QueueBuster: Redesigning for Scale

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

A UX CASE STUDY

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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.

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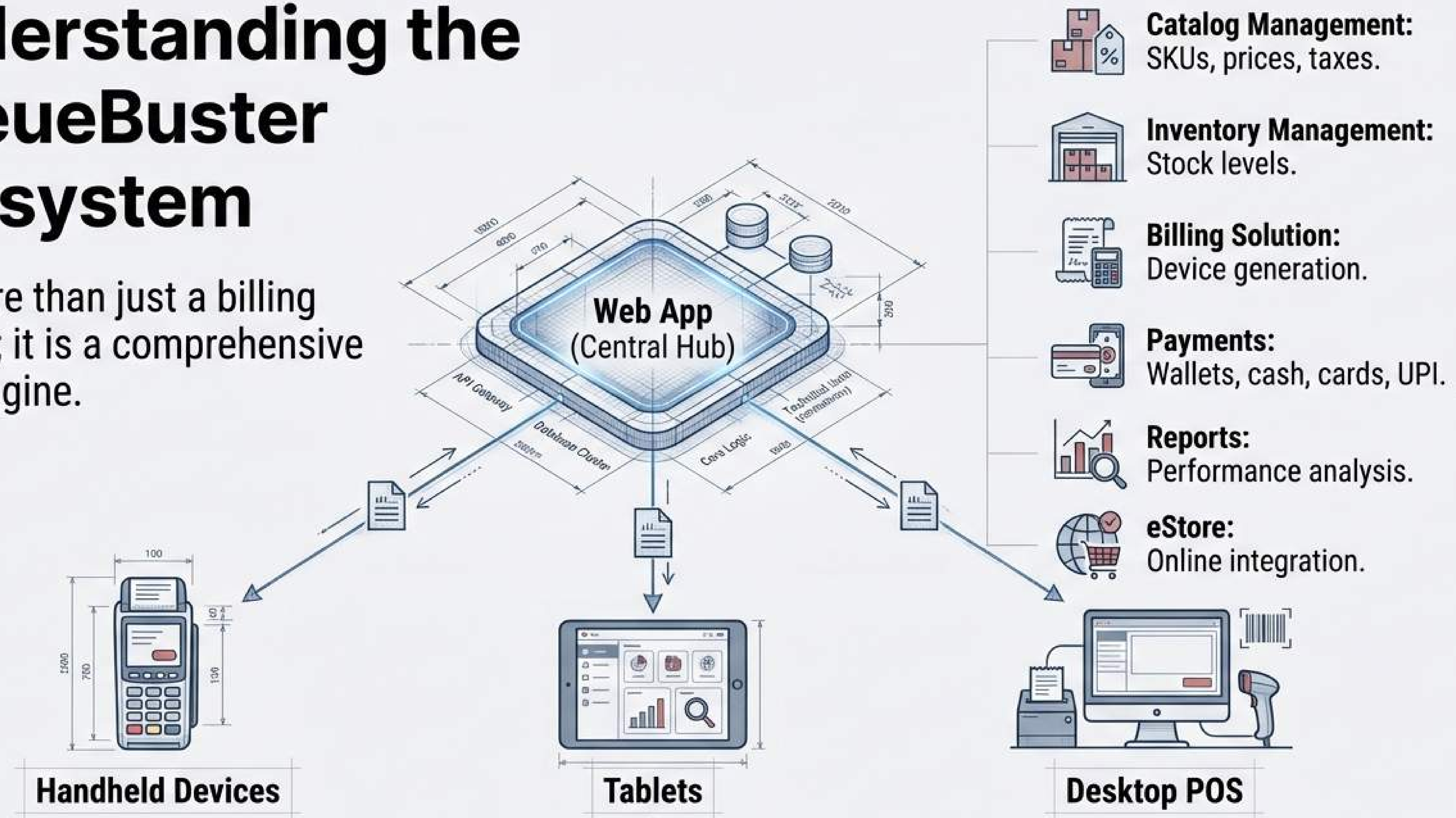
Understanding the QueueBuster Ecosystem

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



Catalog Management: SKUs, prices, taxes.

Inventory Management: Stock levels.

Billing Solution: Device generation.

Payments: Wallets, cash, cards, UPI.

Reports: Performance analysis.

eStore: Online integration.

