

PRODUCT

Melville Candy - ERP Database

PRODUCT TYPE

ERP Tool

PROBLEM STATEMENT

As an enterprise stakeholder, I want a centralized ERP database that consolidates and links overlapping processes across sales, production, and design, so I can ensure data consistency, improve cross-department collaboration, and make faster, more informed business decisions.

PLATFORM

Filemaker Desktop App

USER BASE

Internal Sales Teams & Production Staff

TIMELINE

July 2015 - May 2021

ABOUT

This enterprise ERP database centralizes and connects shared processes across sales, production, and design teams into a single source of truth. By linking data and workflows across departments, it improves collaboration, reduces inconsistencies, and supports more efficient, informed business operations.



My Roles & Contributions

Filemaker Developer

- Established Database Architecture
- Built Custom Tool Key Features
- Configured Data Relationships

UX Designer

- Designed & built user interfaces
- Optimized product data architecture
- Established key data sources

QA / Test Planner

- Contributed to QA strategy
- Planned test execution cycles
- Ensured overall product quality

**Key Decision Factors**

**ORGANIZATIONAL NEEDS**

A shared database and linked workflows across sales, production, and design to reduce duplication and improve operational consistency.

**USER CONSIDERATIONS**

Busy users needed simple forms, low cognitive load, and permissions aligned to departmental responsibilities.

**CONSTRAINTS & PARAMETERS**

Legacy systems, departmental data silos, and operational dependencies limited how quickly processes could be standardized.

**MEASURES OF SUCCESS**

Departments used consistent data, reduced handoff errors, and produced accurate reports without manual reconciliation.

**PRODUCT CORE FEATURES OVERVIEW**



**The Product:**

Melville Candy is a manufacturing company located just outside of Boston.

They produce custom food products that are tailored to the requirements of each client.

As the company grew, they needed a way to record and access all of their accumulated custom order data.

To solve this problem, I developed a fully custom ERP database for Melville Candy, that allowed all departments to record, retrieve and recall data through a shared system.

The ERP I designed gave all departments the ability to record pertinent data, as well as export PDFs and excel files of recipes, quotes, sales reports, price lists, and order specifications.



## ∞ End-to-End Workflow

### EVALUATE BUSINESS NEEDS

Assessed business drivers: operational efficiency, reporting accuracy, and reduced rework across departments.

### EVALUATE USER NEEDS & PAIN POINTS

Identified pain points in handoffs, duplicate entry, and inconsistent terminology.

### DEFINE SCOPE & EXPECTATIONS

Defined shared fields, data governance, and integration boundaries with legacy tools.

### CONFIGURE CONTENT & DEVELOP SOLUTION APPROACHES

Designed linked workflows and standardized forms with validation and shared reference data.

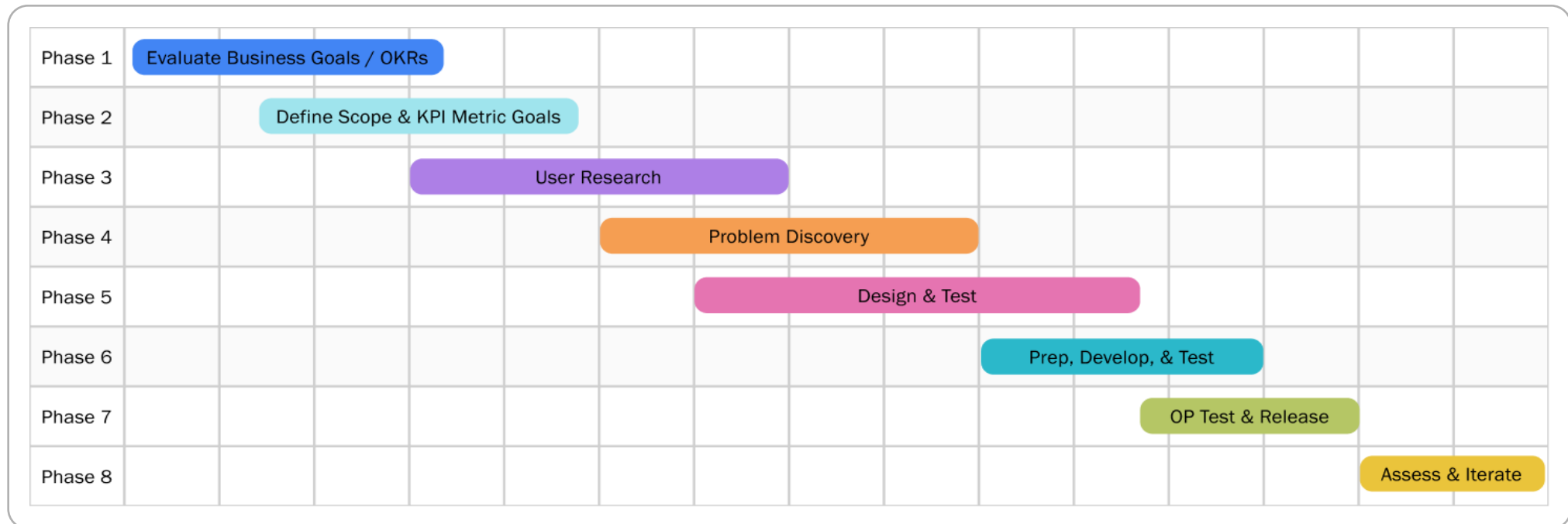
### CONDUCT USER RESEARCH & PROBLEM DISCOVERY

