

QueueBuster: Redesigning for Scale

Transforming a legacy POS Web Application into a high-performance reactive system.



The Challenge: Speed, Navigation, and Usability

QueueBuster provides a Point of Sale (POS) solution for Android and Web, servicing industries ranging from retail to salons.



The Conflict

The legacy web application suffered from slow performance, cumbersome navigation across 11 modules, and poor data visualisation.

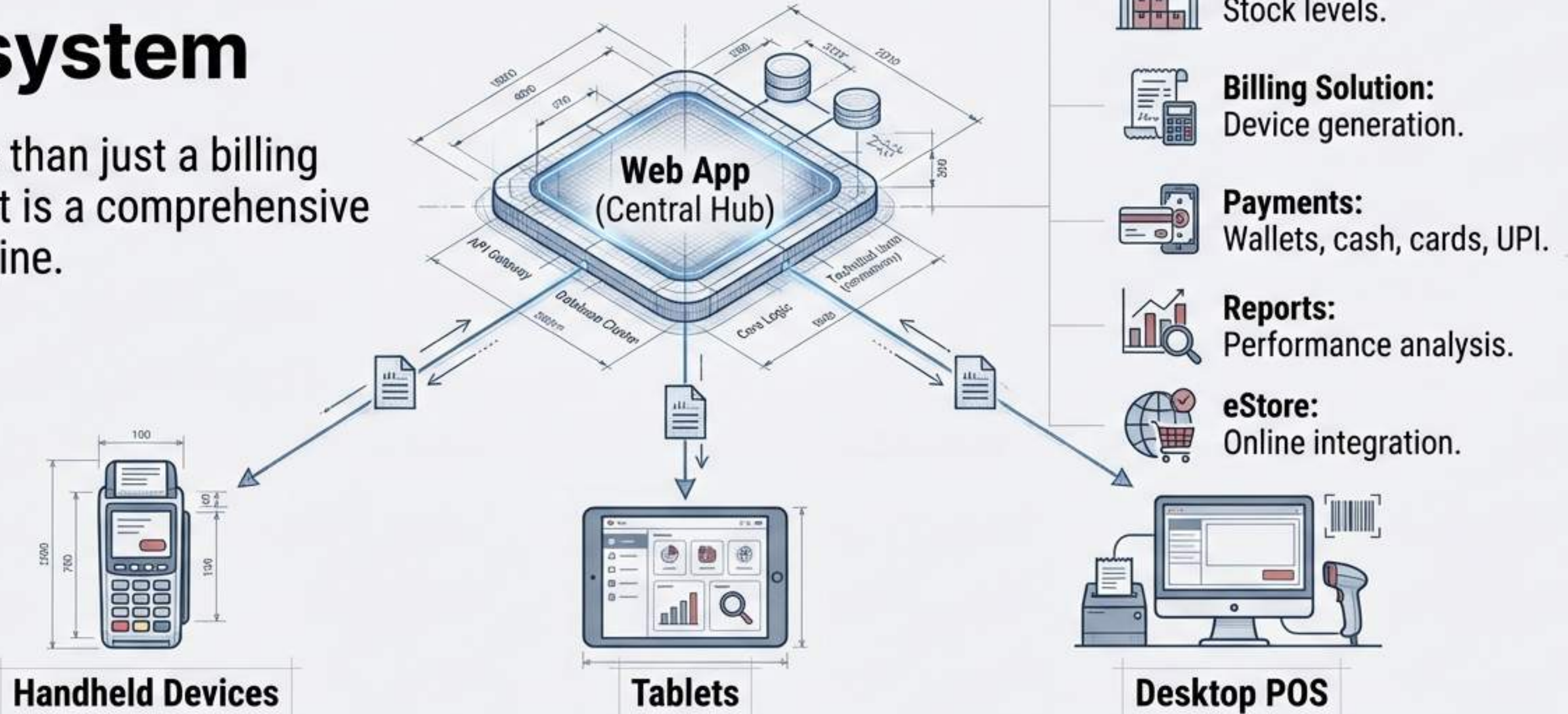


The Outcome

A complete architectural and visual overhaul using ReactJS and a system-font strategy to achieve 0ms load times and a scalable, intuitive UI.

