Reducing Food Waste, One Order at a Time

Designing features that help restaurants, customers, and delivery partners reduce food waste while creating value for everyone in the ecosystem.

INDEPENDENT PRODUCT DESIGN CASE STUDY

Food Waste Is a Business Problem

Every day, restaurants throw away prepared food due to overproduction, cancelled orders, and unsold inventory. Customers often over-order because they don't know portion sizes, while cancelled deliveries result in perfectly good meals being discarded.

The challenge wasn't simply donating leftover food — it was **preventing food waste before it happens.** This case study explores how product design can address waste at every stage of the ordering journey, from kitchen to customer.

Restaurant Side

Overproduction and unsold inventory drive significant daily waste, cutting directly into margins.

Customer Side

Unclear portion sizes lead to over-ordering — customers buy more than they need without realizing it.

Delivery Side

Cancelled orders create immediate food loss with no recovery mechanism in place.

> **How might we reduce food waste without negatively impacting restaurant revenue or customer experience?**

Research & Insights

To understand where waste actually occurs, research spanned the entire ordering journey — from how restaurants manage inventory to how customers make ordering decisions. The goal was to identify the highest-impact intervention points across the ecosystem.

Research Methods

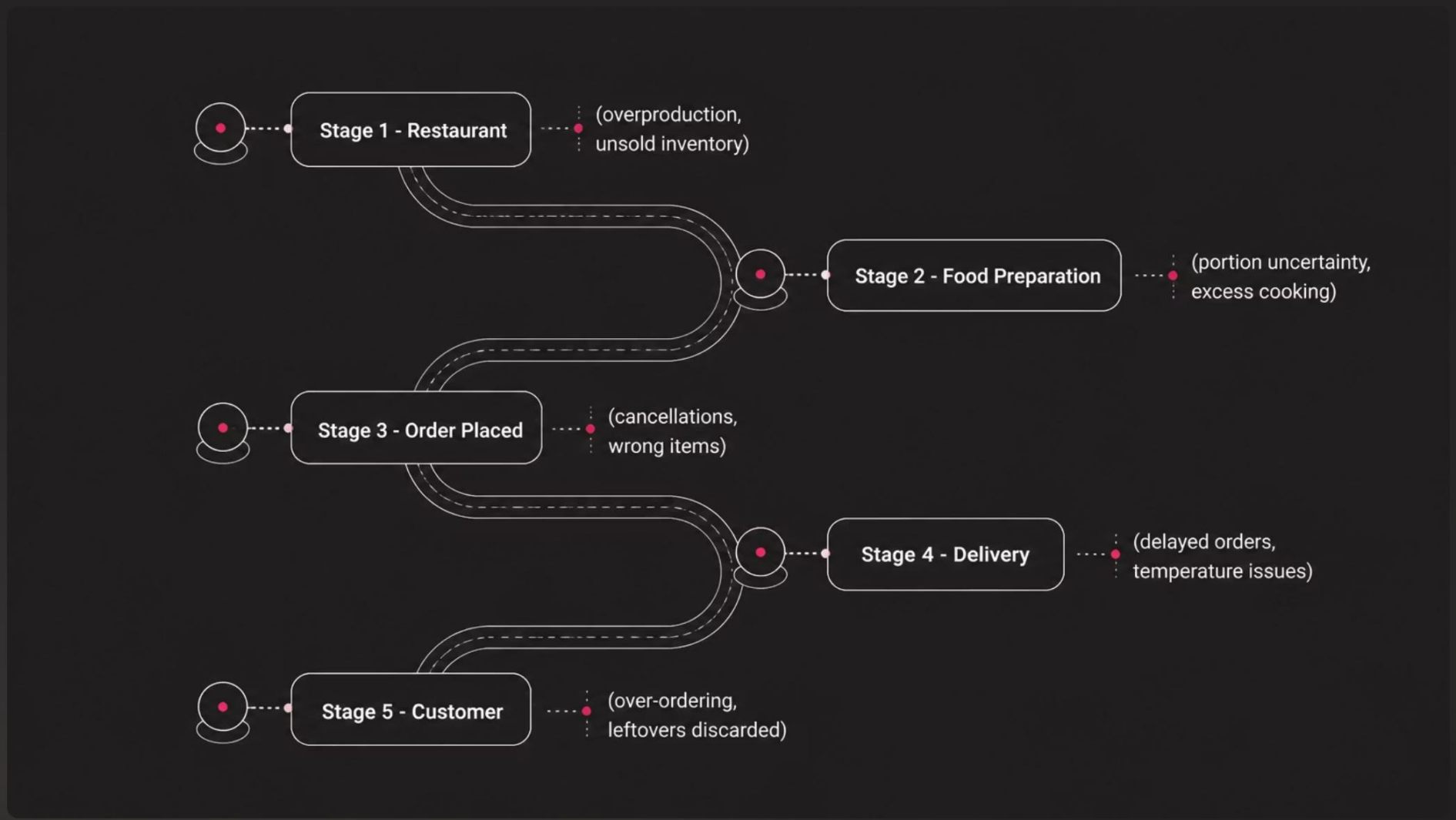
- Customer behavior analysis
- Restaurant workflow audits
- Delivery lifecycle mapping
- Existing sustainability initiatives
- Competitor benchmarking

