FoodWise

Team 6: ELPP Spring 2023

4/12/2023

THE TEAM WHO CARES ABOUT SOCIAL IMPACT

Nidheesh Puthalath

Chief Executive Officer

wish

Lingyan Zhu

Chief Marketing Officer

yahoo!

Vipin Jose

Chief Technology Officer

APPLIED MATERIALS.

Francis Hsu

Chief Financial Officer

yahoo!

Pallavi Nagboth

Chief Product Officer

SAMSUNG

Bisera Ferrero

Chief Impact Officer

yahoo!

Executive Summary

Food waste is a significant global problem, with one-third of the world's food lost or wasted from farm to fork. FoodWise is a platform that aims to reduce food waste by connecting consumers and restaurants. It offers discounted meals during off-peak hours, helping restaurants to advertise and sell excess capacity and reducing food waste. By tracking food waste and utilizing excess capacity, restaurants can reduce waste and increase profit. FoodWise uses AI/ML to determine optimal discounts and times to drive customers to restaurants. The platform has a competitive advantage over its competitors by offering a unique value proposition of reducing food waste and optimizing restaurant utilization. The go-to-market strategy involves targeting technology-savvy diners and partnering with universities, as well as attending restaurant and technology conferences. FoodWise aims to create a win-win situation for both restaurants and customers while promoting social impact and reducing food waste.

Problem Statement

Restaurants do not have an easy way to balance the traffic between peak and off-peak hours and days. At the same time, they do not have an easy way to know the demand and prepare the food which will be optimally utilized. This causes the restaurants to waste up to 10% (22-33 billion pounds[1] in the US) of the food they make every day. To address this, 35% of restaurants are tracking food waste to counteract rising food costs[2]. They also have excess capacity in terms of kitchen resources, food ingredients, space that can be optimally utilized to produce more food. Combining all these, there is an opportunity to help the restaurants run at full capacity, reduce food waste and balance the restaurant traffic inturn helping the restaurants to increase utilization, profit and reduce wastage and contribute towards social impact.

Our solution

What is Foodwise?

FoodWise is a platform which helps the restaurants run at full capacity, balance customer traffic and reduce food waste. The platform provides restaurants the flexibility to adjust hours of discount as well as the price. For the consumers, they get the standard hot meal at a discounted price. From our surveys we found that 81% of the people are willing to buy a meal at off-peak hours or days if they get the meal at a discounted price. This platform enables them to tap into such discounts and get a fresh meal.

FoodWise Restaurant Mode App or Software

This is the restaurant side of the software which can be installed on the restaurant PCs / Mobile Devices. At the heart of our solution is the AI / ML driven software. Our platform takes in data from restaurants directly or through integrations with POS systems like Toast or Clover. Our intelligent algorithm now will determine the optimal time and discounts to drive additional customers to the restaurant with dynamic, time-limited discounts similar to airline ticket prices.

---

[1]US restaurants Food Wastage:
https://foodprint.org/issues/the-problem-of-food-waste/
[2]National Restaurant Assoication State of the Restaurant Industry 2022
https://assets.zapnito.com/users/590364/documents/188635/6be87a1c-2328-4798-8b95-cf118b82b4dd.pdf

FoodWise Consumer Mode App (iPhone and Android)

This is the consumer side solution, which is a mobile app, where the user gets notified of these dynamic discounts, the user then chooses the option he / she likes and places an order through the app which then gets transmitted and is processed and prepared by the restaurant. The app will also notify the user when food is ready for pickup.

The beauty of our solution is that - on the consumer side, the mobile app is similar to any existing food ordering app. so for the user there is no new learning and can easily use our system. For the restaurant also there is not much change as we provide seamless integration to their existing POS systems.