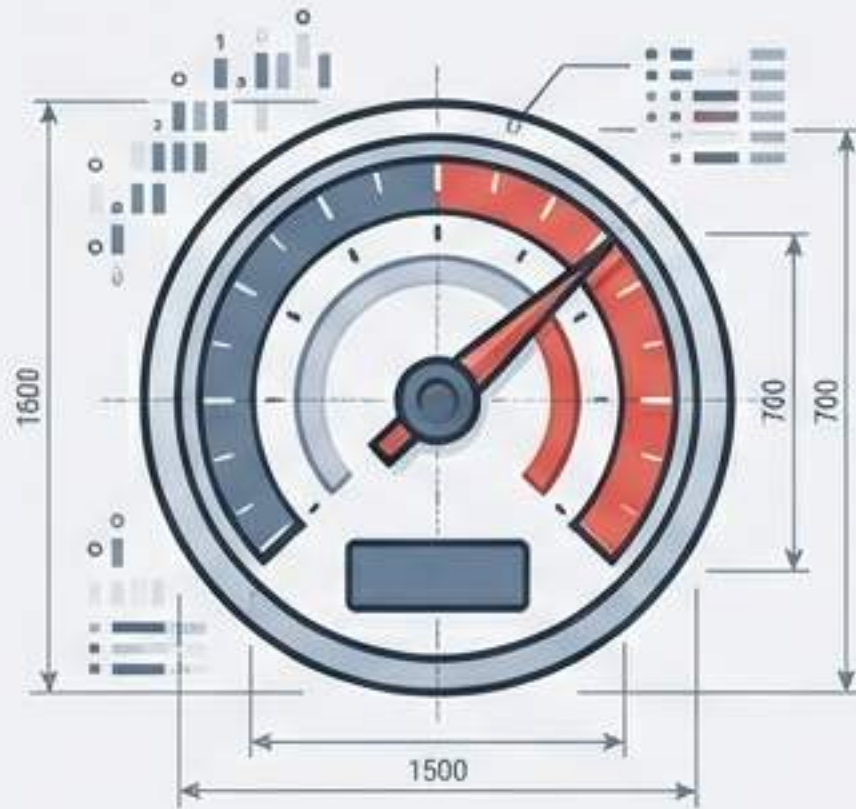
Understanding the QueueBuster Ecosystem

It is more than just a billing counter; it is a comprehensive retail engine.



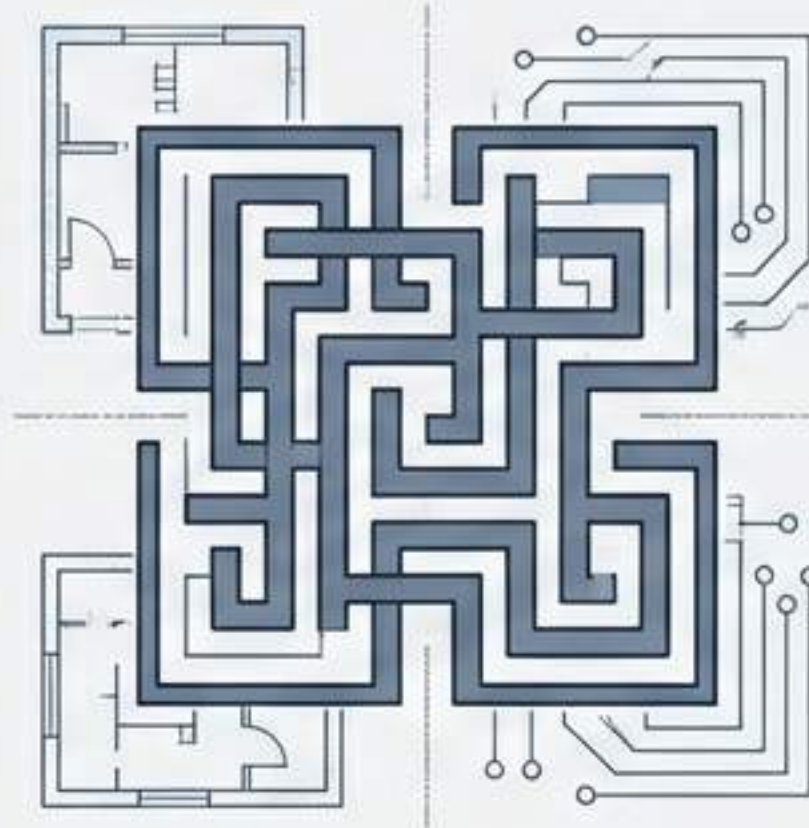
Three Drivers for Redesign

Performance Lag



The application struggled to handle large datasets, making it slow and annoying for customers.

The Navigation Labyrinth



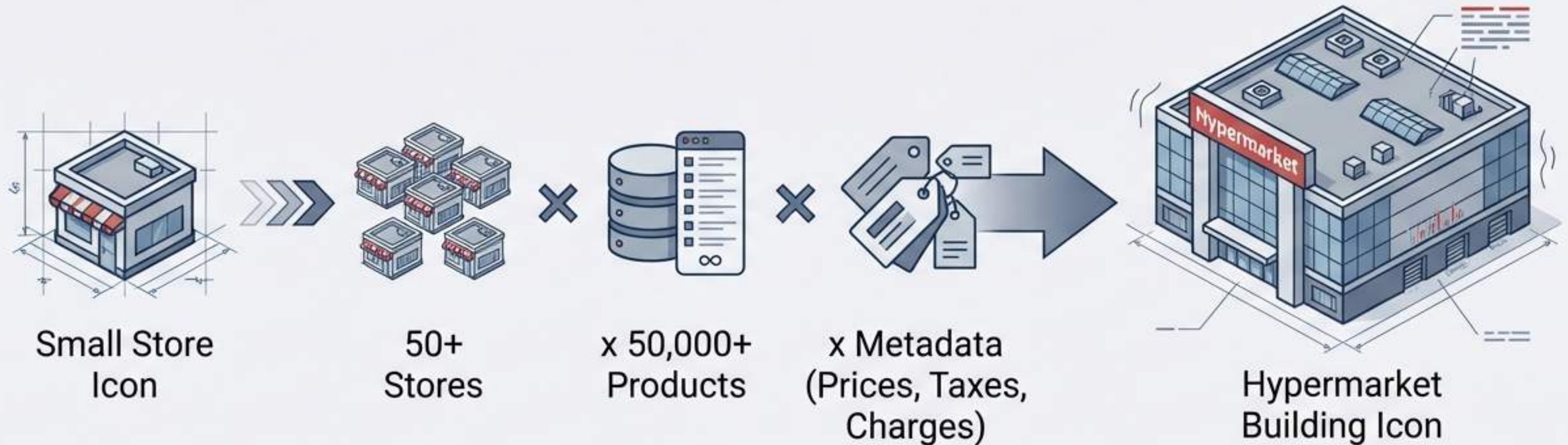
With 11 different modules and crowded sidebars, moving between features was a cumbersome process.

