

Streetkhana

[\(Link to problem statement\)](#)

Key Stats



Market Size:
\$41 billion
(2024 India)



Daily Revenue:
₹8000 crore (Indian
street food market)



Street Food
Vendors: **2 million**
(India)



CAGR: **39%**
(India 2021-25)

(Sources: [1](#) [2](#))

Actors Involved



Consumers: Anyone who wants to find and enjoy great street food.



Street food vendors: Anyone who sells street food and wants more customers.



Govt. Authorities/Regulators : Ensure food safety, hygiene standards, and vendor compliance.



Platform: Connects consumers with street food vendors and provides recommendations.

Hypothesis



Consumers:

- Struggle to find the best vendors and face issues when vendors are temporarily closed.
- Are uncertain about the hygiene standards of vendors.
- Lack curated lists of top outlets for specific dishes.
- Find it difficult to easily share recommendations with friends.



Vendors:

- Need to change locations in search of better sales opportunities.
- Unable to grow their stall fast due to low customers.
- Lose customers when they relocate.

Insights (Secondary Research)

- **FSSAI License:** Is mandatory for all food businesses, to ensure that the food being sold is safe for consumption. ([Source 1](#))
- **Health Trade License:** Issued by local municipal authorities, ensuring vendors meets hygiene standards upon inspection. ([Source 1](#))
- **Clean Street Food Hub Certification:** Separate special certification for the vendors who meet high standards of hygiene, food safety, and waste management, as assessed by the FSSAI. (Sources [1](#), [2](#))

Assumptions

For our case, we assume all vendors only have the FSSAI license and zone permit to set up their stalls, preventing police interference, an ideal condition. We assume they may or may not have the Health Trade License and Clean Street Food Hub Certification.

Targeting ~40 million young urban Indian food enthusiasts seeking reliable, hygienic street food information

Target Segment

Indian Urban students & young professionals, aged 20-35, who are frequent street food eaters (at least once in week)

Why

To tap into a demographic that is sizable, tech-savvy, has disposable income to spend, and are also passionate about discovering new street food experiences and value reliable, quality information.

Estimated Impact

Indian Population = 1400 million

Aged 20-35 = 25% x 1400 = 350 million

Urban Population = 35% x 350 = ~122 million

Professionals & Students = 50% (assuming) x 122 = 61 million

Frequent Street Food Eaters = 68% (User Research) x 61 = ~40 million

Estimated Target Segment = 40 million people

Estimated Target Segment = ~40 million people

Insights (User Research)

31 Consumer Survey ([Link](#))

10 Consumer Interviews ([Link](#))

Consumer:



value hygiene while choosing stalls



want a solution for it



struggle with stall location and timing changes.



discover vendors through word of mouth



choose the dish before the stall

10 Vendor Interviews ([Link](#))



interviewees shift location and timings for better sales



want to grow sales but struggle to do so

Three personas: a college student, a tech-savvy engineer, and a street vendor, each with unique challenges in discovering and growing street food businesses



Persona 1

Shreya Gupta - 21yrs
College Student | Delhi
Tech-Savviness: Medium

Shreya often hangs out with friends at popular street food joints after classes. She relies on word-of-mouth and social media recommendations.

Pain Points:

- Finds hard to keep track of vendors' locations due to their frequent movements.
- Lack of a reliable platform for street food exploration, especially when recommendations from friends are not available.

Needs:

- A solution that allows her to easily discover and navigate to popular street food vendors near her college.
- Focus on hygiene and quality.
- Save favorite vendors and share recommendations with friends.

Quotes

(Consumers): "I wish I could have a list of all the famous street food vendors in one place"
- Akansha 22yrs

(Vendor): "I wish I could increase the number of customers and my sale"
- Jaswant 40yrs



Vendor Persona

Deepak Lal - 38yrs
Samosa Chaat Vendor | Delhi
Tech-Savviness: Low

Deepak has been running his chaat stall in for the past 5 years. He started his business with minimal resources but is growing steadily.

Pain Points:

- Not able to grow his stall fast due to low customers.
- Municipality forces him to shutdown from time to time.