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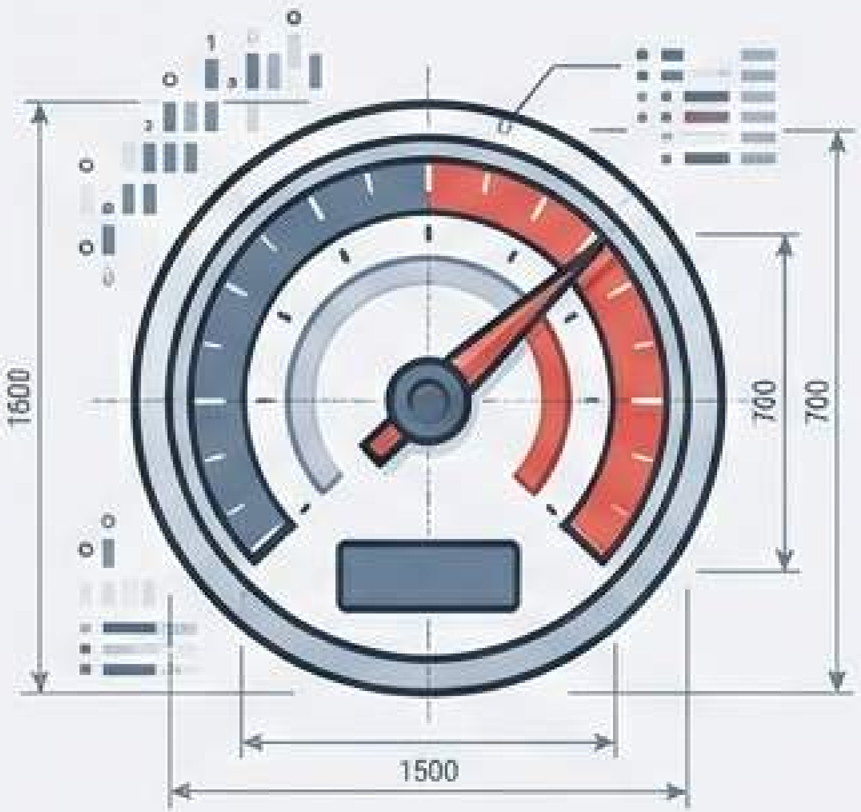
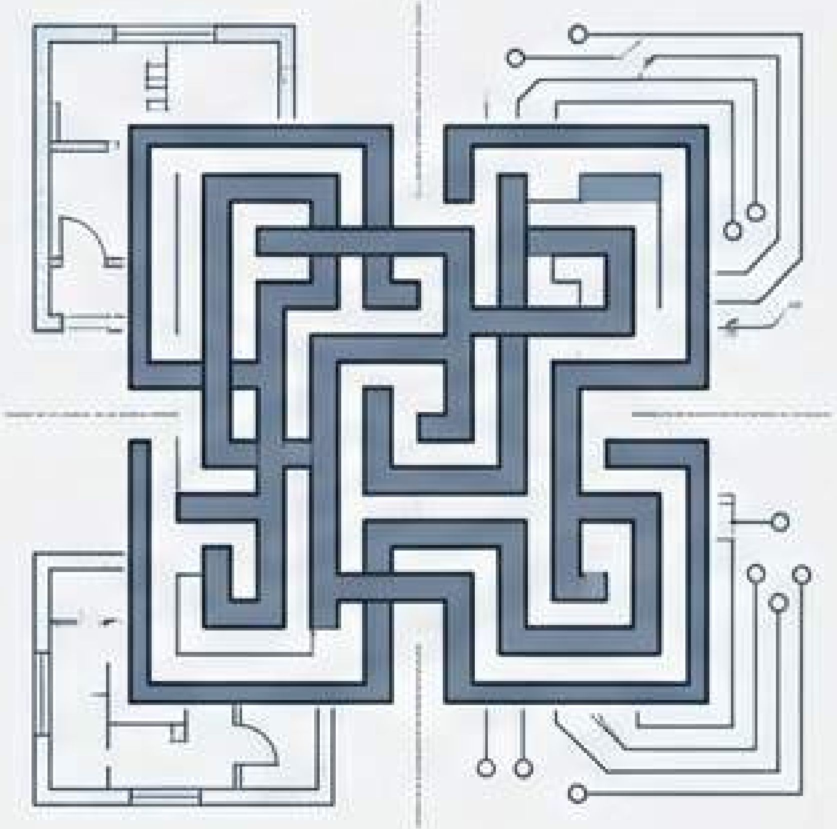
Three Drivers for Redesign

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.

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The Scale Problem: “The Walmart Scenario”

Hypermarket

Small Store Icon

50+ Stores

x 50,000+ Products

x Metadata (Prices, Taxes, Charges)

Hypermarket Building Icon

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.

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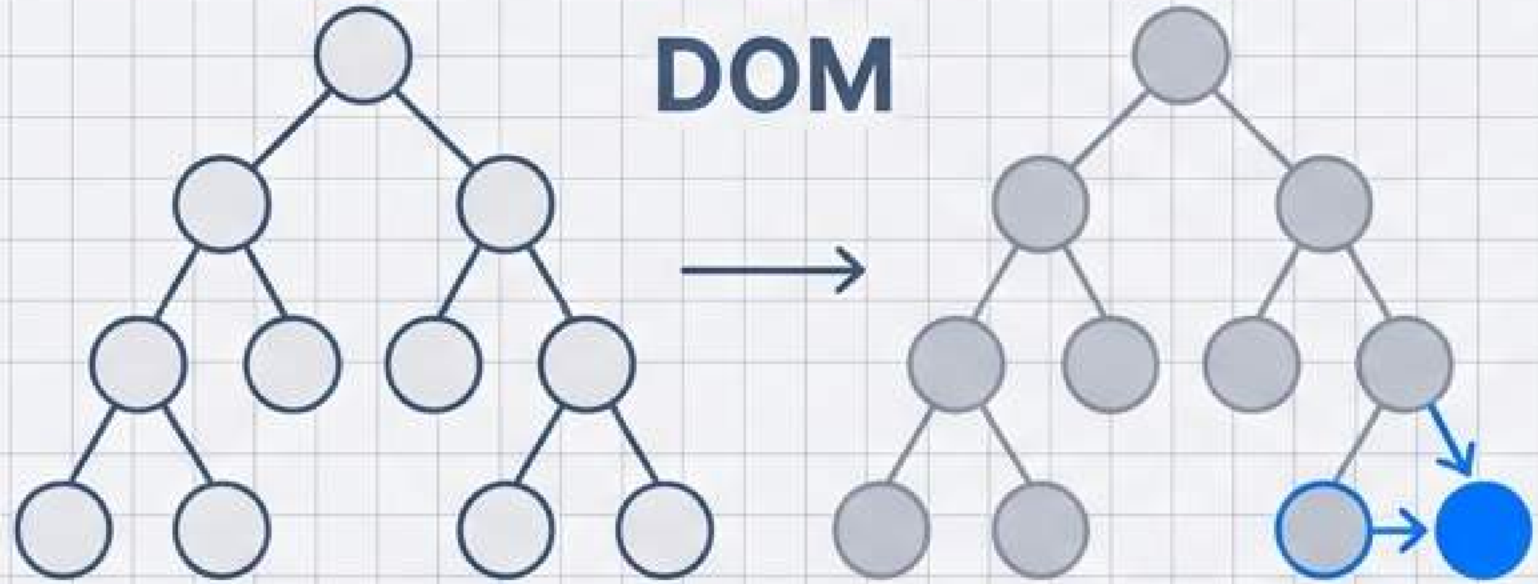
Architectural Strategy: Solving for Zero Latency

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).