High level Workflow
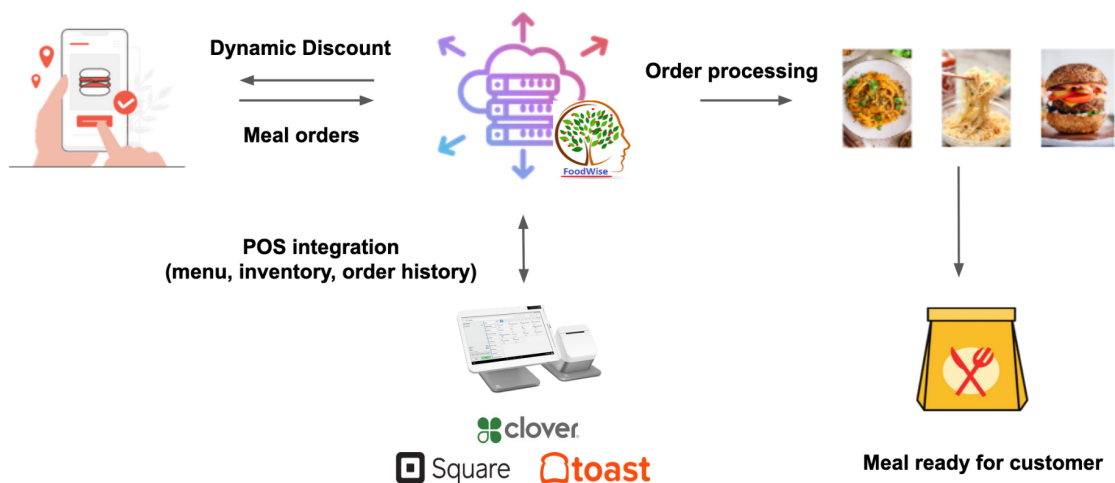
Dynamic Discount AI Pricing engine - A machine learning model

This is the brain of the FoodWise platform. This ML model starts with assumptions on the amount of spare capacity and potential food waste from the restaurants. This will be derived based on industry analysis. This ML model will be fed with data from restaurants (types, location and demand over time) as well as customer preferences (order history, ranked lists of wishlist restaurants) for the ML model to continue optimizing the algorithm. This system will optimize the discount percentage based on all the factors fed into the system.
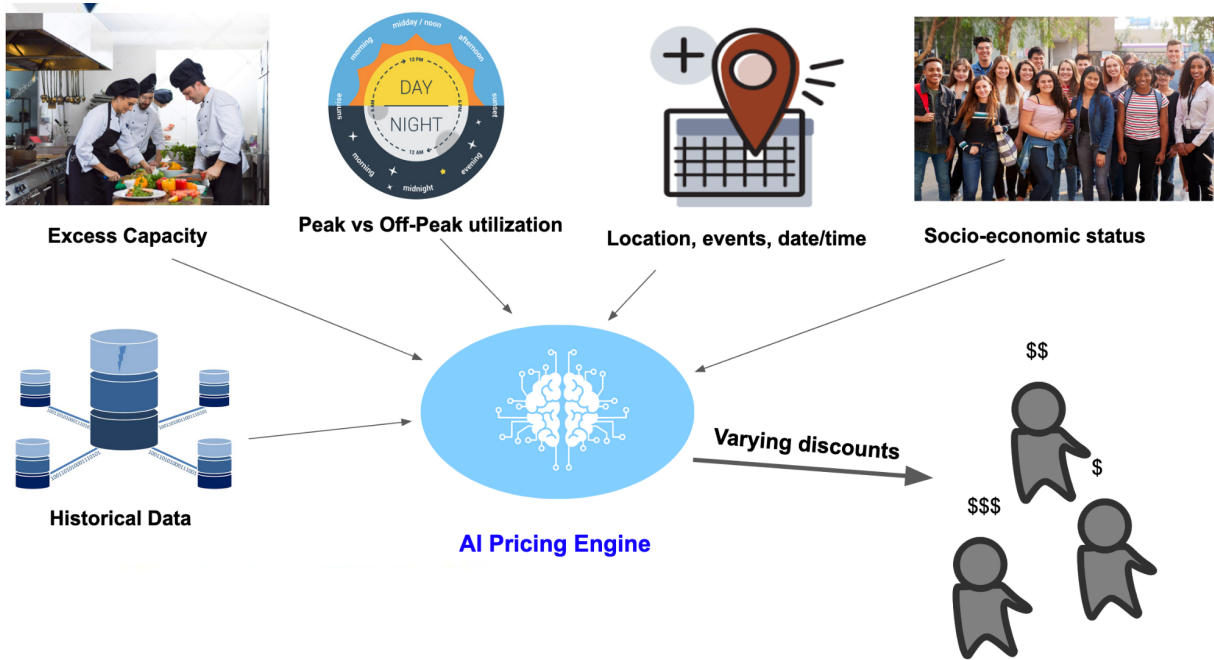
Market Size