Persona 2

Rohan Mehta - 26yrs
Software Engineer | Gurgaon
Tech-Savviness: High

Rohan, a busy professional, loves discovering new street food spots in Gurgaon through social media. Hygiene-conscious, he frequently changes his eating spots, relying on recommendations and social media to find the best options.

Pain Points:

- Difficulty in finding consistent, reliable information on street food vendors.
- Concern over hygiene practices of street food vendors.
- Difficulty in discovering new street food vendors when traveling to Bangalore for work.

Needs:

- An easy way to locate and explore top-rated street food vendors nearby.
- Reliable, up-to-date information on vendor locations and hygiene practices.

Street food vendors' frequent changes make it hard for consumers to find and track their favorite or new spots, impacting customer experience and vendor sale

True Problem

Street food vendors often change locations, menus, or operating hours, making it difficult for customers to keep track of their favorite spots or discover new ones which are hygienic.

Who's Facing It

Consumers:

- Regular Patrons: Often struggle with vendors' changing locations and hours.
- New Customers: Have difficulty finding hygienic options.

Vendors:

- Street Food Vendors: Experience loss of regular customers and miss out on new ones due to frequent relocations.

Why This Problem is Happening

Frequent Location and Operating Hours Changes:

- Vendors often relocate to avoid conflicts with others, or in search of better sales opportunities.

Difficulty in Tracking:

- Consumers often forget details of friend recommended stalls and their details like timings and location.

Challenges in Discovering New Hygienic Vendors:

- There's no reliable way to assess a vendor's hygiene before visiting.

Why This Must Be Solved Now

With a **\$41 billion** market growing at **39% CAGR**, solving these challenges can enhance customer experience and boost vendor profitability, impacting **~40 million consumers'** daily pain points.

Impact

- Improved consumer experience (potentially affecting ~40 million people)
- Time and cost savings
- Hygienic choices for the consumers.
- Increased vendor visibility and sales

Other Products



Street Vendors App by NULM & State Livelihood Schemes: Government apps for vendor support, but they lack consumer-facing features like real-time updates and hygiene ratings.



HungerBox: Focuses on discovering stalls in food courts in corporate settings but isn't accessible to the general public.

Broken true problem into 3 sub-problems and proposed 5 solutions to tackle frequent vendor changes, improving discovery, user experience, and trust

Sub Problem: Vendors frequently change locations, timings and menu

Real-Time Vendor Tracking:

- Vendors **check-in with their location and operating hours** in the app each day, which automatically updates in real-time.
- If a vendor moves more than 50 meters from their initial location (zone), the **app triggers an update location alarm** on the vendor's device.
- Consumers can check the **day's timing and location** of all stalls aggregated on the platform.

Instant Menu Updates:

- Vendors can **quickly update their menus** by uploading a photo, with **image recognition technology** automatically parsing and listing each item.
- Vendors can easily **modify individual menu items** directly within the app, ensuring their offerings are always up to date.

Interactive Live Map

- A **dynamic live map** displays the current locations of vendors, allowing users to see where their favorite vendors are in real-time.
- Vendors, especially food trucks, can **pre-set their future locations**, allowing users to see upcoming spots in advance

Sub Problem: Consumer's difficulty in tracking and discovering vendors

Customizable Libraries

- Users can **create private or public libraries** to save and organize their favorite stalls, similar to playlists.
- These libraries can be **easily shared with friends** or the broader community, allowing for effortless discovery

Sub Problem: Concerns about vendor hygiene

Hygiene Badge System

- Vendors **receive badges** based on their stall's hygiene standards.
- **Badges A, B, C, and D** are awarded to vendors who meet all **three, two, one, or none** of the following certifications, respectively:
 - **8+ hygiene ratings** from consumers
 - **Health trade license**
 - **Clean Street Food Hub certification.**
- Vendors can **upload license images** on the vendor app and is then verified and then badges are awarded


Prioritization ranks solutions by their product score, highlighting those with high impact, confidence, and low effort, suggesting that Real-Time Vendor Tracking and Hygiene Badge System should be developed first.