Conducted stakeholder interviews and process mapping workshops across sales, production, and design.

### MEASURE OUTCOMES & ITERATE

Measured error rates and throughput, iterating forms and rules to reduce friction.

## CONTINUOUS IMPROVEMENT WORKFLOW PHASES



Design Decision Highlights

KEY DESIGN CHOICES

Standardized core records, guided forms, and linked workflows that mirrored real cross-department handoffs.

WHY I MADE THESE CHOICES

My initial designs were based on user interviews and focused on collecting and recording as much product data as possible.

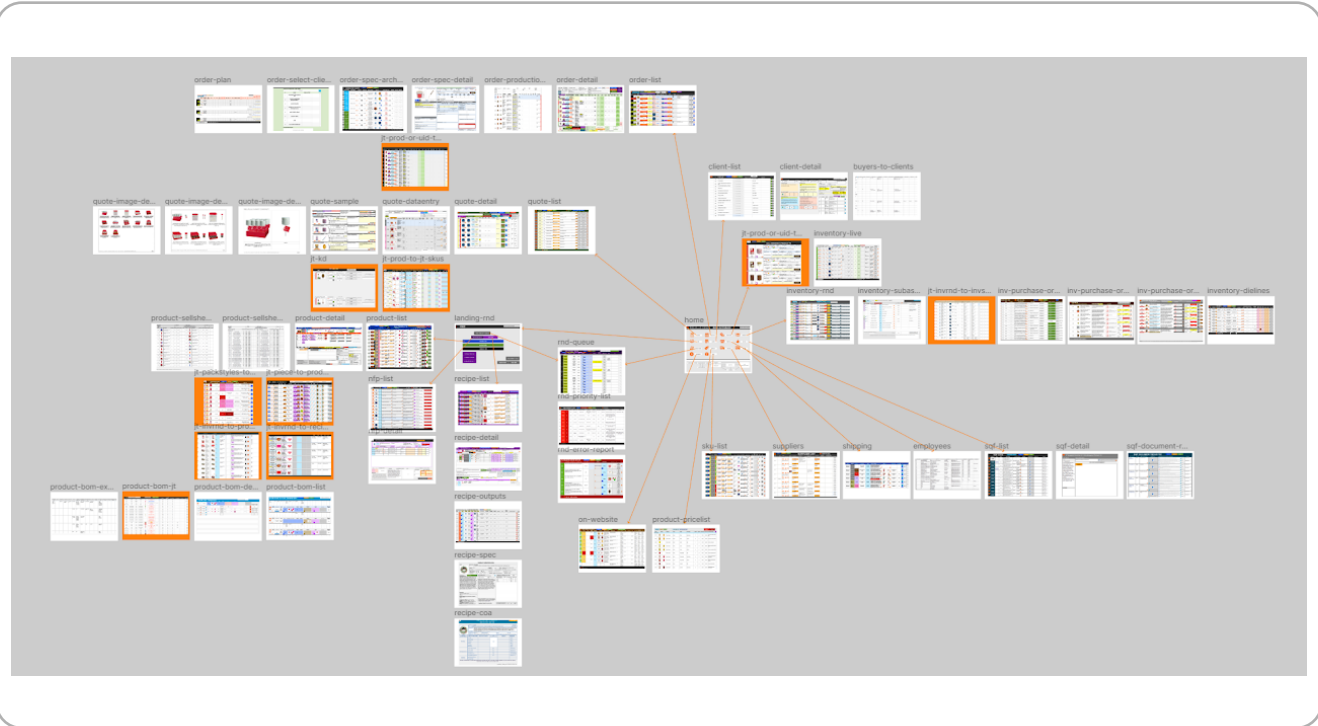
WHAT I INTENTIONALLY OMITTED

Non-critical custom fields and complex workflows that weren't used frequently or added confusion.

WHY THESE CHOICES MATTERED

Cleaner data and clearer handoffs reduced operational delays and improved decision confidence.

KEY DESIGN COMPONENTS



Design Process Elements

USER RESEARCH



**Margaret Nuyen**  
 Age: 34  
 Education: Some College  
 Hometown: Boston, MA  
 Family: Son 12, Daughter 8  
 Occupation: Packaging Supervisor

"We process almost 1000 orders some days, and it only makes it harder if we don't have all of the materials and info in one place."

Goals

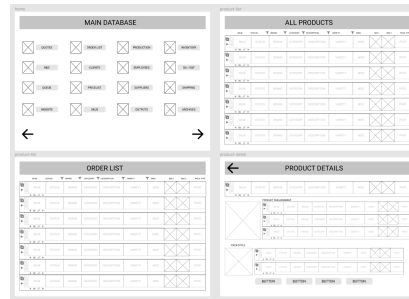
- Have an easy way to organize hundreds of custom orders.
- Meet her daily packaging production quotas.
- Train her staff to all use the same process.

Frustrations

- "I cannot manually sort the orders each day it will take too long"
- "we have some automated processes but they sometimes make things harder."
- "If we have to stop to find missing information then we will probably not make the ship dates."

Margaret has been a Packaging Supervisor for 4 years and works 40+ hours a week. She manages a team of 10 workers that pack custom candy orders each day. Margaret has the daily task of making and packing custom candy orders, and needs a way to quickly deliver the order data to her staff to make the custom orders before packing and shipping the orders to their final destination.

PROTOTYPES



DATA ARCHITECTURE



Impact Snapshot

BEFORE REDESIGN

One of the main goals of the ERP was to replace the outdated and inadequate system that was being used. Below on the left is an example of the production slip that was traditionally given to the production staff. There were no images, and not enough fields to properly deliver all of the necessary data.

BEFORE

AFTER REDESIGN