The Total Addressable Market (TAM) is about 661,000 restaurants in the United States[3].

Served Addressable Market (SAM): Independent restaurants with one to two locations represent 53% of total restaurants in the U.S, according to this press release from the NPD Group[4]. After declines in 2020 due to COVID, these restaurants started growing again in large urban areas like Los Angeles, Dallas-Fort Worth, and Seattle-Tacoma. These 350,000 independent restaurants are non-chain restaurants, therefore need more support from platforms which can bring new customers and technology to control their costs, including reducing food costs and waste.

Target market: We are targeting 52,200 independent restaurants, which is 15% of the total independent restaurants in the U.S. During the first year, we are targeting 145 independent restaurants in San Francisco and Berkeley, California, representing 5% of all non-chain local restaurants in the area.

---

[3]45 Must-Know US Restaurant Industry Statistics, https://www.zippia.com/advice/restaurant-industry-statistics
[4] Despite A Rough Two Years, US Independent Restaurants Still Represent Over Half of US Commerical Restaurant Units and Are Recovering
https://www.npd.com/news/press-releases/2022/despite-a-rough-two-years-u-s-independent-restaurants-still-represent-over-half-of-u-s-commercial-restaurant-units-and-are-recovering/

Market Validation

Restaurant Side

To validate the market, we started on the restaurant side. We talked with Srihari Bathini, the owner of Koriander. Koriander is a local independent restaurant. As you can see below from Srihari's own words, what we offer at FoodWise perfectly matches what he needs.

"As a restaurant owner, I always look for options to increase revenue. We do have slow times during weekdays. FoodWise can help us to attract customers who can take advantage of our dynamic deals during the slow times. We can also use FoodWise when we have extra food to dispose of quickly. Thus, it will save us food costs, increase employee productivity and revenue." - Srihari Bathini

In addition, our market research shows that Zero Waste and Sustainability have been consistently in the top 10 trends of the restaurant industry in the 2022 report[5] and the 2023 report[6].