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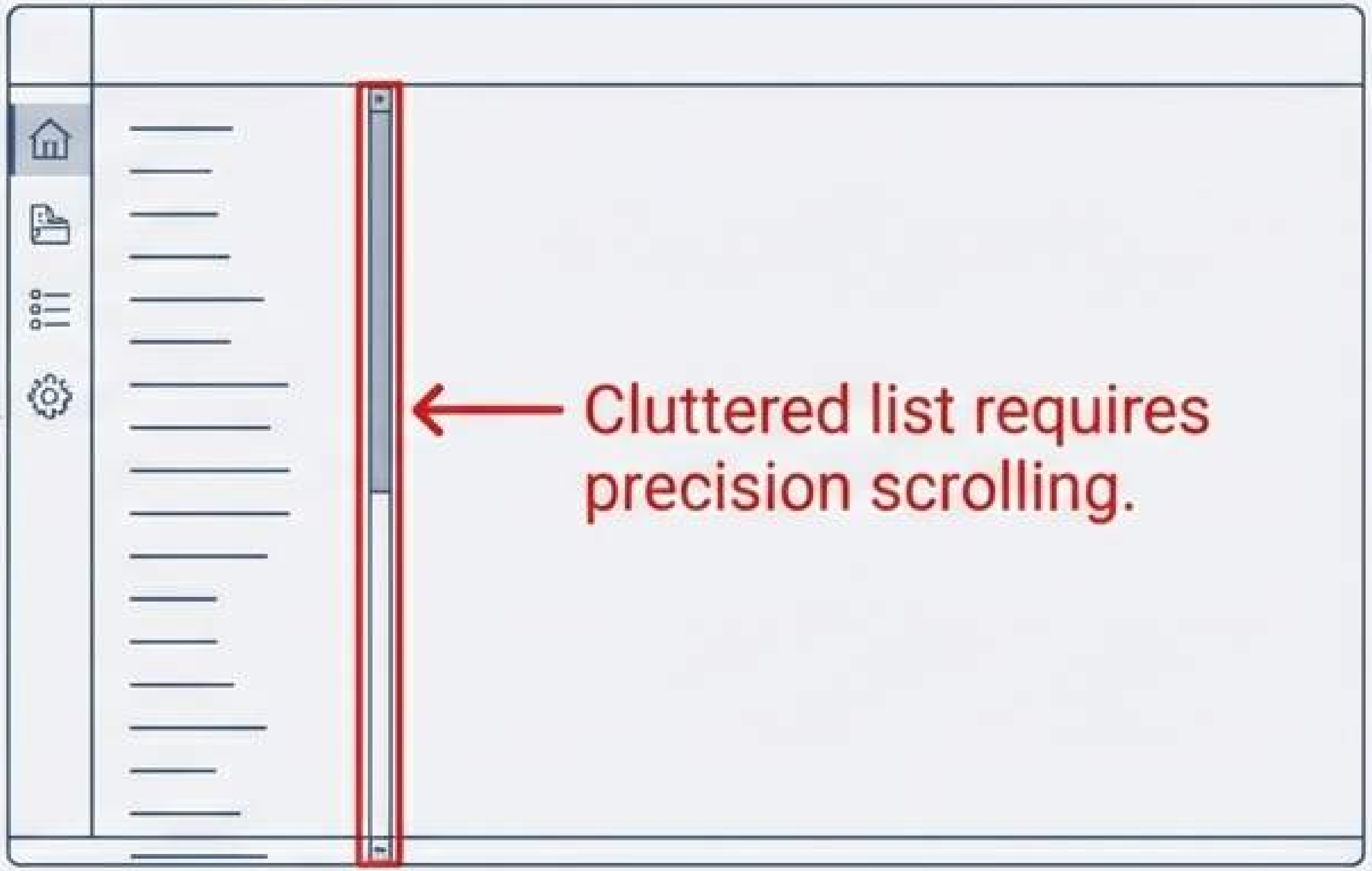
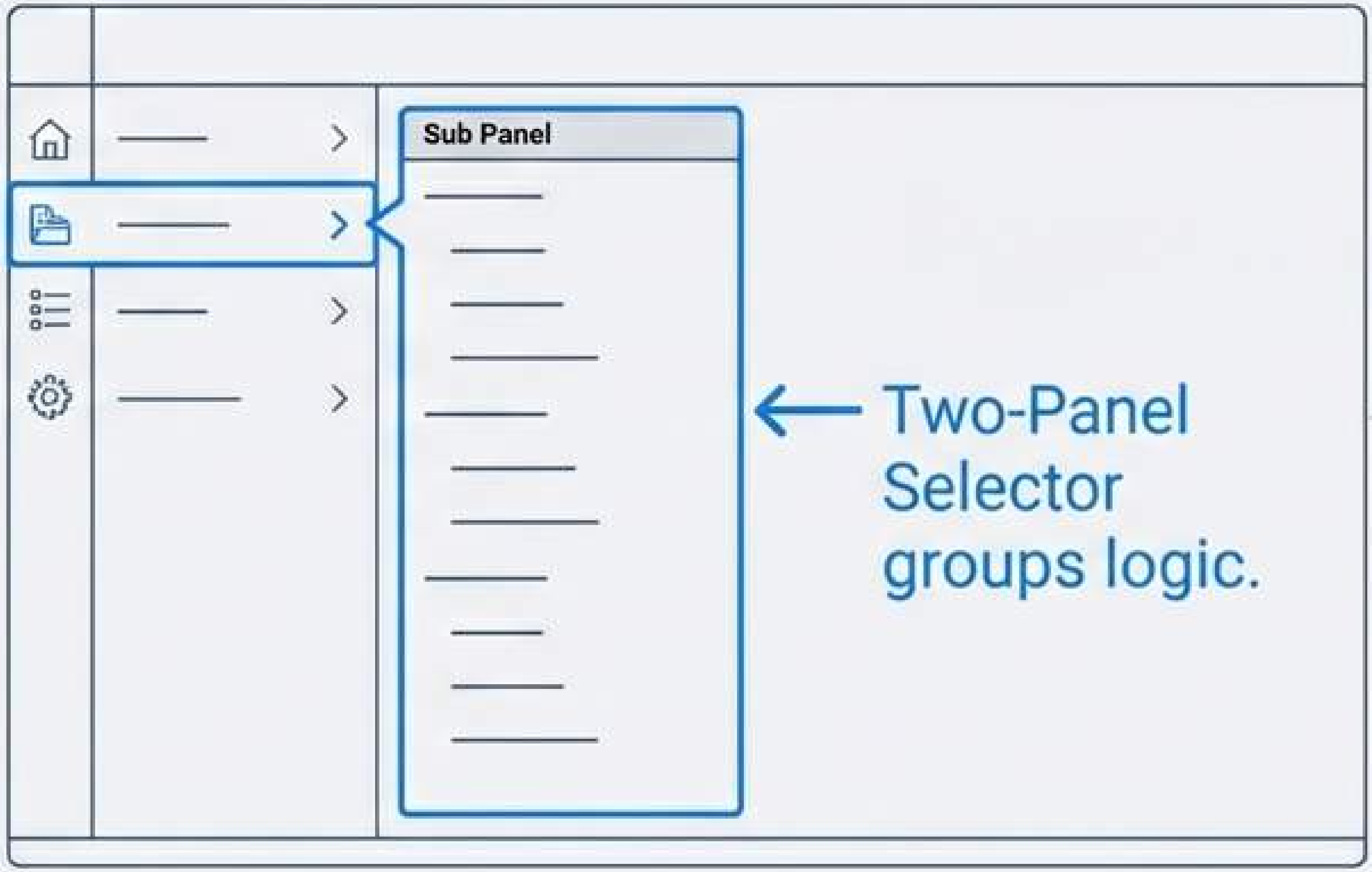
Minimising Cognitive Expenditure in Navigation