The example below on the right is the final refined production slip design that proved successful in making order processing much more efficient. A consolidated ERP improved collaboration, reduced errors, and enabled faster, more accurate reporting.

AFTER REDESIGN

| ORDER               | 8322                    | V | 3 | CLIENT | UNIVERSAL STUDIOS | PO# | 83832 | SO# | 8818 | SHIP | 11/10/20 | CANCEL | 11/25/20 |
|---------------------|-------------------------|---|---|--------|-------------------|-----|-------|-----|------|------|----------|--------|----------|
| BILL TO             | UNIVERSAL STUDIOS       |   |   |        |                   |     |       |     |      |      |          |        |          |
| SHIP TO             | UNIVERSAL STUDIOS       |   |   |        |                   |     |       |     |      |      |          |        |          |
| TERMS               | 3% Immediate Pay        |   |   |        |                   |     |       |     |      |      |          |        |          |
| NOTES               | See below for each item |   |   |        |                   |     |       |     |      |      |          |        |          |
| PRODUCT DESCRIPTION | UNIVERSAL STUDIOS       |   |   |        |                   |     |       |     |      |      |          |        |          |
| PRODUCT PACKAGING   | UNIVERSAL STUDIOS       |   |   |        |                   |     |       |     |      |      |          |        |          |
| PRODUCT TYPE        | UNIVERSAL STUDIOS       |   |   |        |                   |     |       |     |      |      |          |        |          |
| CASE TYPE           | UNIVERSAL STUDIOS       |   |   |        |                   |     |       |     |      |      |          |        |          |
| UNIT                | UNIVERSAL STUDIOS       |   |   |        |                   |     |       |     |      |      |          |        |          |
| TOTAL UNITS         | UNIVERSAL STUDIOS       |   |   |        |                   |     |       |     |      |      |          |        |          |
| TOTAL PRICE         | UNIVERSAL STUDIOS       |   |   |        |                   |     |       |     |      |      |          |        |          |
| TOTAL CASES         | UNIVERSAL STUDIOS       |   |   |        |                   |     |       |     |      |      |          |        |          |
| PRETICKETS          | UNIVERSAL STUDIOS       |   |   |        |                   |     |       |     |      |      |          |        |          |