Customer Side

On the customer side, we sent a survey to a group of UC Berkeley students, and received 57 responses. We have found the responses confirm our product vision. Here are the highlights from the response summary[7]:
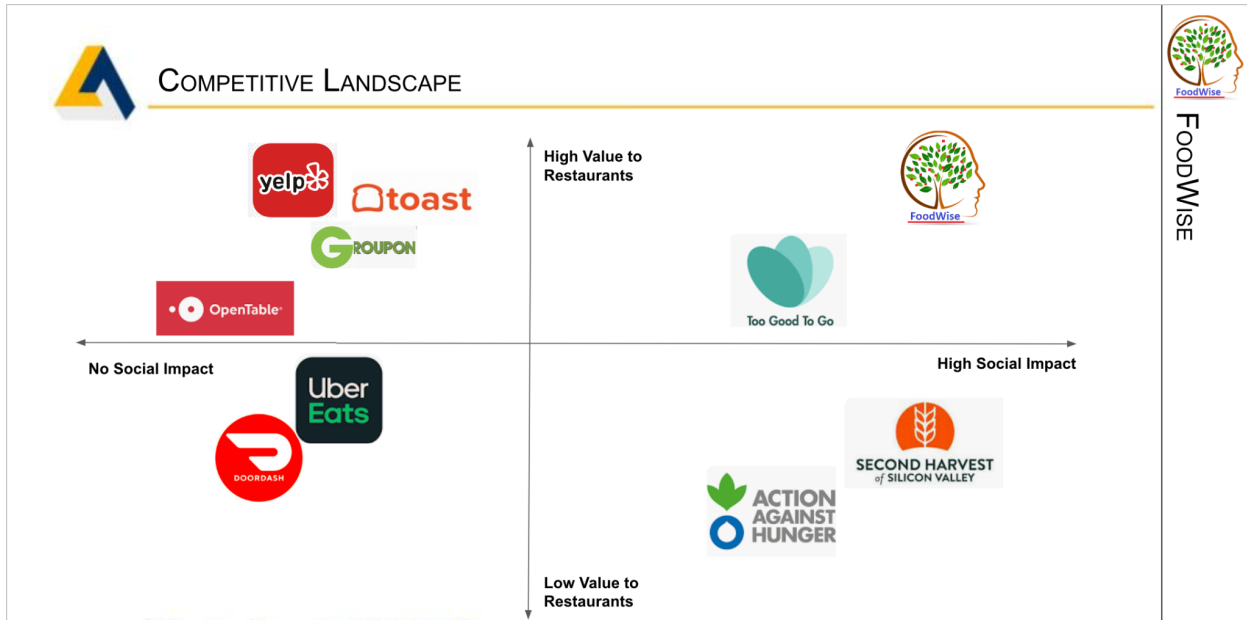- 91% interested in using an app to order food at discounted prices
- 81% interested in off-peak hours with discounts (63% without discounts)
- 67% Social impact influences choice of food ordering app
- 97% used food ordering apps before
- 93% spend $10-$50 per order (75% $10-$30)

---

[5] 2022 State of the Restaurant Industry, https://xchange.avixa.org/documents/pdf-report-2022-state-of-restaurant-industry
[6] National Restaurant Association, What's Hot 2023, https://go.restaurant.org/rs/078-ZLA-461/images/Whats-Hot-Culinary-Trends-2023.pdf
[7] Food Ordering Survey, https://docs.google.com/spreadsheets/d/1gA_AlOEdgifmCBvlgsk5dotTVV2gycNAGOKQJWCcuVE/

Competitive Landscape

Competitive Analysis

FoodWise stands out from competitors like Too Good To Go, ToastTab, UberEats, DoorDash, Open Table, Yelp, and Groupon by offering a unique value proposition that focuses on reducing food waste and optimizing restaurant utilization. FoodWise accomplishes this through its AI-powered pricing engine, which calculates discounts based on multiple factors such as time of day, traffic, location, and customer socio-economic status. This feature allows restaurants to attract more customers during off-peak hours, reduce food waste, and increase revenue. Additionally, FoodWise's environmentally conscious solution can also appeal to customers who prioritize sustainability. In contrast, other platforms like ToastTab, UberEats, and DoorDash do not have a specific focus on reducing food waste or optimizing restaurant utilization. While Yelp and OpenTable provide some benefits to restaurants, they lack the unique value proposition that FoodWise offers. Overall, FoodWise's dynamic pricing and AI-powered engine make it a standout platform in the industry.

COMPETITIVE ANALYSIS

	FoodWise	Too Good To Go	ToastTab	UberEats	DoorDash	OpenTable	Yelp	Groupon
Pricing Model	Dynamic	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Social Impact	✅	✅	✖	✖	✖	✖	✖	✖
Optimize Restaurant Utilization	✅	✖	✖	✅	✅	✅	✖	✖

User Personas

FoodWise caters to two main sets of user personas: Consumers who are interested in a discounted meal, and Restaurants who are concerned with reducing waste and increasing their profit.