Key Insights

- **Most waste happens before food reaches customers** — at the kitchen and preparation stages.
- **Cancelled orders create immediate food loss** with no built-in recovery path.
- **Customers over-order due to unclear portions** — a solvable UX problem.
- **Restaurants lack easy ways to monetize surplus food** before it spoils.

The Stakeholder Journey

Food waste doesn't happen at a single point — it's a systemic issue that spans the entire ecosystem. Mapping the journey revealed critical intervention opportunities at every stage, from food preparation to final delivery.



Each stage presents a distinct opportunity to intervene — whether through smarter ordering tools, real-time surplus management, or post-cancellation recovery flows. The most impactful solutions address waste *upstream*, before it compounds.

Product Strategy: Recover & Rescue

Rather than solving one problem in isolation, the strategy tackles waste across the entire ecosystem. Two core features address the highest-impact waste moments — unsold surplus and cancelled orders — turning potential loss into recovered revenue.

Surplus Deals

Allow restaurants to list surplus food near closing time at discounted prices. Customers get great value, and restaurants recover revenue that would otherwise be lost.

- Recover revenue from unsold inventory
- Attract price-conscious customers
- Reduce end-of-day food waste

Cancelled Order Rescue

Nearby users can purchase cancelled but freshly prepared meals at discounted prices within a limited time window. Food stays fresh, customers save money, and restaurants recoup costs.

- Immediate recovery of cancelled meals
- Time-sensitive flash deal mechanics
- Zero additional preparation required

Customer Experience: Guide & Give Back

Beyond recovery features, the product also empowers customers to make smarter ordering decisions and gives restaurants a seamless path to donate surplus meals — creating a full-circle sustainability story.

Smart Portion Guidance

Help users order the right quantity before they check out, reducing over-ordering at the source.

- Portion recommendations based on dish type
- "Serves 2" or "Family Size" labels
- Personalized suggestions from order history