END-USER QUOTES

BEFORE REDESIGN

"We re-enter the same information three times and it never matches."  
- Operations Manager



AFTER REDESIGN

"Now the handoff is clear – the record is already there."  
- Production Worker



AFTER REDESIGN

"Reporting finally reflects what's actually happening on the floor."  
- Operations Manager




### SPEC SHEET PACKAGING V1

OK TO PACK ORDER

TO LIST
TO R&D
PRINT
SAVE PDF

DUMMY IMAGE
SECONDARY IMAGE (IF NEEDED)



BRAND 牌子 MELVILLE

| PRODUCT SKU # | UNIQUE ID# 产品号码 | ORDER # | SO or PO# 订单号码 | SHIP 运输    | CANCEL 取消  |
|---------------|-----------------|---------|----------------|------------|------------|
| 11460         | 156160          | 8583    | 8583           | 12/11/2020 | 12/15/2020 |

|           |                    |                 |                                      |                                       |
|-----------|--------------------|-----------------|--------------------------------------|---------------------------------------|
| CLIENT 公司 | 2004 HALF NUTS INC | PRODUCT NAME 名称 | CHOC STIRRER PEPPERMINT DARK COATING | <a href="#">VIEW LINKED INVENTORY</a> |
|-----------|--------------------|-----------------|--------------------------------------|---------------------------------------|

| PRODUCT TYPE | PACK SIZE FOR 1 PRODUCT | CASE PACK | COST UNIT TYPE | TOTAL UNITS | TOTAL WIP PIECES | TOTAL INNER CASES | TOTAL MASTER CASES | TOTAL PALLETS |
|--------------|-------------------------|-----------|----------------|-------------|------------------|-------------------|--------------------|---------------|
| BUCKET       | 50                      | 1         | BY WIP PIECE   | 100         | 100              | N/A               | 2                  |               |

**SALES NOTES** CAN SHIP EARLY  
FREE SHIPPING  
NO BEST BUYS PLEASE ADD UPC NUMBERS  
APPLICABLE

#### PRODUCT PACKAGING

**PRODUCT PACKAGING** PKG DISPLAY BUCKET # 1331 PLASTIC BUCKET LARGE  
**DO NOT SHRINK BUCKET UNLESS CUSTOMER REQUESTS** X1 OLD  
 PKG ID#13 FACTORY MADE  
 PKG BUCKET LABEL 3.25 IN X 3.25 IN SQUARE # 3875 STIRRER PEPPERMINT FANCY MELVILLE X1 OLD PKG ID#3215 MADE IN-HOUSE

#### CASE PACK INFORMATION

|               | INNER CASE 内箱 | MASTER CASE 外箱              |
|---------------|---------------|-----------------------------|
| PACK 纸箱尺寸     |               | 50                          |
| TOTAL BOXES   | N/A           | 1                           |
| BOX TYPE 纸箱类型 |               | DISPLAY RE-SHIPPER MELVILLE |
| CASE UPC 号码   | N/A           | N/A                         |

PACKING DUNAGE MATERIAL # 包装材料

PACKING NOTE # 包装注意事项

#### QUALITY ASSURANCE

Half Nuts Inc. REQUIRE # 特别要求  
 METAL DETECT  COA  TOP SAMPLE  MICROBAG TEST  
 SO SHEET REQUIRED? 确认数量   
 LOLLIPOP SAMPLE COMPLETED? 完成棒棒糖样本?   
 FINISHED SAMPLE COMPLETED? 完成棒棒糖制成品?   
 QA SIGN OFF NOTES: 确认注意  TOP SAMPLE QTY & ADDRESS

QA IMAGE # OR FILE # (IF APPLICABLE)

ITEM DIMENSION # & WT / MASTER CASE DIM # & WT

#### LABELING 标签

|                            |                 |
|----------------------------|-----------------|
| UNIT UPC (#) OR SKU 个别产品号码 | LABEL WEIGHT 重量 |
| 7-32577-11460-5            | 0.40Z (11G)     |