Consumers

FoodWise targets two types of consumers who are interested in finding a good deal or a bargain:
- The budget-conscious consumer has a strong desire to save money and is mindful of their spending habits. These individuals are often living on a tight budget and enjoy finding ways to reduce their expenses.
- Deal-seekers love the thrill of finding a good deal and are willing to spend time researching and comparing prices to maximize their savings.

Both types of consumers are tech-savvy and comfortable navigating websites, apps, and social media platforms to find deals. They sign up for alerts and notifications through email or on their smartphones to access deals and often plan their shopping trips around available discounts and deals.

Restaurants

The second set of user personas for FoodWise is restaurants. FoodWise helps restaurant owners reduce waste and increase their profits. The restaurant owners that FoodWise targets are passionate about food, cooking, and hospitality and are socially conscious.

They are concerned with reducing or eliminating waste and creating a welcoming and enjoyable atmosphere for their guests. These individuals are also customer service-focused and ensure that all aspects of their business, from food preparation and presentation to cleanliness and service, meet high standards. They have an entrepreneurial mindset, are resourceful, adaptable, and willing to take on risks.

These owners are looking to stay relevant and competitive as the restaurant industry continually evolves, reflecting changing customer preferences and market conditions. They face an ongoing challenge of making and increasing profit, which prompts them to experiment. FoodWise can help these owners address a set of challenges that include:

- Building a customer base and becoming profitable by experimenting with various options to attract cost-conscious customers and those who value sustainable operations.
- Reducing the impact of challenging locations, such as limited visibility, low foot traffic, or inconvenient access, by attracting customers who are looking for a deal in the off-peak hours.
- Differentiating themselves from their competitors by being recognized for their social impact and discounted meals.
- Reducing high overhead costs by increasing utilization in the off-peak hours.

Social Impact and Benefits

FoodWise operates in a market of food waste reduction through improving utilization of resources in the off peak restaurants' hours. The value proposition of restaurant food being sold for a low price during off peak hours through FoodWise centers on providing cost savings to the restaurant, protecting the environment, and attracting socially conscious, price-sensitive customers.

FoodWise is particularly helpful for smaller restaurants that may not have enough technology to provide online orders. Offering food at a discounted price can attract customers who are looking for a good deal, which can increase traffic and revenue for the restaurant. Furthermore, offering affordable food options can help restaurants engage with their communities and foster goodwill.

By reducing or potentially eliminating food waste, restaurants can enhance their brand image and attract socially conscious customers. Selling surplus food for a discounted price instead of throwing it

away can help reduce food waste and protect the environment. This, in turn, can appeal to customers who are concerned about the environment.

FoodWise can help restaurants define the discount rate and timing based on the traffic on the app. Additionally, FoodWise can provide data to restaurants to help them utilize their maximum capacity of resources and food. This can help restaurants make more informed decisions and reduce waste.
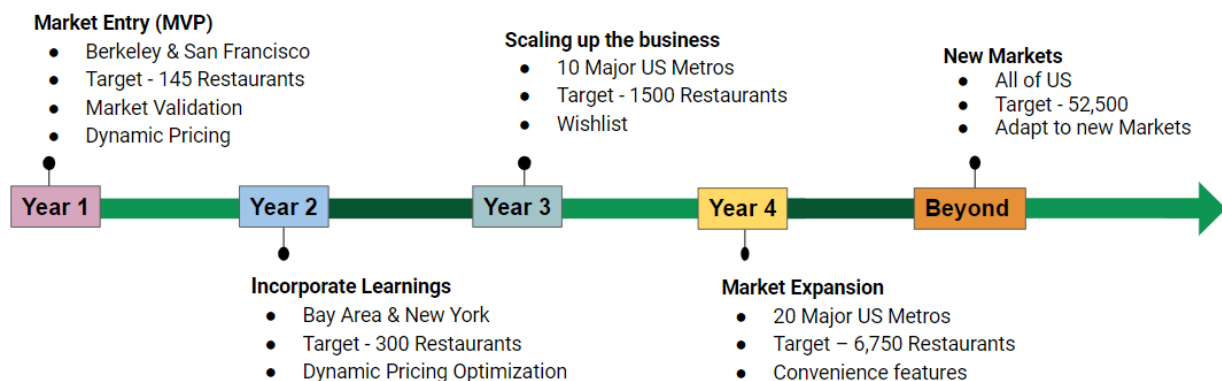
Finally, FoodWise can help customers save money by purchasing food at discounted rates with no additional fees, making it an attractive proposition for users. Overall, FoodWise can be a win-win situation for restaurants and customers alike.

