed to address a massive surge in traffic, a rapidly expanding team with lots of new employees, and an on-going systems overhaul that DoorDash began in August 2019.

"It was all hands on deck, all the time," Sokol says. "When we got breathing room on engineering projects,



DOORDASH

we were all uploading new restaurants' menus into our system."

Then it got worse.

Restaurants needed to get paid faster than DoorDash's weekly cycle.

"The restaurants were saying, 'We're going to have to close down. We can't wait a week,'" Sokol says. "I'm a restaurant guy. I knew exactly what they meant. In restaurants, cashflow is everything."

Meanwhile, DoorDash's mobile app, suddenly burdened with many new users, had slowed to a crawl.

The systems upgrade needed to address it all and Sokol realized they had to complete it *right now*.

Without it, "we would have lost hundreds of engineering hours – and I would imagine hundreds of thousands if not millions of orders – due to outages," he says.

What was at risk was a key priority for Sokol: Reliability. "We talk about it all the time," he says. "It may be



DoorDash vice president of engineering Ryan Sokol.

my most important value. We have to be there for restaurants, dashers, and consumers. We cannot fail them when it comes to reliability.”

DoorDash had been working on the systems overhaul for months with Cloudflare, the San Francisco internet performance and security company that acts like a gatekeeper for other companies’ websites and apps.

So the two companies huddled on the situation – and in 100 engineers’ homes across the country, people started brewing coffee. Days of furious work culminated in employees from both companies working all night to complete the overhaul and address the engineering issues.

As a result, the app was 40% faster, restaurants could get paid within a day, and the companies had confidence that restaurants and diners were not vulnerable to attackers.

“That was a big part of it,” Sokol says. “The last thing we wanted was to open up a new threat vector where the restaurants or consumers right now could get hacked.”

The accomplishment was also a win for Cloudflare, the company says. “We’d been working with DoorDash for many months before COVID-19,” says Cloudflare CTO, John Graham-Cumming, and was delighted to “help DoorDash handle the incredible increase in traffic.”

When everything settled down, the entire DoorDash engineering team got on a conference call to go over the project. Sokol knew that a production manager and his team had made a kind of theme song out of Simon and Garfunkel’s powerful 1967 hit “The Sound of Silence.” So he waited for a pause on the call, put on the song, and turned it up.

“And I saw 100 exhausted nerds who knew they’d done something really big just start to *get down*,” he says. “Lots of air drumming. It was beautiful.”

DoorDash has its critics. Consumers have sued DoorDash and other companies for imposing what they say are unfairly high fees during the pandemic. Cities have capped food delivery fees in an effort to defend restaurants against such fees. DoorDash responds that it cut commissions in half for more than 150,000 restaurants from March through May.

(The company is in a “quiet period” and unable to discuss any specific financial aspects of its business due to the February filing of IPO paperwork.)

Whatever criticisms the company faces, though, the hustle of Sokol’s team provided economic opportunity for the struggling restaurant industry, he says. And the coast-to-coast all-nighter stands as one moment early in the pandemic that helped a lot of restaurants, delivery drivers, and diners, the two companies say.

How do you find people willing to work under that kind of pressure? Sokol says that the willingness to take on thorny issues is something he looks for while hiring. “We don’t want to hire someone who is just looking for a safe place to land,” he says. “We want someone with intellectual curiosity, who really loves challenges, and knows how to build things that can scale.”

“An appreciation for ‘Sounds of Silence’ isn’t mandatory,” Sokol says. “But it helps.”