INGREDIENT APPLICATION 成分

BAG STYLE

LOOSE, BUT TAPE BAG CLOSED AT BASE

LABEL PRINT SOURCE (#) 标签打印方式

MADE IN HOUSE

LABELING NOTE # 标签注意事项

PRODUCTION NOTE # 生产注意事项

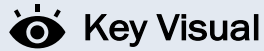
BEST BY (#) 最佳食用日期

**ALERTS 重要事项**

CREO modified by 原始制单人  SOLD BY 销售人

HILLARY\_RND  JENNIFER SWEENEY

sku MODIFIED 11/23/2020 BY HILLARY\_RND



SAVE PDF

| MELVILLE CANDY |  |             |           |           |               |                     |             |             |                 |              |               |
|----------------|--|-------------|-----------|-----------|---------------|---------------------|-------------|-------------|-----------------|--------------|---------------|
| SPR            | PACK TYPE  | TOTAL PACKS | UNIT COST | CASE COST | # INNER BOXES | UNITS PER INNER BOX | TOTAL UNITS | TOTAL CASES | UPC             | UNIT WT (OZ) | CASE WT (LBS) |
|                | BULK PACK 50   | 24          |           |           |               |                     |             | 1           | 732577-10238-CD |              |               |
|                | <b>SKU # 10236 HARD CANDY LOLLIPOP MINI DAISY ASSORTED</b>   |             |           |           |               |                     |             |             |                 |              |               |
| SPRING         | BULK PACK 50   | 24          |           |           |               |                     |             | 1           | 732577-10238-CD |              |               |
|                | <b>SKU # 10259 HARD CANDY LOLLIPOP SPRING FLOWERS STACKED DAISIES</b>                              |             |           |           |               |                     |             |             |                 |              |               |
| SPRING         | BULK   | 24          |           |           |               |                     |             | 1           | 7-32577-10259-6 |              |               |
|                | <b>SKU # 10259 HARD CANDY LOLLIPOP SPRING FLOWERS STACKED DAISIES</b>                              |             |           |           |               |                     |             |             |                 |              |               |
| SPRING         | BULK   | 24          |           |           |               |                     |             | 1           | 7-32577-10259-6 |              |               |
|                | <b>SKU # 10259 HARD CANDY LOLLIPOP SPRING FLOWERS STACKED DAISIES</b>                              |             |           |           |               |                     |             |             |                 |              |               |
| SPRING         | BULK   | 24          |           |           |               |                     |             | 1           | 7-32577-10259-6 |              |               |
|                | <b>SKU # 10216 HARD CANDY LOLLIPOP SPRING CRITTERS ASSORTMENT</b>                                  |             |           |           |               |                     |             |             |                 |              |               |
| SPRING         | BULK   |             |           |           |               |                     |             | 1           | 7-32577-10216-9 |              |               |
|                | <b>SKU # 11846 HARD CANDY LOLLIPOP SPRING FLOWERS RETRO DAISY W CANDY CENTER</b>                   |             |           |           |               |                     |             |             |                 |              |               |
| TRENDY         | BULK PACK 24   |             |           |           |               |                     |             | 1           | 732577-11846-7  |              |               |
|                | <b>SKU # 40062 HARD CANDY LOLLIPOP EMO 2IN ASSORTMENT OF 4 (WINK, LAUGHCRY, HEART EYES, LAUGH)</b> |             |           |           |               |                     |             |             |                 |              |               |
| TRENDY         | BULK PACK 24   |             |           |           |               |                     |             | 1           | 732577-40062-7  |              |               |
|                | <b>SKU # 43212 HARD CANDY LOLLIPOP EMO POOP</b>  |             |           |           |               |                     |             |             |                 |              |               |
| TRENDY         | BULK PACK 24   |             |           |           |               |                     |             | 1           | 732577-43212-9  |              |               |
|                | <b>SKU # 42032 HARD CANDY LOLLIPOP EMO 2IN SUNGLASSES PINEAPPLE FLAVOR</b>                         |             |           |           |               |                     |             |             |                 |              |               |
| TRENDY         | BULK PACK 24   |             |           |           |               |                     |             | 1           | 7-32577-42032-4 |              |               |
|                | <b>SKU # 43278 HARD CANDY LOLLIPOP EMO 2IN , SMOOCH</b>  |             |           |           |               |                     |             |             |                 |              |               |
| TRENDY         | BULK   |             |           |           |               |                     |             | 1           | 7-32577-43278-5 |              |               |