Usability Bottlenecks



Critical workflows in Order Details, Tables, and Product Catalogs required excessive scrolling and cognitive load.

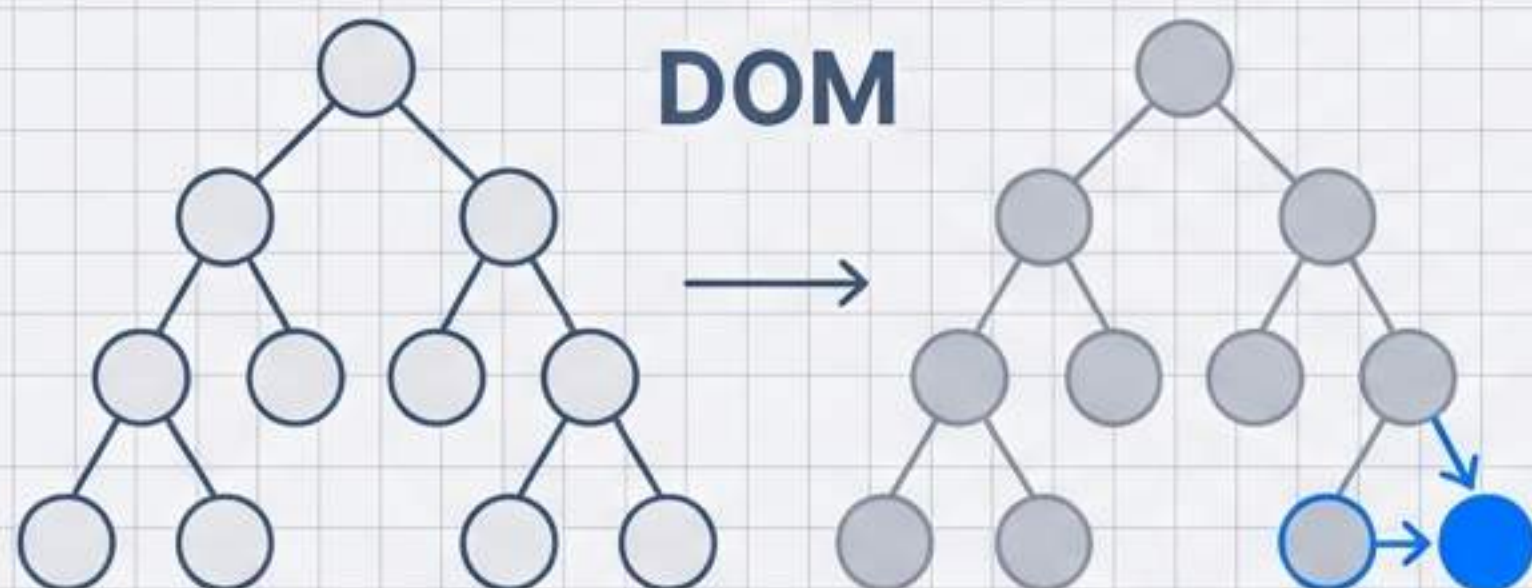
The Scale Problem: “The Walmart Scenario”



The User Impact: Under this weight, the old product became sluggish. A redesign was required not just for aesthetics, but to process massive data loads without user friction.

Architectural Strategy: Solving for Zero Latency

Strategy 1: ReactJS



Efficiently updates and renders only the necessary components when data changes, creating a reactive UI.

Strategy 2: System Fonts



Segoe UI
(Windows)



San Francisco
(Apple)

Switched to System Fonts to achieve 0ms font loading time.