Roadmap

Our target market for Year 1 is the independent restaurants in Berkeley and San Francisco in California. These two cities are the top 2 that have the highest percentage of non-chain restaurants in US, at 94.2% and 92.7% respectively[8]. There are around 370 non-chain local restaurants in Berkeley and 2900 non-chain restaurants in San Francisco. In addition, in these cities there is a large population that are both technology savvy and want to have a positive social impact on the local community.
Initially we will target 45 restaurants in Berkeley and 100 in San Francisco. Learning and building features, especially the dynamic pricing engine along with market validation will be our primary focus in the first year.

In the second year, once we have ironed out the model and operation, we plan to expand to all major cities of the Bay Area and New York City. We plan to deploy our solution to 300 restaurants and work on optimizing the dynamic pricing model.

Once we see good traction, we will expand into 10 US metro cities and target to reach 1500 restaurants by Year 3. We will target market expansion by Year 4 and plan to cover 20 major US metros and target to have 6,750 restaurants signed up and then to finally deploy all over us with an install base of 52,500 restaurants.

Market Entry (MVP)
- Berkeley & San Francisco
- Target - 145 Restaurants
- Market Validation
- Dynamic Pricing

Scaling up the business
- 10 Major US Metros
- Target - 1500 Restaurants
- Wishlist

New Markets
- All of US
- Target - 52,500
- Adapt to new Markets

Year 1   Year 2   Year 3   Year 4   Beyond

Incorporate Learnings
- Bay Area & New York
- Target - 300 Restaurants
- Dynamic Pricing Optimization

Market Expansion
- 20 Major US Metros
- Target – 6,750 Restaurants
- Convenience features

---

[8] 10 Cities with the Most Local Restaurants, https://www.rent.com/blog/cities-with-the-most-local-restaurants

Go-to Market Strategy

Berkley is chosen as our very first market. We will start by identifying 10 restaurants to join FoodWise's beta program. There are a couple ways to identify these candidates. One is to share our FoodWise app on social platforms such as Reddit, Instagram, and TikTok, targeting tech savvy diners such as UC Berkeley students. We will also partner with UC Berkeley to have FoodWise represented in campus student fairs, student foodie clubs, and university newsletters. Also we will pay selected Berkeley students to be FoodWise ambassadors, who will evangelize our platform/app among Berkeley students and their favorite local restaurants. Also, based on wish lists created by the students in the FoodWise app, we can identify the top 30 Berkeley independent restaurants as leads. Another way to identify candidates is through local events, such as Berkeley Restaurant Week[9]. After these restaurants are identified, we will reach out to their owners to introduce the FoodWise platform. The first 10 restaurants that join our beta program will get the first year's membership for free.

Our next market is San Francisco. The go-to market strategy will be similar, and on a bigger scale. We will target user segments who are frequent restaurant goers for app install. In addition, since San Francisco is a tourist destination city, we will partner with travel sites such as TripAdvisor, Kayak, Google Map to reach a larger user base. Travelers will be guided to independent restaurants that show up frequently on local diners' wish lists. Also, we will attend San Francisco's local restaurant, dining, and other social events monthly.