MELVILLE CANDY COMPANY 28 YORK AVE RANDOLPH MA 02368 • OFFICE 800-638-8063 • FAX 800-466-0516

Usability Studies

STUDIES CONDUCTED



**MODERATED**

- Scripted Interviews
- Prototype Walkthroughs
- Heuristic Evaluations



**A / B TESTS**

- Product Variant Comparisons
- Time on Task Tracking
- Engagement Experiments



**UNMODERATED**

- Email Surveys
- Task-Based Testing via Prototype
- Field Studies

**BEFORE USABILITY STUDIES**

I conducted two rounds of usability studies. Findings from the first study helped guide the designs from wireframes to mockups. Users struggled with long forms and inconsistent field definitions between departments.

**AFTER USABILITY STUDIES**

The second study used a high-fidelity prototype and revealed what aspects of the mockups needed refining. Simplified forms, standardized terminology, added validation, and improved search/reference flows.

BEFORE USEABILITY STUDY

AFTER USEABILITY STUDY

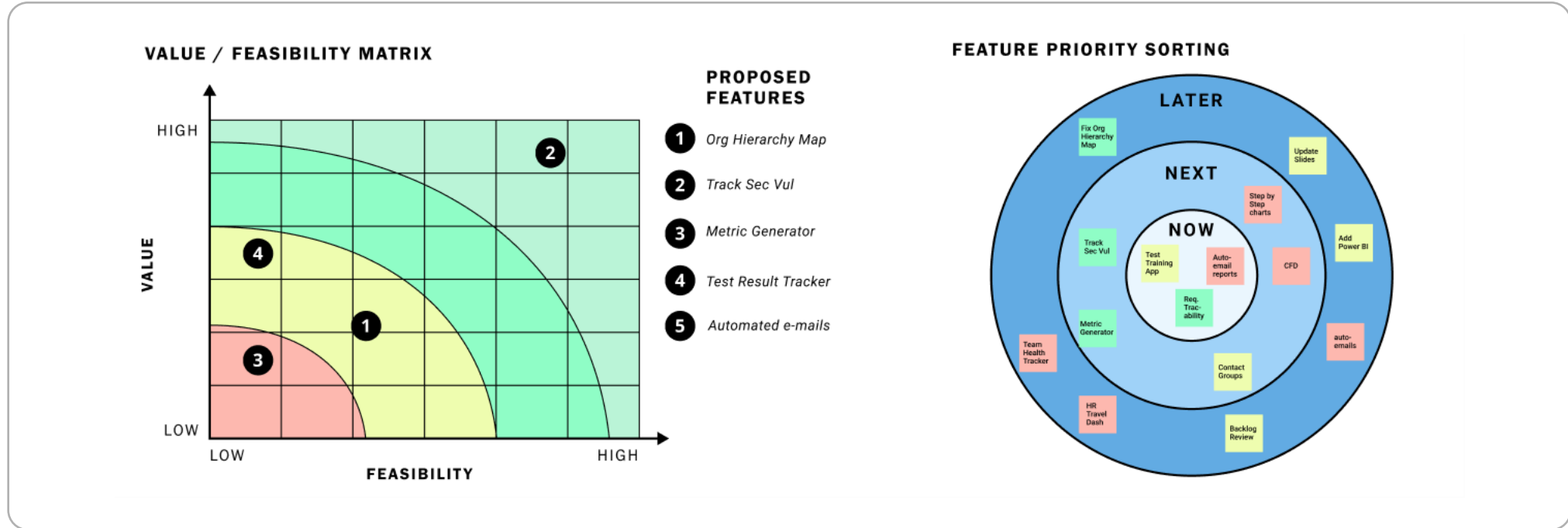
BEFORE USEABILITY STUDY

AFTER USEABILITY STUDY

★ Feature Prioritization

**DETERMINING PRIORITY**

I conducted user research to prioritize and find icons that would make it easy for users to navigate to the appropriate departments from the home page of the database. I also included text labels to ensure there would be no confusion as to what button led where. Prioritized shared pain points first: duplicate entry, handoff delays, and reporting inconsistencies.