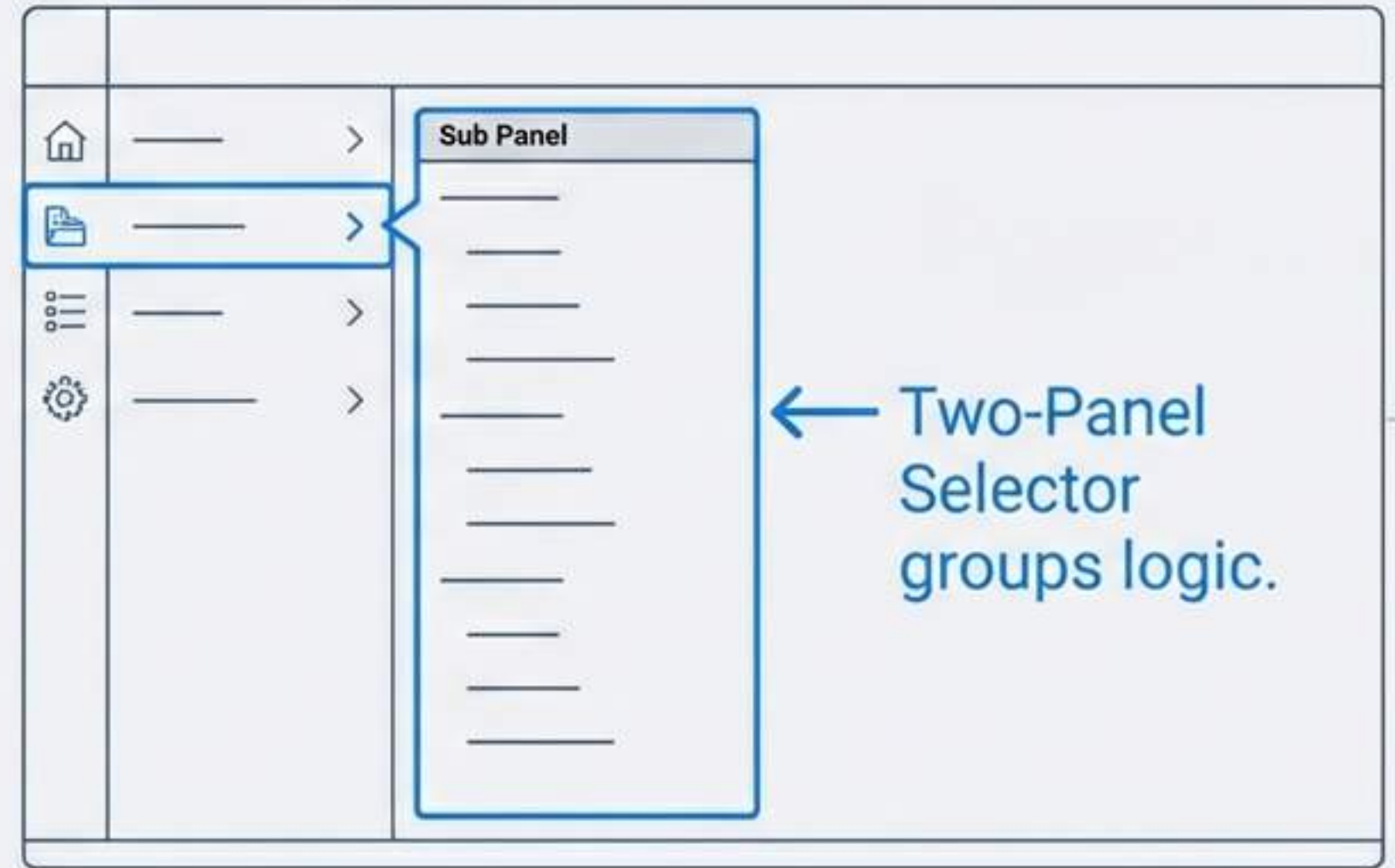
Result: No Flash of Invisible Text (FOIT) or Flash of Unstyled Text (FOUT).

Minimising Cognitive Expenditure in Navigation

Old Design



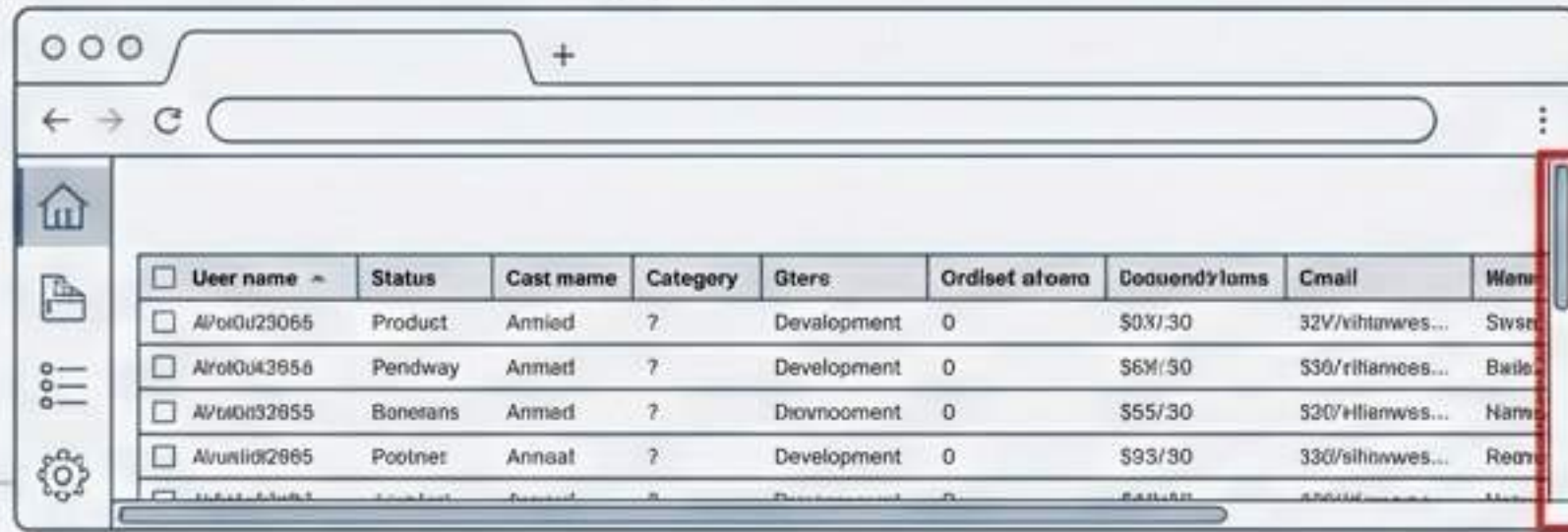
New Design



Most target customers use Windows laptops with poor touchpads. The Two-Panel design minimises the need for precise scroll functions.

