



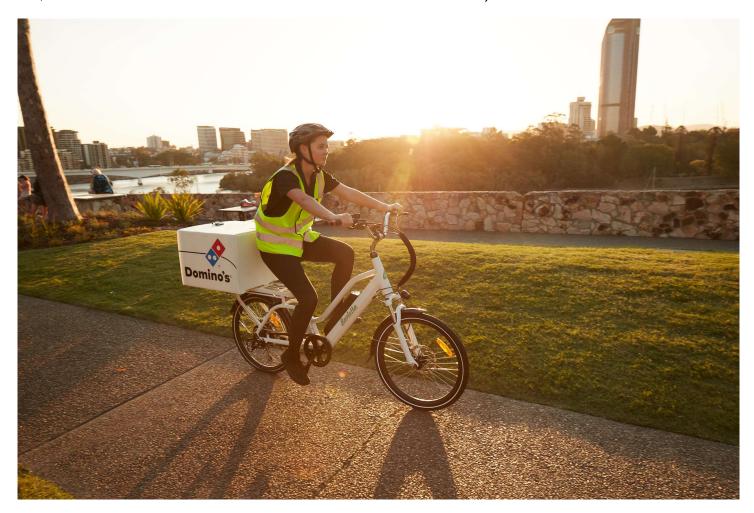
Domino's Pizza Enterprises Delivers in Record Time Using AWS for Predictive Ordering

2020

When it comes to the global pizza business, Domino's Pizza Enterprises Limited (Domino's) has a large slice of the pie. The company, which is the largest Domino's franchise holder, represents the Domino's brand in Australia, New Zealand, Belgium, France, the Netherlands, Japan, Germany, Luxembourg, and Denmark. Domino's maintains a network of more than 2,600 stores globally and is based in Brisbane, Australia.

Domino's is an increasingly digital business, with more than 70 percent of sales coming from online orders. "Our investment in technology is a key ingredient to our growth as a business," says Michael Gillespie, chief digital and technology officer for Domino's. "We strive to use it to reduce pickup and delivery times, because we've identified that the sooner we can get a pizza to our customers, the more satisfied they are with their meal."

To enable faster pickup and delivery, the company recently launched Project 3TEN, an initiative that aims to have a pizza ready for pickup within 3 minutes or safely delivered within 10. This is all possible through efficiencies in cooking methods and transportation and by opening more stores closer to customers. To support this initiative, the company wanted to use predictive technologies to help reduce pizza making and delivery times. "We can use technology to increase the speed of our ovens, and we can give our drivers more efficient technology like e-bikes or scooters, but we also needed to look at how we can help stores anticipate what customers order," says Gillespie.





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Michael Gillespie

Chief Digital and Technology Officer, Domino's Pizza Enterprises Limited

Developing Accurate, Predictive Ordering on AWS

Domino's turned to Amazon Web Services (AWS) and Max Kelsen, an Advanced Consulting Partner in the AWS Partner Network (APN), to help create a predictive ordering solution. "We knew we needed a smart, accurate system, and we liked what we saw in AWS machine learning technologies," says Gillespie. "We knew that by using AWS services we could develop a solution that would give our stores a glimpse into the future by predicting what pizzas would be ordered next."

The company created a data lake consisting of key order information by taking advantage of Amazon Simple Storage Service (Amazon S3) for data storage and AWS Glue for data querying. It also uses Amazon SageMaker to build and train machine learning models to predict the likelihood that an order will be placed, so a store can begin making that order right before it is placed.

As a trial, Domino's initially deployed its predictive ordering solution in some of its stores in Australia. Store employees could view an ordering screen displaying specific pizzas with various color indicators corresponding to the likelihood of those pizzas being ordered. "This isn't making pizzas and leaving them in a hot box for half an hour—this is getting the pizzas lined up, coming out of the oven, and ready to go as an order is placed," Gillespie says.

The company enhanced the solution during the trial so it would be ready for a wider rollout. Domino's then began deploying the solution to stores in New Zealand, France, the Netherlands, Japan, and Germany.

From Order to Delivery in 10 Minutes or Less

Using the AWS-based solution, Domino's has given its stores a tool to help drive down pickup and delivery times for customers. For example, in 2019, a Domino's store in Australia averaged delivery times of under 5 minutes, from order to doorstep, across an entire week. "It's exciting that nothing changes from the customer's perspective, except that the post-order experience can be much quicker," says Gillespie. "Customers are getting their pizza faster, hotter, and fresher because of the improvements we've put into place with Project 3TEN. The predictive ordering solution we developed by using AWS is a big part of that."

Domino's is gaining a competitive advantage in the marketplace. "When our customers are hungry, they're hungry now, and we want to deliver their meal as quickly and safely as possible," says Allan Collins, chief marketing officer for Australia and New Zealand at Domino's. "That's our market differentiator. Some of our competitors still take 45 minutes to an hour to deliver a meal, when we can have a pizza delivered in 10 minutes or less following an order. That really impresses our customers."

Enabling Fast, Easy Deployment for Franchisees

Another advantage is that franchisees don't need to spend much time being trained. "One thing we always try to keep in mind when developing technology is ease of use—the technology has to be accessible and easy to implement," says Gillespie. "We knew if we had barriers to deployment, it would be challenging to roll this out." Domino's Technology Team worked hand-in-hand with the Operations Team to ensure a smooth rollout, with all new processes seamlessly dovetailing into existing operations.

Making Customers Happier

The solution is contributing to a boost in customer satisfaction. "Our data shows that the stores with faster pickup and delivery times have higher customer satisfaction scores," says Collins. "And those customers are more likely to come back and recommend our brand to others."

Domino's has deployed the solution to stores in a number of other countries. "AWS has been a great company for us to work with because it's helping us provide a new, unparalleled level of service to our customers," says Gillespie. "In addition, we hope to take what we've achieved with AWS so far and push it to new heights in the future."

To learn more, visit aws.amazon.com/sagemaker and aws.amazon.com/travel-and-hospitality.

About Domino's Pizza Enterprises Limited

Based in Brisbane, Queensland, Domino's Pizza Enterprises Limited is the largest pizza chain in Australia and the world's largest franchise holder for the Domino's Pizza brand. The company has more than 2,600 stores in Australia, New Zealand, Belgium, France, the Netherlands, Japan, Germany, Luxembourg, and Denmark.

Benefits of AWS

- Assists Domino's stores in achieving goal of pizza delivery in 10 minutes or less
- Deploys accurate, predictive ordering solution guickly and easily
- Enables fast, easy deployment for franchisees

AWS Services Used

Amazon SageMaker

Amazon SageMaker is a fully managed service that provides every developer and data scientist with the ability to build, train, and deploy machine learning (ML) models quickly. SageMaker removes the heavy lifting from each step of the machine learning process to make it easier to develop high quality models.

Learn more »

Amazon S3

Amazon Simple Storage Service (Amazon S3) is an object storage service that offers industry-leading scalability, data availability, security, and performance.

Learn more »

AWS Glue

AWS Glue is a fully managed extract, transform, and load (ETL) service that makes it easy for customers to prepare and load their data for analytics.

Learn more »

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