

# Locker System – 24/7 Shopping for Imkerhuus

Degree programme: BSc en Informatique | Specialisation: Web and Business Applications

Thesis advisor: Prof. Dr. Michael Röthlin

Expert: Dr. Joachim Wolfgang Kaltz (PostFinance)

Project partner: Imkerhuus, Pieterlen

The rapid expansion of the Internet and use of mobile devices in emerging markets is a big part of the reason e-commerce is growing, along with better payment options and advanced shipping. People by nature are impatient creatures. This is why businesses should do whatever they can to curtail long wait times.

1

## The initial situation

Imkerhuus is a Swiss SME based in Pieterlen, in the Canton of Bern. It mainly sells tools for beekeepers, such as wax walls for hives, but also some honey products (tea, candy, etc.). The shop is located in Pieterlen, and the company owns two warehouses in Burgdorf (Canton of Bern) and Oberbipp (Canton of Bern), in which the customers can recover their purchased items. The company has an internet page ([www.imkerhuus.ch](http://www.imkerhuus.ch)), on which customers can buy some products.

Last semester, the objective of the author's project was to create a complete online shop, to help Imkerhuus sell its merchandise all across Switzerland, at any time. The target customer typically being rather old, and not very familiar with new technologies, the shop had to be intuitive and simple to use.

## Goals

During the buying process, customers choose a payment method, then a delivery method. They can choose between receiving their items by mail, or to come recover them in a warehouse. In the latter case, they have to make an appointment.

The goal of this project is to add another method, so that the customer can retrieve its items at any time (24/7). A physical locker system will be implemented at several locations. Once the payment is confirmed, the customer will receive an e-mail containing the

locker's exact number and a code to open it. The customer then can come retrieve his merchandise whenever he or she wants.

The main part of the project was to create a plugin for the online shop, which was developed using the PrestaShop system environment.

## Functionalities

### Base Technology

The solution is implemented as a PrestaShop plugin, using PHP as programming language and the PrestaShop Framework. Communication with customers are extended. For management purposes, a dashboard is available in the shop's back-office.

### Locker Management

The employees are able to manage the lockers, e.g. add new lockers, fill lockers with items, etc.

### Customer Relation

Once the purchase is made, the customer receives an e-mail with the locker's number and a code to open it.

### Stock Management

When the locker is emptied by the customer, the employees receive a notification and can re-fill it with new items. The global stock is distributed over several warehouses, so a major challenge for the application is to find out in which one the wanted items are.



Nicolas Kollros



Imkerhuus