Visualising Data: The 'Invisible Scroll' Trap

Before (Old Design)

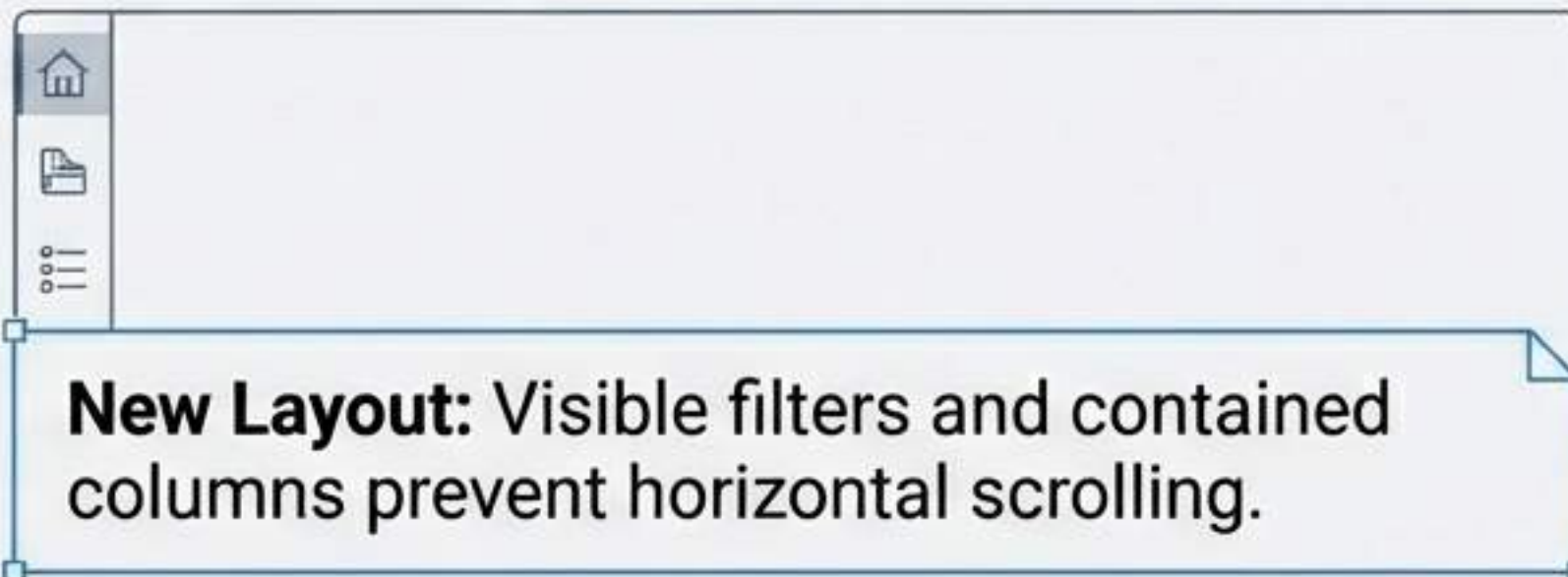


A screenshot of a web application interface. It features a sidebar on the left with icons for home, documents, and settings. The main content area displays a table with the following columns: User name, Status, Last name, Category, Gters, Ordiset atoera, Docuendyloms, Email, and Wene. The table contains four rows of data. A vertical scrollbar is visible on the right side of the table, indicating that the table content extends beyond the visible width of the screen.

User name	Status	Last name	Category	Gters	Ordiset atoera	Docuendyloms	Email	Wene
Al/ot0u23065	Product	Annied	?	Development	0	\$0X/30	32V/vihtawes...	Swst
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User Insight: "I never knew it was scrollable." Critical data hidden off-screen.