Old Design


Cluttered list requires precision scrolling.

New Design



Two-Panel Selector groups logic.

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

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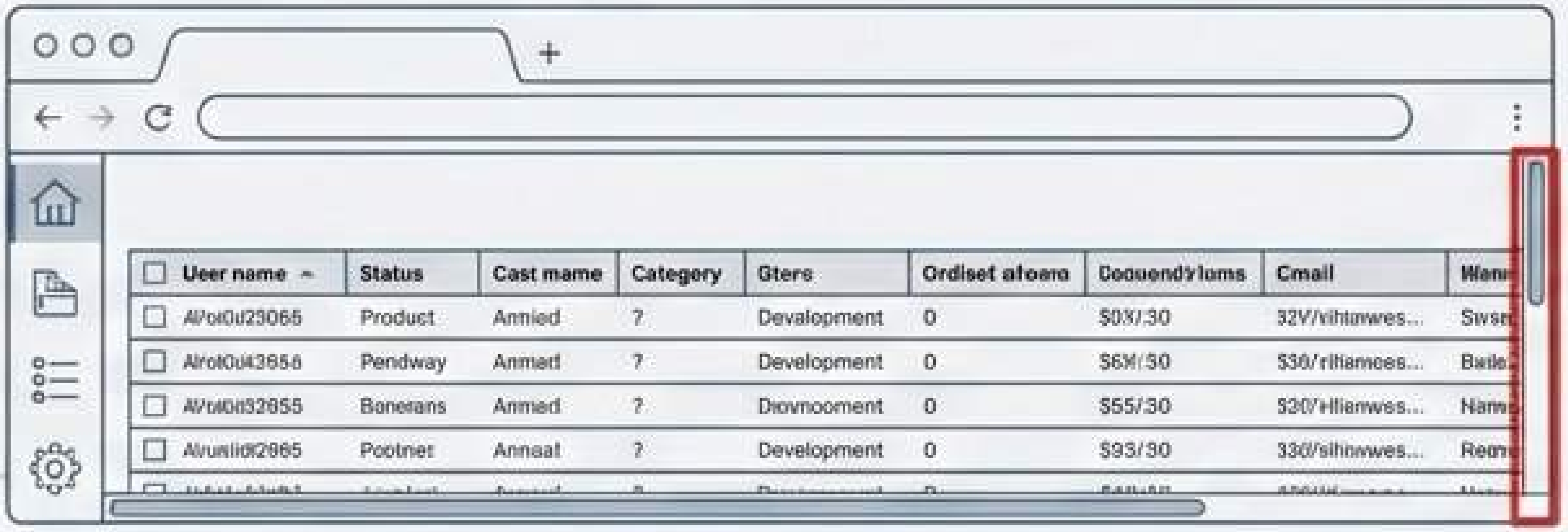
Visualising Data: The ‘Invisible Scroll’ Trap

Before (Old Design)