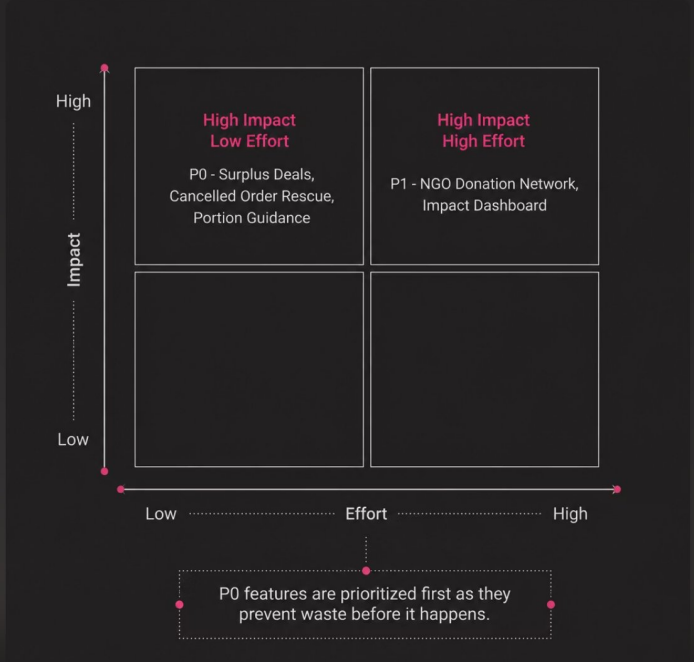
Donate Leftover Food

Enable restaurants to donate surplus meals through verified NGO partners with a single tap — and show customers the impact of their choices.

- Verified NGO partnership network
- Simple one-tap donation flow
- Impact display: *"You helped save 20 meals this month."*

Prioritization: Prevention Over Redistribution

Not all solutions are equal. Prevention — stopping waste before it happens — creates more impact than redistribution after the fact. The prioritization framework reflects this principle, focusing first on features that reduce waste at the source.



Why Prevention First

Features in P0 directly reduce the volume of food that becomes waste. Surplus Deals and Cancelled Order Rescue intercept food at the moment it would otherwise be discarded. Portion Guidance prevents over-ordering before the kitchen even starts cooking.

P1 features like the NGO Donation Network are valuable for handling residual waste, but they operate *after* waste has already been created. Prevention creates compounding impact over time.

Design Principle: The most sustainable feature is the one that prevents the problem from occurring in the first place.

Success Metrics

The North Star metric is straightforward: **reduce food wasted per order.** Supporting metrics track adoption, recovery, and engagement across all stakeholder groups — ensuring the product creates measurable value at every level of the ecosystem.

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Food Wasted Per Order

North Star metric — the primary measure of product success across the ecosystem.

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Surplus Meals Sold

Tracks how many surplus meals are recovered through Surplus Deals and Cancelled Order Rescue.

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Revenue Recovered

Measures the financial value returned to restaurants through waste-reduction features.

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Portion Guidance Adoption

Percentage of orders influenced by Smart Portion Guidance recommendations.

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Meals Donated

Total meals donated through verified NGO partners, displayed as customer-facing impact.

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Restaurant Participation

Share of restaurants actively using surplus and donation features on the platform.

Challenges & Trade-offs

Every product decision involves tension. Building a food waste solution that works for restaurants, customers, and delivery partners simultaneously required careful navigation of competing priorities and real-world constraints.

Discount Cannibalization

Preventing discounted surplus meals from undercutting regular orders. Solution: time-boxed deals available only near closing or immediately after cancellation.

Food Safety Standards

Maintaining strict food safety compliance for rescued and donated meals. Solution: clear time-window rules and temperature handling requirements built into the flow.

NGO Logistics at Scale

Scaling donation logistics across cities with varying NGO infrastructure. Solution: phased rollout starting with high-density urban markets and verified partners.

Sustainability vs. Profitability

Ensuring sustainability features don't erode restaurant margins. Solution: every feature is designed to recover or generate revenue, not just reduce waste.

The Best Solutions Create Value for Everyone

Reducing food waste isn't just about sustainability — it's about building a **smarter marketplace** where restaurants recover revenue, customers save money, and fewer meals go to waste. The features in this case study were designed with one principle at the core: every stakeholder should be better off.

Restaurants	Customers	The Planet
Recover revenue from surplus and cancelled orders instead of absorbing the loss.	Access discounted meals, order smarter portions, and see their positive impact.	Fewer meals discarded means less waste, lower emissions, and a healthier food system.

> Great product design isn't about adding features. It's about **solving the right problem.**