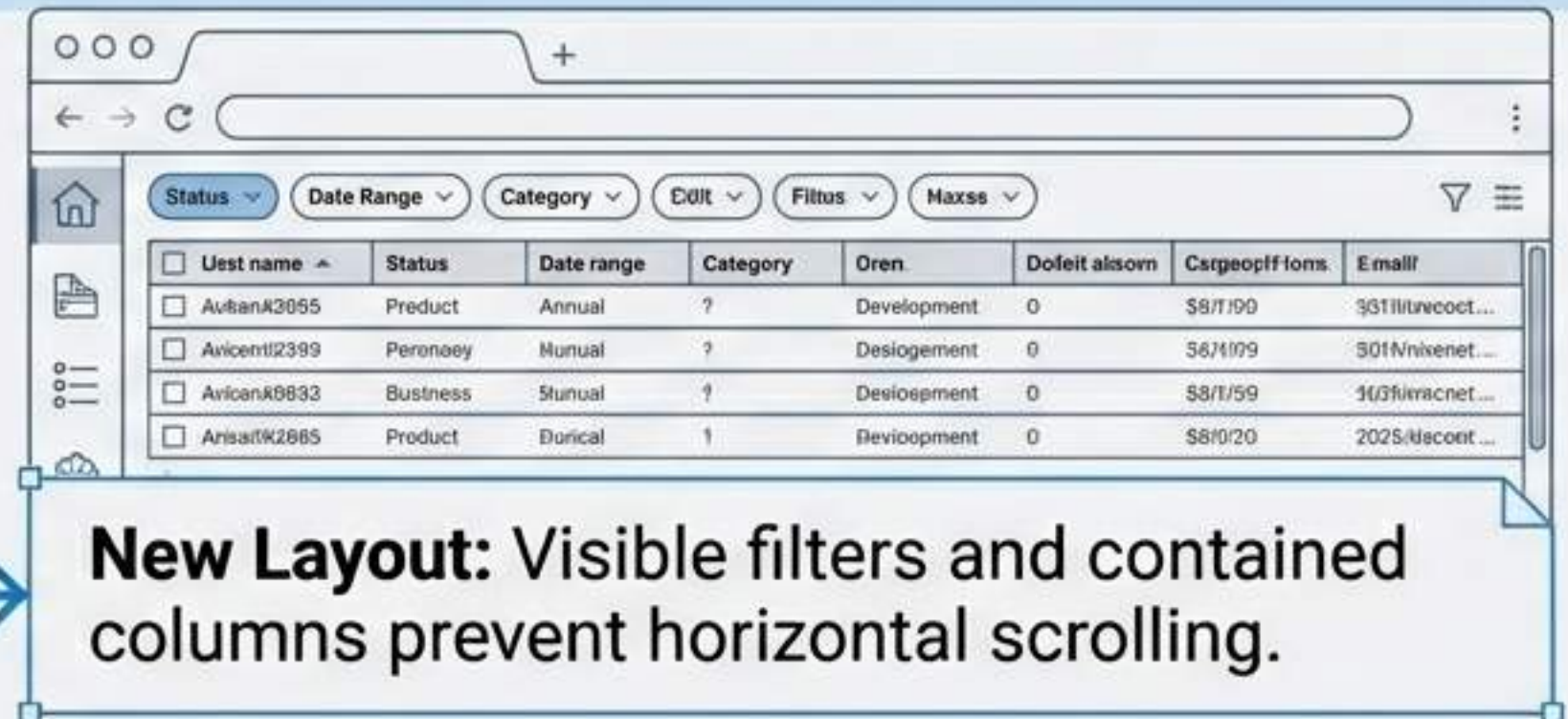
After (New Layout)



A screenshot of the new web application interface. It features a sidebar on the left with icons for home, documents, and settings. The main content area displays a table with the following columns: User name, Status, Date range, Category, Oren, Dofeit alsomn, Cstrgeopffions, and Email. The table contains four rows of data. Above the table, there are several filter buttons: Status, Date Range, Category, Edit, Filter, and Maxse. The table is contained within a fixed-width container, preventing horizontal scrolling.

User name	Status	Date range	Category	Oren	Dofeit alsomn	Cstrgeopffions	Email
AvibanA3055	Product	Annual	?	Development	0	\$8/1/00	331litwcoct...
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New Layout: Visible filters and contained columns prevent horizontal scrolling.