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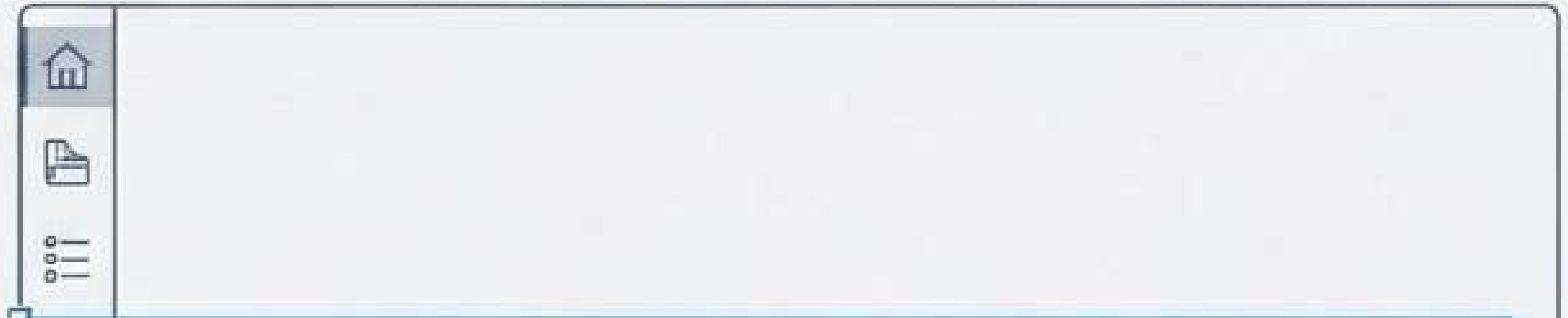
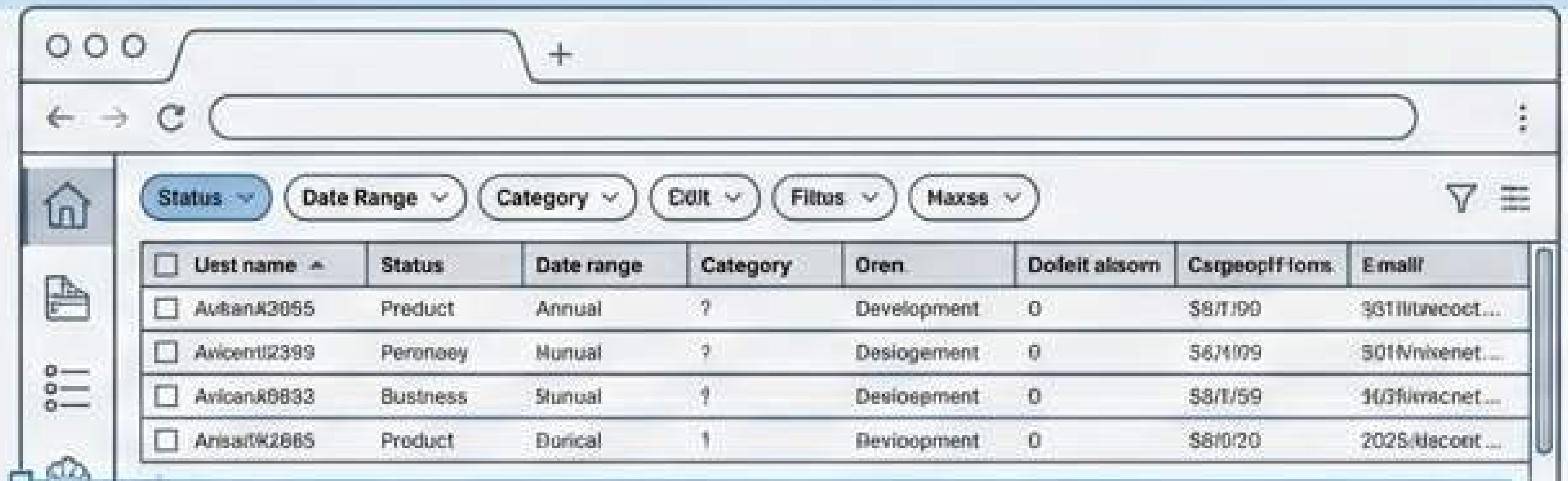
User Insight: “I never knew it was scrollable.” Critical data hidden off-screen.

After (New Layout)





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New Layout: Visible filters and contained columns prevent horizontal scrolling.

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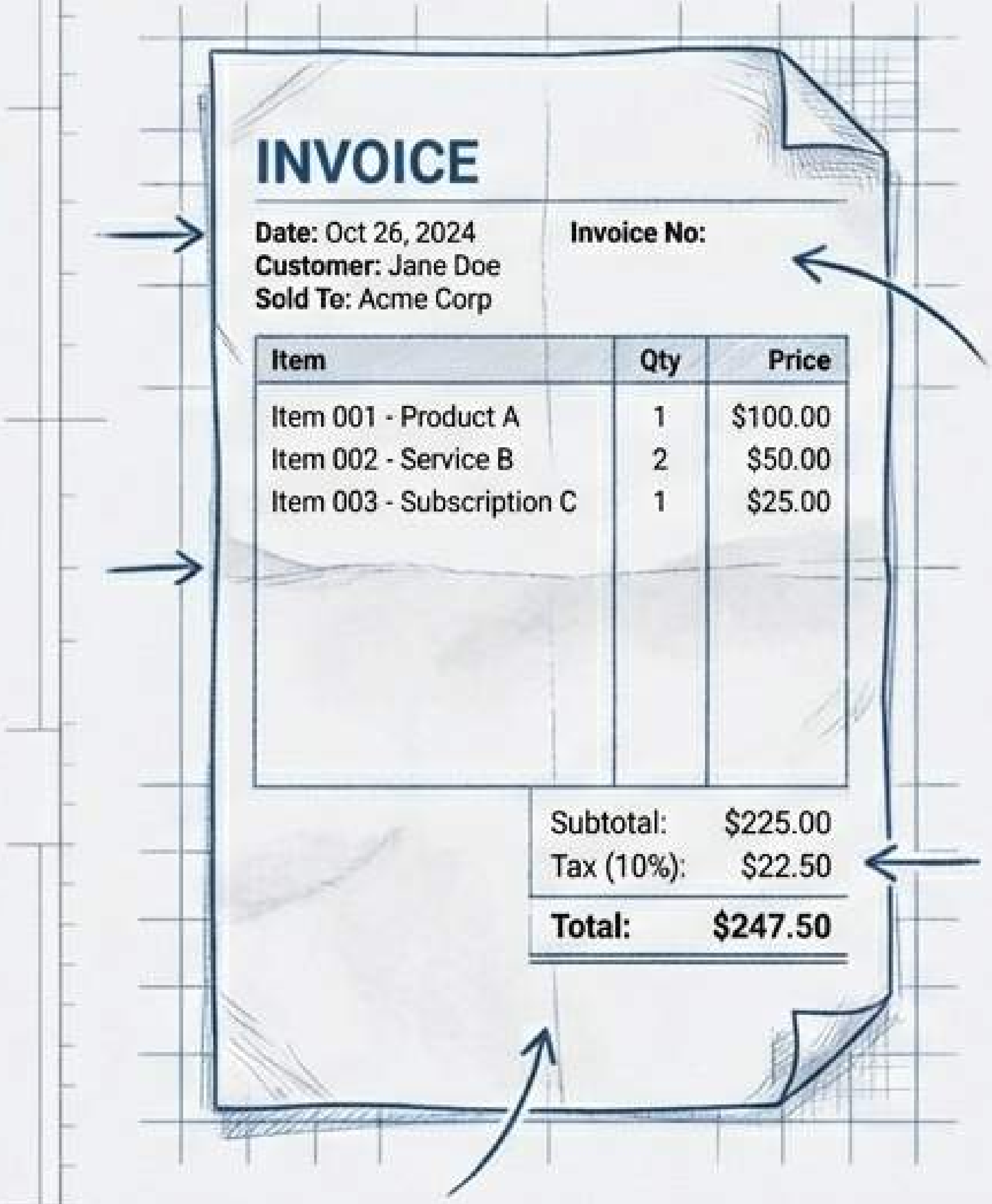
Matching Mental Models: The Invoice Metaphor