**A Navigating Challenges**

**USABILITY**

*Workflow Fit*

Challenge: Aligning screens and forms to real cross-department workflows without adding unnecessary

Approach: Map end-to-end workflows, standardize key fields, and design guided flows for shared processes.

**COMMUNICATION**

*Process Ownership*

Challenge: Departments used different terms and handoffs for the same process, leading to misalignment

Approach: Facilitate process mapping workshops, define owners for shared steps, and document rules in-system.

**ACCESSIBILITY**

*Language Barrier*

Challenge: Forms must contain a breadth of information, and also be readable in both English and

Approach: Apply Language rules to user roles, Use consistent field labels, inline validation, and logical tab order across screens.

Key Insights & Outcomes

USER INSIGHTS

Users wanted fewer required fields and clearer defaults; managers wanted consistent reporting.

WORKFLOW INSIGHTS

Due to the Language barriers, The biggest friction occurred at handoffs; guided steps reduced confusion and errors.

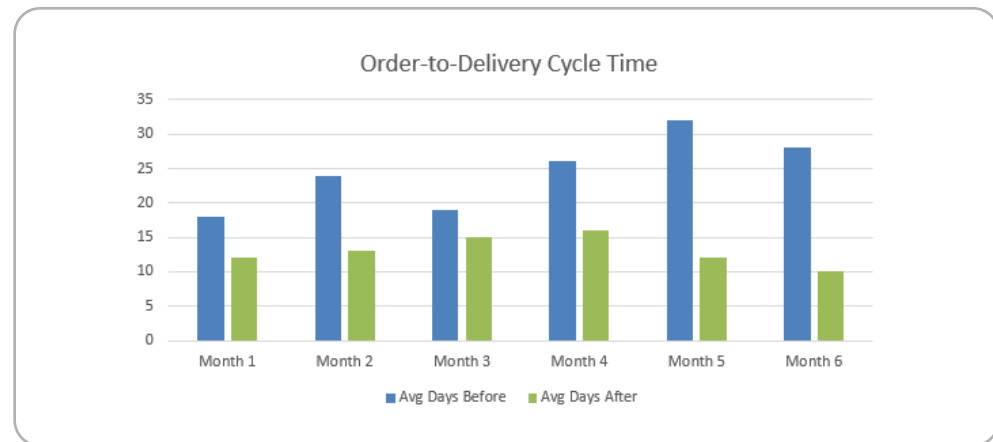
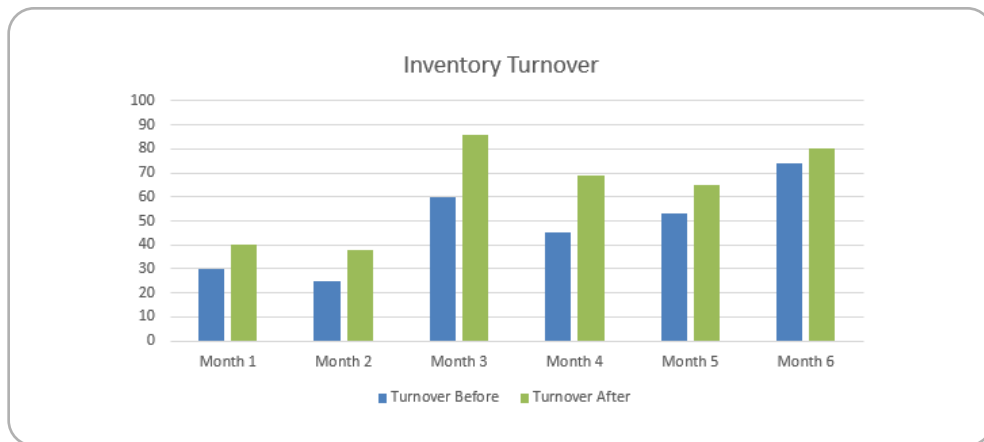
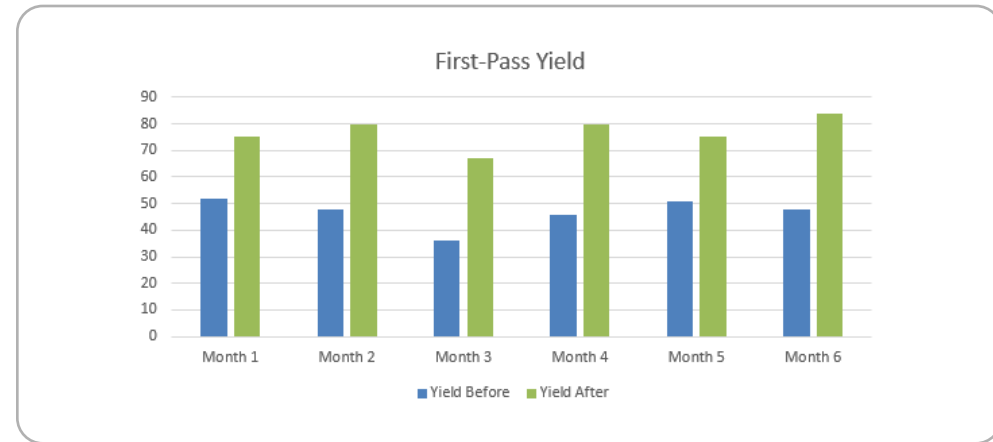
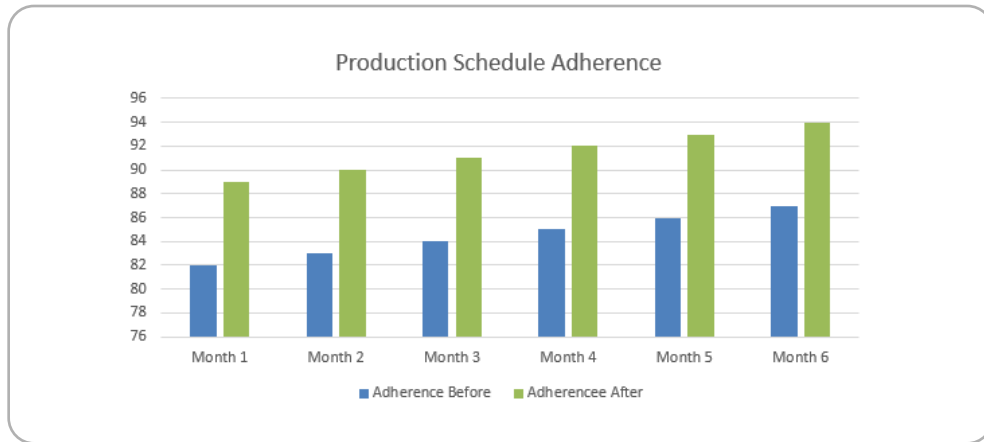
FEATURE INSIGHTS