We will expand our market to cover the entire Bay Area and into Los Angeles in Year Two. We will deploy more go-to market strategies, such as attending restaurant technology conferences for NorthWest regions and LA, such as The Northwest food show[10], April 16 - 17, 2023 in Portland Oregon and Western Foodservice and Hospitality Show[11], August 6 - 8, 2023 in Los Angeles, and FSTEC conference[12] - one of the leading events for restaurant owners learning about restaurant technology, September 13-15, 2023.

We will expand our market region by region within one country, and then move onto the next country. In each region, we will start with college towns and metropolitan areas.

Business Model

In a two-sided marketplace, FoodWise matches underutilized supply with incentivized demand that is generated by a dynamic pricing system. Restaurants gain access to an additional market of price-sensitive and environmentally conscious customers who may have been previously priced out of their current market. The FoodWise business model aligns with the successful revenue growth of the restaurants. When a meal is sold on the platform, FoodWise takes a 10% revenue share of each order, which amounts to $2.00 for an average $20 order. For the target market of 52,000 restaurants by year 5, 63M meals ordered annually on FoodWise would yield a yearly revenue of $126 million.

Financial Projections

For each sale, we need a pool of customers and restaurants on the platform. Our fixed costs are in the software development of the platform, mobile apps and restaurant integrations, the data science necessary to improve our ML pricing model, and salaries. Our variable costs relate to marketing and

---

[9] Berkeley Restaurant Week, https://www.visitberkeley.com/food-drinks/restaurant-week/
[10] The Northwest Food Show, https://nwfoodshow.com/
[11] Western Foodservice and Hospitality Show, https://www.westernfoodexpo.com/
[12] FSTEC, https://fstec.com/

customer acquisition of restaurants and consumers. We expect to become profitable at the end of year 3 when the development costs are spread over 1,500 restaurants and 150,000 consumers.

	Year One	Year Two	Year Three	Year Four	Year Five
Restaurants Enrolled	145	300	1,500	6,750	52,500
REVENUES	$99	$360	$2,700	$16,200	$126,000
GROSS PROFIT	$79	$288	$2,160	$12,980	$101,340
FIXED COSTS	$1,400	$1,670	$2,067	$2,366	$3,093
NET PROFIT	-$1,321	-$1,382	$93	$10,614	$99,273

References

US restaurants Food Wastage, https://foodprint.org/issues/the-problem-of-food-waste/
National Restaurant Assoication State of the Restaurant Industry 2022
https://assets.zapnito.com/users/590364/documents/188635/6be87a1c-2328-4798-8b95-cf118b82b4dd.pdf
45 Must-Know US Restaurant Industry Statistics,
https://www.zippia.com/advice/restaurant-industry-statistics
Despite A Rough Two Years, US Independent Restaurants Still Represent Over Half of US Commerical Restaurant Units and Are Recovering,
https://www.npd.com/news/press-releases/2022/despite-a-rough-two-years-u-s-independent-restaurants-still-represent-over-half-of-u-s-commercial-restaurant-units-and-are-recovering/
2022 State of the Restaurant Industry,
https://xchange.avixa.org/documents/pdf-report-2022-state-of-restaurant-industry
National Restaurant Association, What's Hot 2023,
https://go.restaurant.org/rs/078-ZLA-461/images/Whats-Hot-Culinary-Trends-2023.pdf
Food Ordering Survey,
https://docs.google.com/spreadsheets/d/1gA_AIOEdgifmCBvlqsk5dotTVV2qycNAGOKQJWCcuVE/
10 Cities with the Most Local Restaurants,
https://www.rent.com/blog/cities-with-the-most-local-restaurants
Berkeley Restaurant Week, https://www.visitberkeley.com/food-drinks/restaurant-week/
The Northwest Food Show, https://nwfoodshow.com/
Western Foodservice and Hospitality Show, https://www.westernfoodexpo.com/
FSTEC, https://fstec.com/