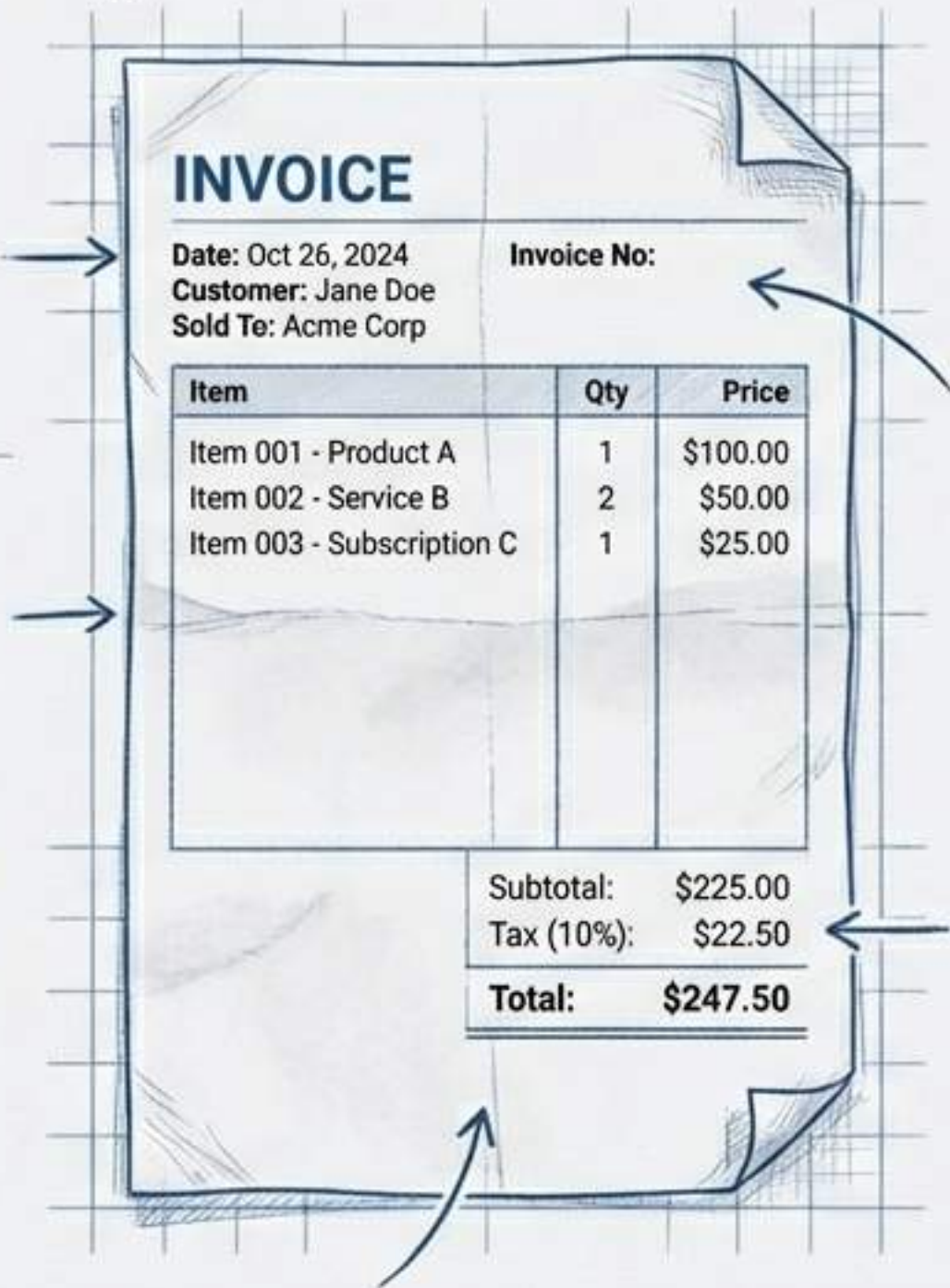
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Matching Mental Models: The Invoice Metaphor

Physical Mental Model



Digital Interface

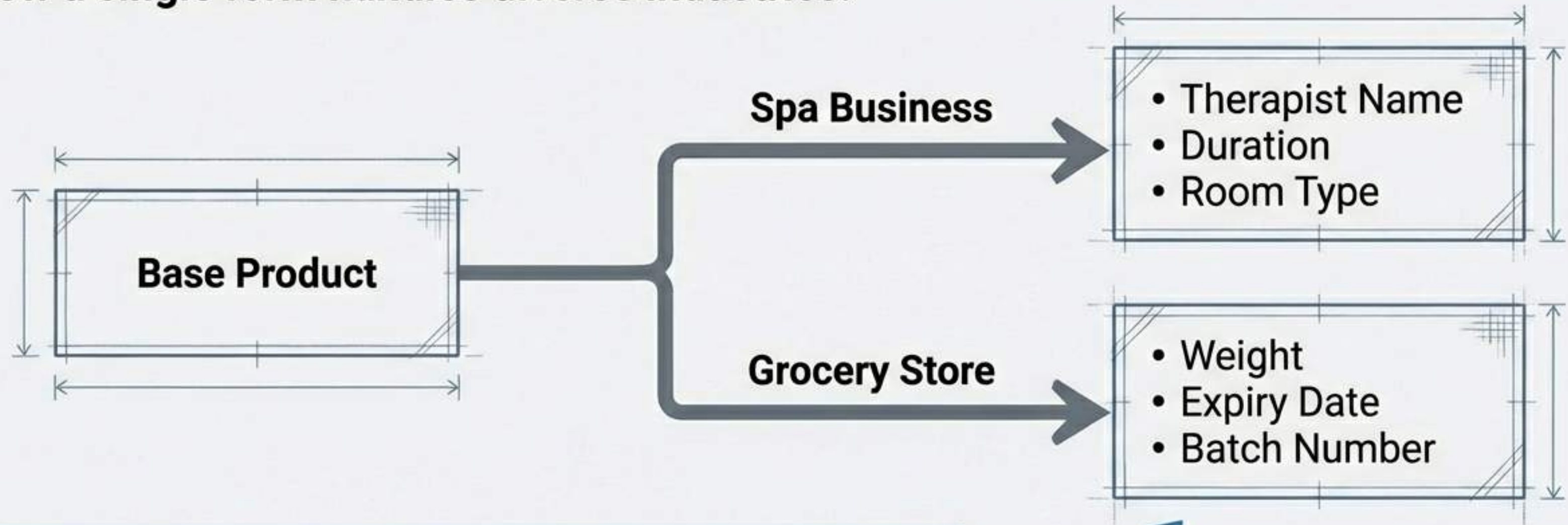


The Old design used abstract rigid tables. The New design mimics a physical

bill, tean bit, reducing cognitive load by matching the paper trail users are accustomed to.

Architecture for Variety: The Attribute System

How a single form handles diverse industries.



