

## Applied Research – Supermarket FreshChoice BV case

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### Introduction

This document is about the applied research we did for our FreshChoice supermarket project. The goal of the research was to understand what our website would need so it can actually improve the supermarket's operations and work well for both customers and staff. It's also about seeing what other supermarkets do with their systems and which research methods we could use to make good choices during this project.

### Problem-Oriented

For this project the practical problems we focused on were the ones FreshChoice is currently struggling with. Their inventory management is not accurate which leads to overstocking or running out of products. Their labor scheduling is also done in a very inefficient way because everything happens through one Excel file. Their customer service could also be better since they do not offer any option to order groceries online for pickup. These problems were the main reason we had to do some research first so we could understand what features our website should include.

### Research Question

Which features do real supermarket websites and dashboards use for managing stock, schedules and customer orders, and how can we apply those features to FreshChoice?

### Solution-Focused

To figure out what we needed for our project, we looked at how other supermarkets set up their websites and dashboards. Since we don't have all the expert knowledge about what goes into a supermarket system, we needed to check what already exists out there. We looked at things like inventory dashboards, scheduling systems and pages where customers can order products. We also researched the tech stack to see which tools are normally used for projects like this, which helped us choose things like Blazor for the admin dashboard and SQL Server for storing the data. This part of the research helped us understand which features were important so we could add the right things into our design.

## Uses Real-World Context

The choices we made for this project are based on real supermarket examples and realistic workflows. For example, our user stories were based on real roles inside a supermarket like managers, employees and customers. This helped us understand what they would actually need when using a system like this. Because of our research we added features that real supermarkets probably also use, like clear stock labels, a simple way to manage schedules, a pickup location system and dashboards with charts. Our design choices were also influenced by how normal supermarket websites look so that the layout stays familiar and easy to use.

## Conclusion

This applied research helped us understand what a real supermarket system needs and what kind of features make sense for FreshChoice. By looking at existing examples and focusing on the problems they have, we were able to make clearer decisions for our own website. It also made it easier to write our analysis and design documents since we already had a good idea of what our website should include. Overall, the research made the rest of the project easier because we were not just guessing what a supermarket system should have.

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