Delivery optimization for an eCommerce retailer

Last Mile Delivery

Introduction

In 2020, due to COVID-19, retail businesses had to make a sudden shift toward digitalization. Online shops and delivery services thrived during the pandemic, as their sales skyrocketed from the start of the lockdown and onward.

The growth in sales leads to a growth in logistics-related tasks. With an increasing number of orders, mistakes are more likely to happen, and the delivery process becomes harder to track. The orders need to be delivered on time to keep customers' trust.

In this case study, we'll tell you how integration with the Veeroute optimization engine helped a large eCommerce retailer during the pandemic, as well as what the results were.

Client Profile

European online retailer processing over 15000 orders per day. Established in 1998.

Annual revenue:

> $ 300 000 000

Geography:

275 pickup locations in 102 cities

Goods:

over 350,000 products

The start of the collaboration

In May 2020, the company team first had the idea to collaborate with Veeroute on delivery planning and optimization.

This was a turbulent time. 2 months into the lockdown, many online retailers faced a workload like never before. Let's take a look back:

10 million people made their first online purchases within the first few months of the pandemic.

Compared to Spring 2019, there was a 430% growth in online shopping for everyday items.

The demand for grocery delivery increased by 7 times, for clothes and shoes delivery — by 3 times, and for household items — by 2 times.

At that time, our client also had to deal with uncontrollable growth in sales, which led to an increased workload.

In the first quarter of 2020, the company delivery service completed about 300-400 orders in a single region. At the beginning of the lockdown, the number of orders increased by 2–3 times and went up to 1,000 orders a day.

What problems did it cause?

1. **The delivery process was harde to monitor with manual processes.** As the number of orders grew, it became harder to fulfill them.
2. **The logistics department faced a heavy workload.** The routing took more and more human resources. At the time of the project launch, there were as many as four people working on route scheduling.

Tackling the increased workload while preserving the service quality was quite a challenge, especially during a pandemic. This is why the execs decided to partner up with Veeroute for delivery optimization.

Challenge

The Veeroute optimization engine was supposed to find solutions to two problems:

1. Make the delivery process transparent

Transparency throughout the delivery process means you can get an update on the order at any moment: where the delivery driver is, as well as the status of the orders assigned to them.

What do you need it for?

- → Monitor customer experience and react to feedback at once.
- → Reduce manual operations and improve workflow and performance.
- → Collect precise data on delivery times and get a comprehensive view of the logistics system.

2. Reduce the amount of time spent on planning routes

Before the integration with Veeroute, the team spent several hours on route planning every day. Even though the client already had a route planning tool, their employees spent a lot of time on manual processing.

Optimized route planning would help the company save time and let the logistics specialists focus on building an effective logistics network and improving the customer experience.

Solution

The project started in June 2020. The Veeroute optimization engine was successfully integrated with the customer's IT infrastructure. The integration process went smoothly and took a week. There were no setbacks from the client's side either.

To cope with the drastically increasing demand, the company management decided to implement the solution into operations immediately.

It was a risky move. The logistics department had to learn a new tool while working as usual. All of this was to be done without hurting the customer experience. Nevertheless, the logistics team did an amazing job adjusting to the new reality and handling a growing number of orders.

> "Integration with Veeroute helped us boost the quality and efficiency of our logistics system, and we'll continue using this tool. Our experience shows that the only way to win customers' hearts is to employ technologies".
>
> **— CEO of the company**

Results

Integrating with the Veeroute optimization engine helped the company upgrade the logistics system and make it more efficient. The successful integration brought the following results:

1. The delivery process became completely transparent.

Veeroute tools allow the company to track a driver's location in real-time. The logistics specialist and customer relations manager can see when the order was delivered, how much time the driver spent getting to the pickup location, and whether they met the time constraints.

Precise data helps the company monitor their service quality and analyze the logistics system. Veeroute, on its part, uses the data to calculate the routes' stochastic characteristics.

2. Route planning time was reduced from several hours to 20 minutes.

Before:

1. Logistics specialists planned a majority of the deliveries during the day.
2. After all the drivers returned, the remaining orders that they couldn't deliver were being calculated a second time and distributed for the next day's routes. Thus, the logistics team had to do the same job twice a day.

Route planning time: 2-5 hours.

After:

After Veeroute implementation, the logistics specialists were able to plan all routes in one step.

The optimization tool automatically generates a set of routes based on input data — logistics specialists just need to choose the most efficient plan instead of doing everything manually.

Route planning time: less than 20 minutes.

Veeroute's solution also led to the business process optimization and saved time spent to schedule /reschedule the routes.

Integration with Veeroute lets the logistics specialists spend more time on tweaking the system to achieve high-quality route planning, perfect the logistics and improve customer service.

3. Increased efficiency of routes led to resource optimization.

There was one more unexpected result: the company decided to move away from delivery by foot.

Initially, foot couriers delivered orders in the urban area because drivers experienced troubles searching for a parking space there, downtown in particular. However, the optimization engine revealed how to improve mobility and cost-effectiveness, and the company came up with a more functional solution.

In the renewed business model each order downtown or to the area with little parking space is delivered by a vehicle with two employees. While the driver is responsible for parking, the second employee does the delivery.

Conclusions

6 months later, the Veeroute's team asked the client what changes they noticed after the integration with Veeroute. Here are the numbers achieved by that point:

- Time spent on route planning was reduced from 2 hours to 20 minutes.
- The minimum time window was reduced from 1.5 hours to 30 minutes.
- The number of orders per vehicle increased by 20%.

One more advantage of Veeroute implementation is that the optimizer considers the dimensions of the goods while route planning. The engine takes into account the cargo size in combination with the time windows and the delivery areas' requirements. These parameters are used for more flexible delivery scheduling.