Standardized records, validation rules, and better search delivered immediate value.

PERFORMANCE INSIGHTS

Faster search and reduced load times improved day-to-day usability for high-volume tasks.

METRICS TRACKED



 **Takeaways**

**HOW DID FEEDBACK INFLUENCE DECISIONS?**

Feedback highlighted where users duplicated work or misunderstood fields. Iterations focused on simplifying inputs, clearer labels, and reducing steps in key workflows.

**HOW DID THESE CHOICES INCREASE VALUE?**

Reduced manual entry and fewer handoff errors increased operational throughput and data accuracy.

**HOW DID THE OUTCOMES ALIGN WITH BUSINESS GOALS**

Outcomes aligned with goals by reducing waste, improving accuracy, and enabling faster cross-department execution.

**WHAT ELSE WOULD I CHANGE?**

When new departments are added, new report requirements emerge, or legacy integrations change.

**WHAT NEEDS FURTHER EXPLORATION?**

Role-based dashboards, automated alerts for stalled orders, and deeper integration with finance/inventory.

**WHAT I LEARNED**

Aligning terminology and ownership early prevented downstream rework and training overhead.

 **Next Steps**



**FOR THE BUSINESS**

*Expand governance and reporting*

Define data stewardship roles and add standardized reporting packs for leadership and operations.



**FOR THE TEAM**

*Enhance integrations*


Stabilize legacy integrations, add automated checks, and improve monitoring for data sync failures.



**FOR THE USERS**

*Improve onboarding*

Create quick-start guides, in-product help, and role-based training to reduce ramp-up time.

 Let's Connect!



## Thanks for Reading!

If you'd like to further discuss my work, talk about product strategy, UX design, or building productivity tools, I'd love to connect. Hope to hear from you!

-Hill

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