Dynamic Attribute System allows seamless inventory management across Retail, Restaurants, and Salons without changing the core code.

Design Insight: The Utility of 'Boring Grey'

High-End Retina Display (Ideal State)

Looks okay, but maybe washed out.

Search or enter text...

Actual Hardware (Low-Cost Windows Laptop)

The white box "pops" clearly against the grey.

Search or enter text...

Testing across 5–10 devices revealed that "Boring Grey" backgrounds offered far superior contrast for text and fields on lower-quality screens compared to stark white.

The Discipline of Standard Patterns

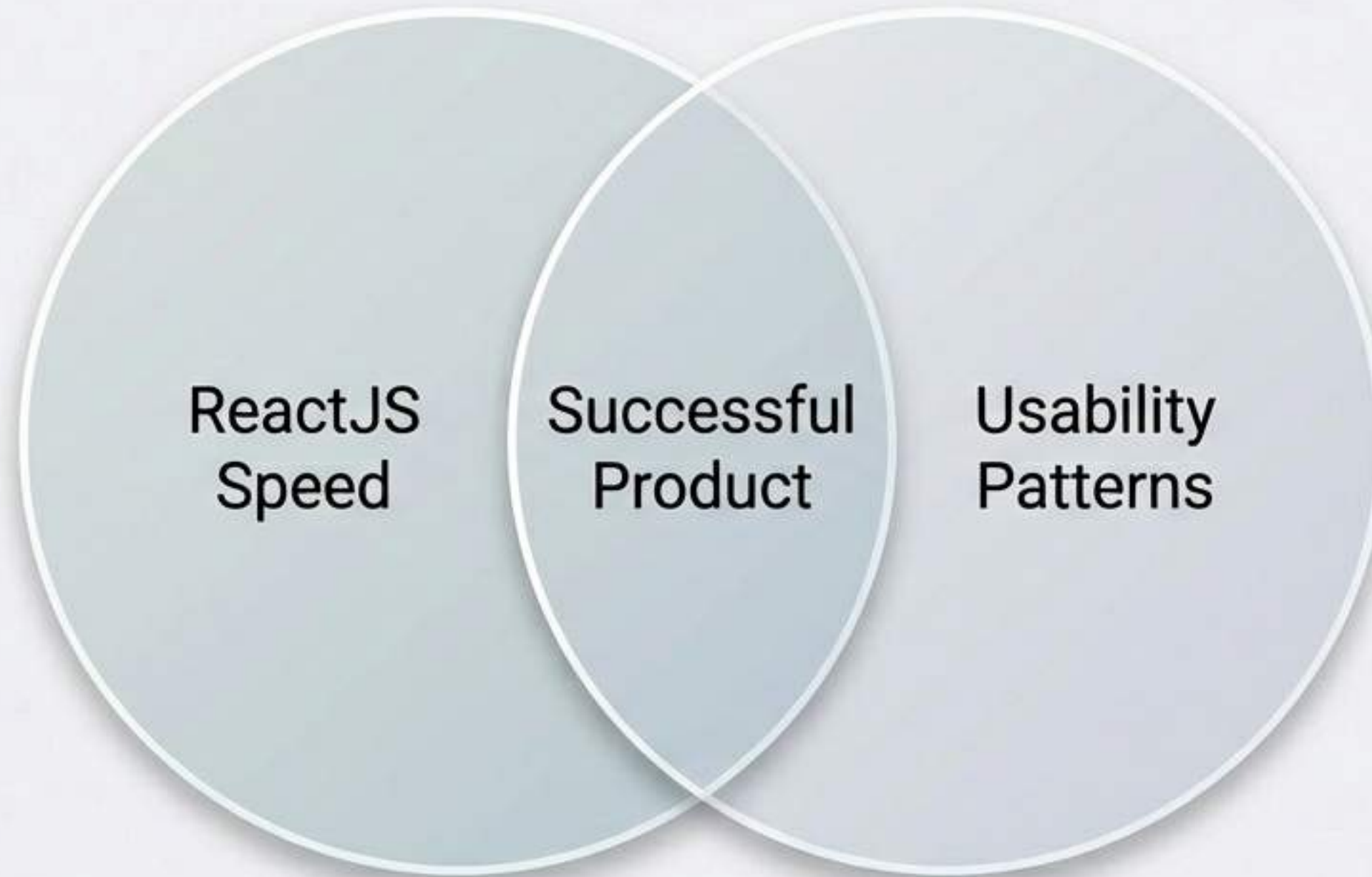
“Tables and forms have 100+ years of research behind them. We cannot break them just to create something new.”

UI Kit Overview
QueueBuster Design System Components

<input type="button" value="Submit"/>	<p>Email Address</p> <input type="text" value="Email Address"/>
<p>Drownow</p> <input type="text" value="Select Option"/>	<input type="checkbox"/> <input type="text" value=""/>
<input checked="" type="checkbox"/> Remember me	<input checked="" type="radio"/> Individual <input type="radio"/> Business

- Created a Design Library for scale.
- Conducted heuristic evaluations.
- Prioritised tried-and-tested patterns (Google, Apple) over novelty.

Summary & Impact



There is no point in making a 'great' UI if the user cannot reach their goal. Success required a tight loop between design and engineering to merge technical performance with human-centric usability.