

Analysis – Supermarket FreshChoice BV case

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Introduction:

In this document we will analyze the current situation of supermarket FreshChoice. The goal is to understand the problems the company is facing and find possible IT solutions that can help improve their business operations. We will describe the problem and goal of our project, the target audience and the tools we will use during the process. Next, we will define the functional, non-functional, and technical requirements that our final IT solution must meet. These requirements will be prioritized using the MoSCoW method to show what features are most important for the project. By the end of this analysis, we will have a clear understanding of FreshChoice's needs and how our IT solution can help solve at least two of their main challenges.

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The problem:

FreshChoice needs a more efficient way to manage its daily operations. Right now, problems like inconsistent inventory levels, manual staff scheduling, and limited customer service options are slowing things down and affecting both employees and customers. The supermarket wants to modernize its systems with digital solutions that can track stock in real time, make staff scheduling easier, and improve the overall shopping experience through convenient online or app-based services.

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Goal of the project:

In this project we want to design and create a website that helps Supermarket FreshChoice BV improve how they run their stores. Our goal is to build:

- a system that can be used by staff members to keep track of the store's inventory
- a feature that allows managers to upload, edit or delete employee schedules
- a feature that allows customers to order groceries online for pickup.

With this project we want to make the operations of FreshChoice supermarket smoother and better. By combining these first two features into one admin dashboard and the third feature as a regular feature that's accessible for everyone, we want to create one website that helps both the staff and the customers.

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Target audience:

We're targeting both the customers of FreshChoice and the staff who work there. For customers, the website will make shopping easier by letting them order/reserve groceries online, see which products are in stock and choose a location to pick their groceries up. For managers and staff members, the website will offer features to manage inventory and to organize employee schedules across all of the FreshChoice store locations. By focusing on both sides of the business, we think we'll be able to build a nice website that improves the operations of FreshChoice in multiple ways.

User Stories:

Ref.	User Role	User Story	Outcome
INV-01	Store Manager	As a store manager, I want to see real-time stock levels, so I can prevent overstocking or running out of popular items.	Reduces waste, increases sales by maintaining optimal stock levels.
INV-02	Employee	As an employee, I want to easily update inventory after deliveries or sales, so the system always stays accurate.	Ensures accurate data for decision-making and reordering.
INV-03	Manager	As a manager, I want to receive low-stock alerts, so I can reorder products before they run out.	Prevents lost sales and improves customer satisfaction.
INV-04	Store Manager	As a store manager, I want to view inventory trends over time, so I can predict which products will sell best in certain seasons.	Helps with data planning and reduces product waste
INV-05	Supplier	As a supplier, I want to receive automatic restock requests when inventory stock is low, so I can ensure on-time deliveries.	Streamlines the supply chain and prevents empty stocks.
INV-06	Employee	As an employee, I want to scan barcodes to instantly update stock quantities, so that I can save time during restocking.	Increases accuracy and efficiency of inventory updates.
INV-07	Manager	As a manager, I want a dashboard that visualizes which products are about to expire, so I can prioritize their sale.	Reduces waste and improves inventory turnover.
LAB-01	Manager	As a manager, I want to create and share weekly work schedules digitally, so employees always know when they need to work.	Improves communication and reduces scheduling conflicts.
LAB-02	Employee	As an employee, I want to view and swap shifts online, so I can manage my availability more easily.	Increases employee satisfaction and flexibility.

LAB-03	Manager	As a manager, I want to schedule employees across multiple store locations, so I can make staffing more efficient.	Optimizes workforce distribution and reduces labor costs.
LAB-04	Payroll administrator	As a payroll administrator, I want to track employee working hours digitally, so that the payroll can be calculated automatically.	Improves accuracy and reduces administrative work.
LAB-05	Employee	As an employee, I want to receive notifications about schedule changes, so I can plan my week better.	Enhances communication and organization while preventing scheduling confusion.
LAB-06	Employee	As an employee, I want to request vacation days directly through the website, so I don't have to ask manually.	Simplifies leave management and improves transparency.
CS-01	Customer	As a customer, I want to order groceries online or through an app, so I can quickly pick them up without waiting in line.	Enhances customer convenience and loyalty.
CS-02	Customer	As a customer, I want to receive updates when my order is ready, so I can plan my visit conveniently.	Improves customer experience and reduces waiting times.
CS-03	Store Manager	As a store manager, I want to monitor online orders and pickup requests, so I can make sure customers are served quickly and accurately.	Improves service quality and operational efficiency.
CS-04	Customer	As a customer, I want to receive personalized product suggestions based on my past purchases, so I can shop faster.	Encourages repeat purchases and increases customer satisfaction.

Table 1: User stories

MoSCoW:

Must have	INV-01, INV-02, LAB-03, CS-01
Should have	INV-03, CS-03, INV-04, LAB-01
Could have	INV-05, INV-06, INV-07, LAB-02, LAB-05
Will/Wish have	CS-02, LAB-06, CS-04, LAB-04

Table 2: MoSCoW requirements prioritization

Used tools:

Design: Figma

Version control: GIT & GitHub-GitLab.

Requirements:

- Functional requirements:

- **Admin dashboard:** CRUD (create, read, update, delete) operations for managing stocks, schedules, shifts for employees, having data insights (charts, etc.) and an administrative control layer.
- **Labor management:** Automating schedule maintenance, administrator assigning new roles.
- **Customer service:** Build-up feature for picking up stocks from different locations.

- Non-functional requirements

- **Performance:** The dashboard should handle extensive upcoming data without breaking down the application.
- **Scalability:** The architecture has to be built upon without additional frustrations.
- **Usability:** The UI/UX has to meet design conventions (layout principles, colors, etc.), making it easy for customers and staff to navigate throughout the app.

- Technical requirements

- **Frontend:** Bootstrap, CSS, HTML.
- **Backend:** C#, JavaScript, Blazor, SQL Server.

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Conclusion:

The analysis phase created a clear foundation for the project by identifying the main challenges that FreshChoice is facing and translating them into concrete requirements. After agreeing on the essential elements of the project such as the tools and technologies we will use, the MoSCoW prioritization, and the complete set of user stories, we now have a shared understanding of what needs to be built and why.

With these fundamentals in place, the project has a clear direction and a realistic scope. Everyone involved understands the goals and expectations, which creates focus and reduces confusion during development.

Now that the analysis is complete, the project is ready to continue with the design phase where the ideas and requirements will be transformed into clear system designs and practical solutions.

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