Physical Mental Model



INVOICE

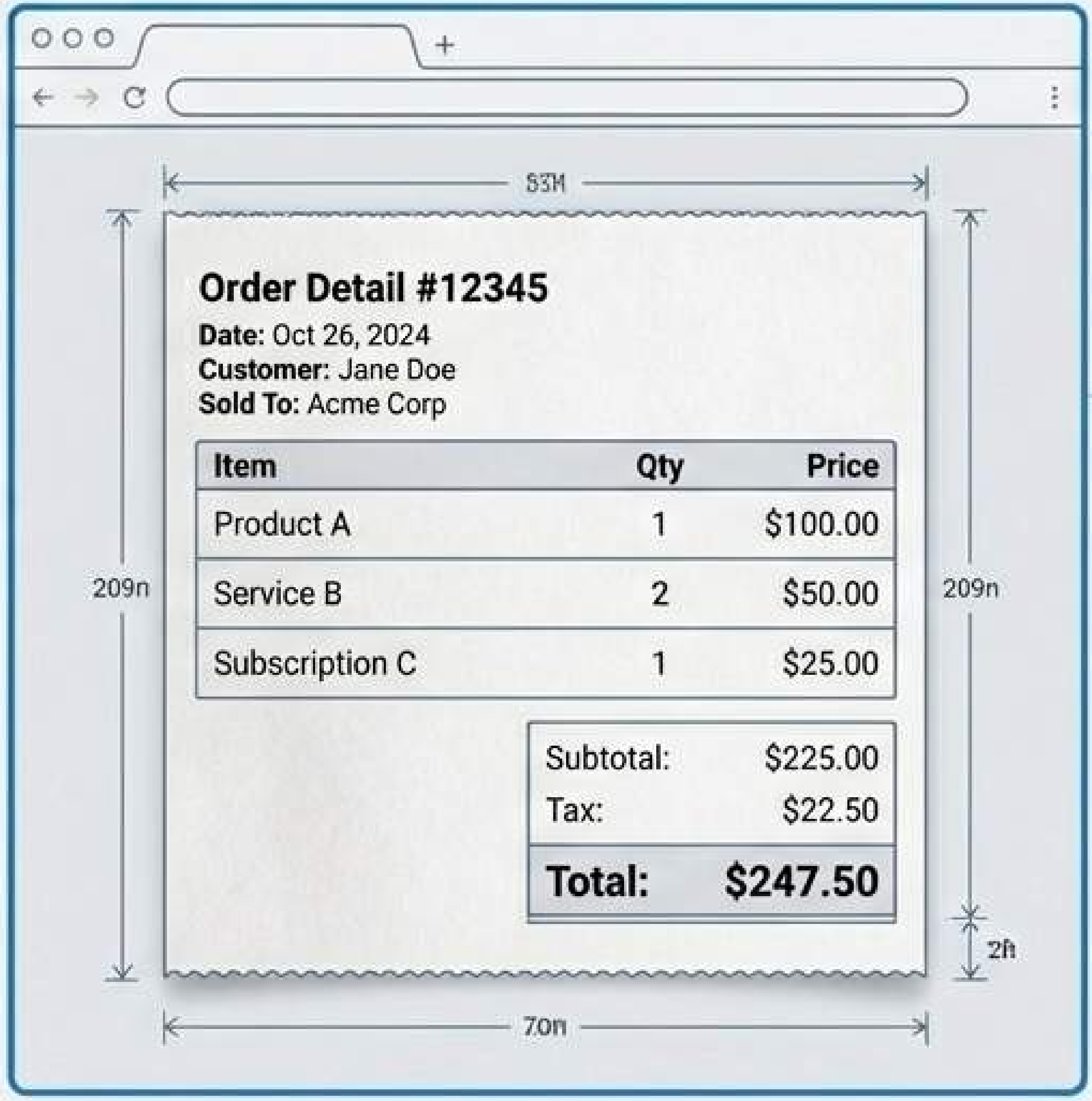
Date: Oct 26, 2024 **Invoice No:**
Customer: Jane Doe
Sold To: Acme Corp

Item	Qty	Price
Item 001 - Product A	1	$100.00
Item 002 - Service B	2	$50.00
Item 003 - Subscription C	1	$25.00

Subtotal:	$225.00
Tax (10%):	$22.50
Total:	**$247.50**

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.

