

Emesa: Marketing Campaign Optimization

Case Study

Learn how online consumer auction provider Emesa automated and optimized its email marketing process and increased the revenue generated by its email campaigns by 6% with Gurobi.

The Challenge: Driving Increased Traffic, Engagement, and Revenues with Email Marketing

Email marketing is a critical tool for e-commerce companies today. With the complexity and competitiveness of the marketplace always increasing, e-commerce firms must find a way to promote the right products to the right customers at the right times – and email marketing campaigns can enable them to do just that.

For e-commerce companies, the goal of email marketing is simple: To drive more traffic, engagement, and, ultimately, revenues. But actually achieving this goal is challenging due to a number of different factors including:

- Constantly changing customer preferences and demand for personalized online shopping experiences.
- The ever-expanding number and variety of products.
- Strict government rules and regulations for commercial email communications.

One e-commerce company that understands the challenges as well as the value of email marketing is Emesa, which owns and operates a portfolio of leading online consumer auction and deal platforms in the Netherlands and Belgium.

Every day, Emesa's auction platforms – which include vakantieveilingen.nl, slajeslag.nl, vakantieveilingen.be, and vavabid.be – attract thousands of customers to participate in auctions of a wide array of physical products and leisure experiences such as vacations, spa, zoo, theme park packages, event tickets, and restaurant reservations.

In order for Emesa to reach its business objectives – to boost the volume of visitors to its online auction websites, increase the number of auction bids and transactions, and maximize its sites' profit margins – the company must be able to optimize its marketing initiatives.

SNAPSHOT

Company: Emesa

Industry: E-commerce

Gurobi Application: Email Marketing Campaign Optimization



Results:

- 5% increase in the volume of sent emails by reducing planning inefficiencies.
- 6% increase in the number of email opens by customers.
- 6% increase in traffic to online auction platforms from email campaigns.
- 6% increase in revenue attributed to email campaigns.



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Email marketing campaigns are a pivotal channel, and the online auction provider sends out thousands of emails each day to its customer database. The keys to ensuring that these email marketing campaigns are effective and help Emesa drive revenue growth are:

- **Timing:** The timing of the emails must be coordinated with the timing of the auctions – so that more traffic is being driven to the websites during the peak times for bidding in various auctions.
- **Personalization:** The content contained the emails must be relevant to individual users, and the timing and frequency of the emails must adhere to each customer's preferences.

Emesa was using a manual process and heuristics-based tools to manage the timing and personalization of its email marketing campaigns – but this method was inefficient (as it was labor intensive and took a long time) and ineffective (as it couldn't ensure that the right email content was sent to the right customers at the right times).

And so Emesa decided to develop and deploy an automated, mathematical optimization tool to handle its email marketing campaigns.

The Solution: Automation and Optimization of the Email Marketing Process

In late 2020, a project team at Emesa – led by the company's Customer Intelligence Manager, Giel Linthorst – began developing a mathematical optimization application that would automate its email marketing process and optimize the timing and personalization of the emails sent out to customers.

Mathematical optimization was selected as the advanced analytics technology of choice for this application because of its:

- **Flexibility:** Emesa was able to define its unique business objectives and constraints (such as auction schedules) as well as customer preferences and bidding history into the application.
- **Robustness:** Mathematical optimization was capable of handling the complexity of Emesa's email marketing operations, which involve thousands of customers and millions of emails that go out on a monthly basis.

Giel Linthorst commented: "We decided to use mathematical optimization to manage our email marketing campaign operations because we wanted to be able to automate the process of sending emails to customers while taking into consideration their product preferences, the timing and frequency of our email communications (so as not to conflict with individual customers' personal contact preferences), and our own auction schedules (as we want to control the volume of traffic coming to our sites at certain times, to coincide with our auctions). Mathematical optimization enables us to do this."

It took the team a few months to build and implement the mathematical optimization application, which went live in early 2021.



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Using the application – which is powered by the world’s fastest mathematical optimization solver, the Gurobi Optimizer – Emesa is able to automatically decide which emails to send to which customers on which days, taking into account:

- Each customer’s unique auction bidding history, which is used to determine which products to showcase.
- Each customer’s personal contact preferences, which stipulate how many emails they wish to receive on a weekly basis.
- Emesa’s auction schedules on its various online auction platforms, which is subject to change on a day-to-day basis.
- Industry and government regulations on email marketing communications.

With this new mathematical optimization application, Emesa’s email marketing process – which was once manual, time-consuming, and ineffective – has been transformed. The online auction provider now has the capability to automatically distribute the right emails to the right customers at the right times in order to



Using this mathematical optimization application, we can automatically determine the optimal timing and select the most relevant contents of our emails to customers – so that we can maximize customer engagement with our emails, drive more traffic to our auction platforms, and ultimately generate more bids and revenue growth.

Giel Linthorst, Customer Intelligence Manager

maximize website traffic, bidding activity, and profit margins.

“Using this mathematical optimization application, we can automatically determine the optimal timing and select the most relevant contents of our emails to customers – so that we can maximize customer engagement with our emails, drive more traffic to our auction platforms, and ultimately generate more bids and revenue growth,” Linthorst added.



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The Results: Greater Website Traffic, Customer Engagement, and Revenue Growth

The implementation of the email marketing campaign optimization application has delivered significant business benefits for Emesa.

Operationally speaking, the new automated application has made Emesa's team more efficient (as it takes them far less time and effort to manage their email marketing campaigns) and has also made them more effective (by giving them visibility and control over the volume and variety of emails they are sending to customers on a daily basis).

With the mathematical optimization application, Emesa has been able to achieve significant improvements including:

- 5% increase in the volume of sent emails by reducing planning inefficiencies.
- 6% increase in the number of email opens by customers.
- 6% increase in traffic to online auction platforms from email campaigns.
- 6% increase in revenue attributed to email campaigns.

As a result of the success of this implementation, Emesa has plans to expand its deployment of this mathematical application to other CRM channels including push notifications.

Why Gurobi?

When the Emesa project team first started to build their mathematical optimization application, they initially used an open source mathematical optimization solver – but soon discovered that this technology was not capable of handling the size and complexity of their marketing campaign optimization problem.

And so they decided to switch to the Gurobi Optimizer, which had the necessary speed and robustness to rapidly solve Emesa's email marketing campaign problem. With the Gurobi Optimizer, Emesa can automatically, optimally schedule and send easily up to one million customer emails per week (but with an open source solver it was only possible to handle around 10,000 emails).

Data scientist Shady El Gewily, who is on the Emesa project team, commented: "We chose the Gurobi Optimizer because it is the best-of-breed mathematical optimization solver, which has the power that we need to optimize our email marketing campaign operations and manage the huge volume of emails that we send out every week. Also, with the Gurobi Optimizer's speed, we can reoptimize in real-time and continuously revise our email marketing campaigns to accommodate changing auction schedules and volume requirements. The Gurobi Optimizer is clearly the best solver for the job."