Digital Interface



Order Detail #12345

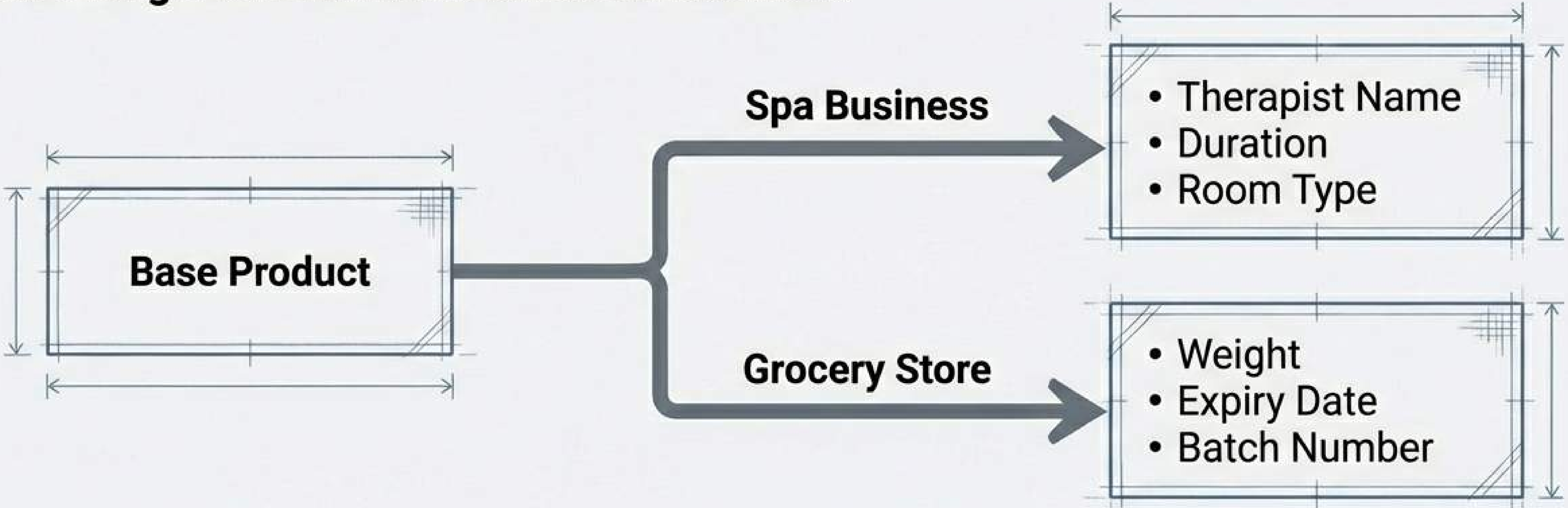
Date: Oct 26, 2024
Customer: Jane Doe
Sold To: Acme Corp

Item	Qty	Price
Product A	1	$100.00
Service B	2	$50.00
Subscription C	1	$25.00

Subtotal:	$225.00
Tax:	$22.50
Total:	**$247.50**

Architecture for Variety: The Attribute System

How a single form handles diverse industries.



- Therapist Name
- Duration
- Room Type

- Weight
- Expiry Date
- Batch Number

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

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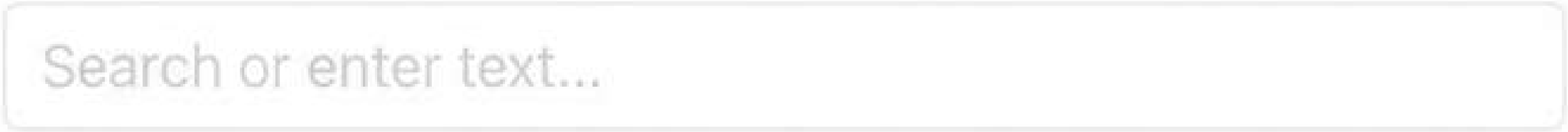
Design Insight: The Utility of ‘Boring Grey’

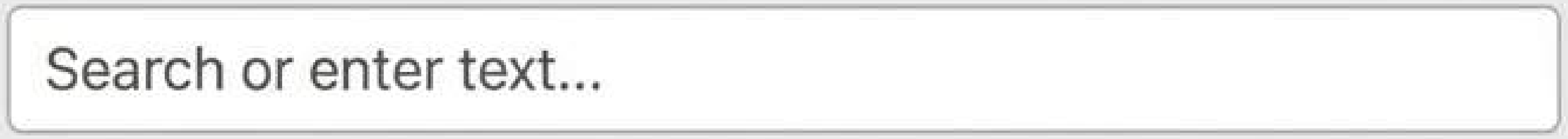
High-End Retina Display (Ideal State)

Looks okay, but maybe washed out.



Actual Hardware (Low-Cost Windows Laptop)

The white box “pops” clearly against the grey.



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.

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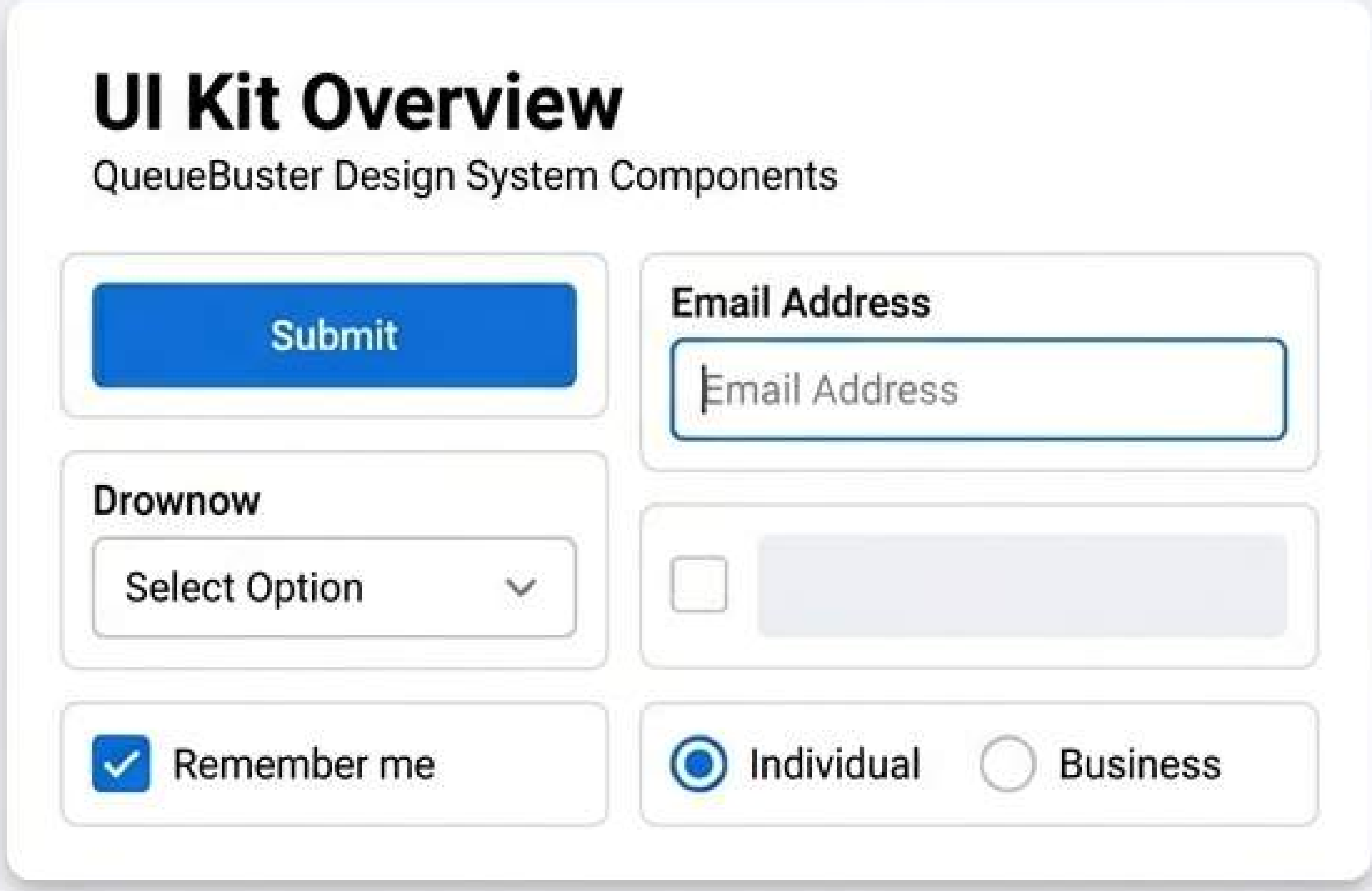
The Discipline of Standard Patterns

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



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

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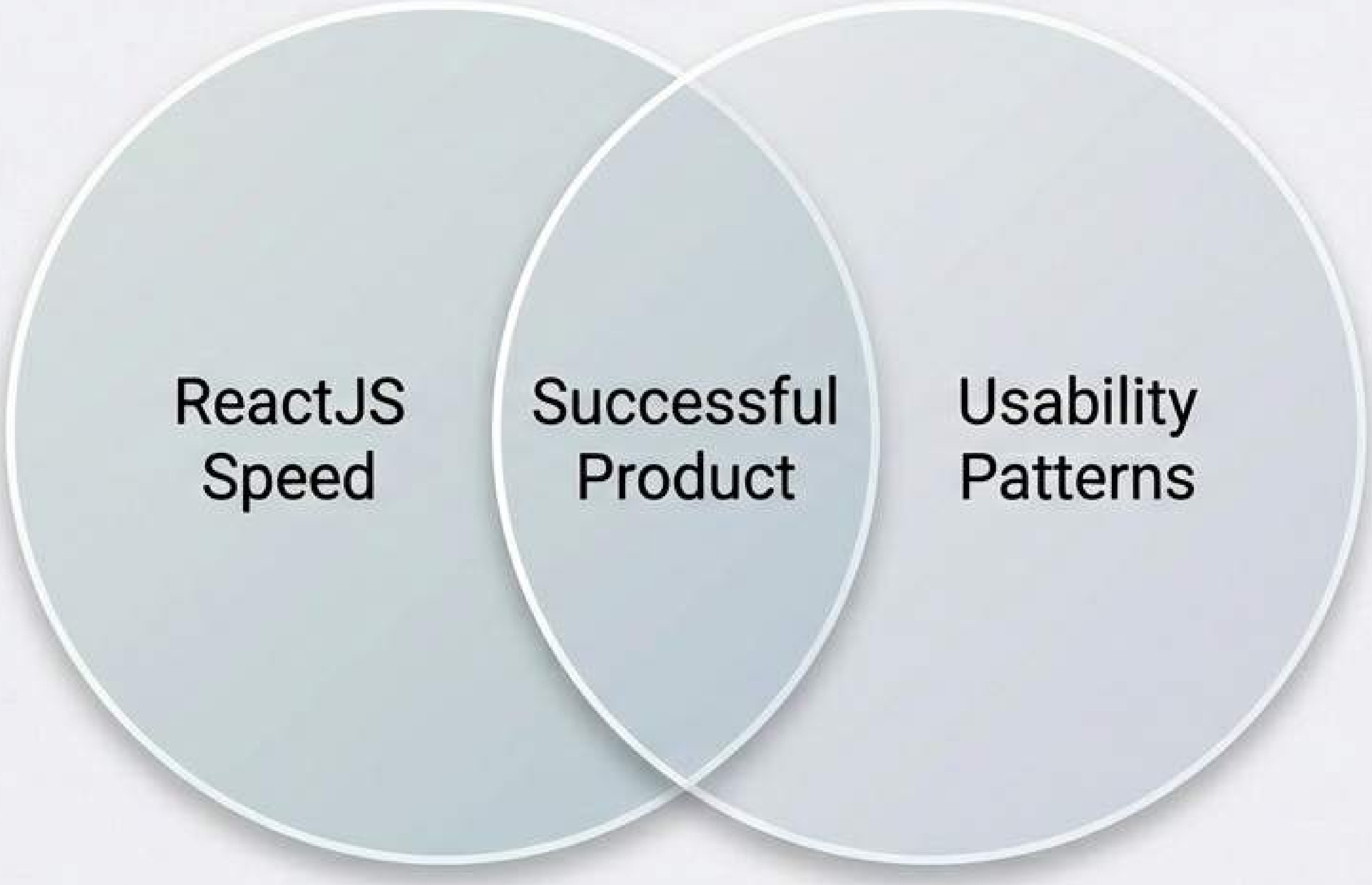
Summary & Impact



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.

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