Prioritization

$$\text{Product Score} = (\text{Impact} \times \text{Confidence}) - \text{Effort}$$

Please see the [link](#) for the product score scale, (e.g., 1 impact score = <5% people affected, 0.2 confidence score = 1-pager written, 6 effort = 10 dev weeks)

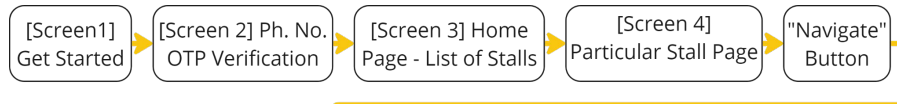
	Impact	Confidence	Effort	Product Score
 Real-Time Vendor Tracking	10	0.8	3	5
High impact (>30% people) combined with high confidence (solution validated with users) and comparatively low effort results in a strong product score, making this a priority for development .				
Instant Menu Updates	7	0.5	8	-4.5
Despite its potential impact, high effort (tech. bandwidth of machine learning and image processing) result in a negative product score, hence this feature may not be the best initial investment .				
Interactive Live Map	6	0.5	9	-6
Combination of lower impact, low confidence (only problem validation), and high effort (making the interactive UI with live position of vendors), results in a negative product score, hence this might be a feature to develop later , once more critical needs are met.				
Customizable Libraries	8	0.6	5	-0.2
Relatively high impact (helping people share their libraries with friends which helps in discovery) and moderate confidence, combined with moderate effort making this slight negative product score, while important, other impactful solutions must be prioritize .				

	Impact	Confidence	Effort	Product Score
 Hygiene Badge System	10	0.8	7	1
The relatively high impact (>30% people) and confidence, combined with moderate-high effort (low tech. effort but involvement of inspection & validation), result in a positive product score, making this a worthwhile feature to prioritize after core functionalities are established.				

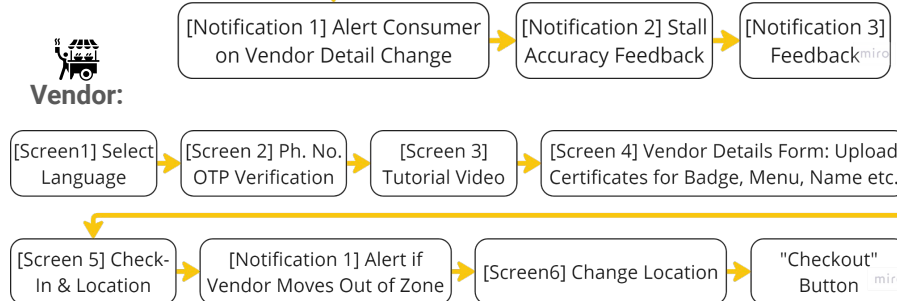
User Journey



Consumer:



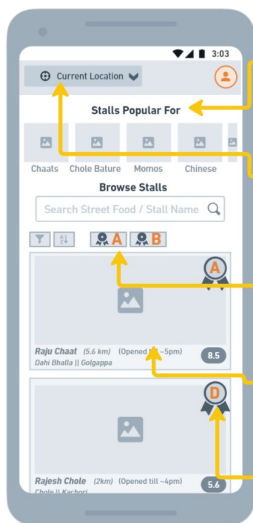
Vendor:



Wireframes for consumer and vendor app, focusing on how real-time vendor tracking and hygiene badge system could be implemented based on multiple insights

**Consumer App
Screen 3**

[Link for All Screen Wireframes](#)



Based on the **insight** that consumers **choose food items before the stall**

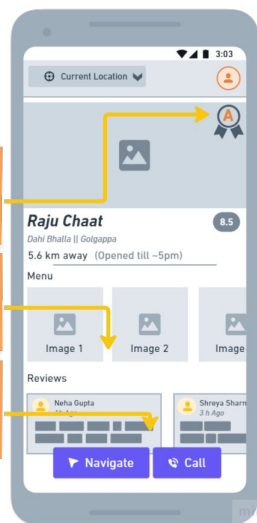
Consumers can switch to a different city

Quickly filter Hygienic Stalls

Timings & Distance

Vendors receive Badges based on their Hygiene Standards.

**Consumer App
Screen 4**

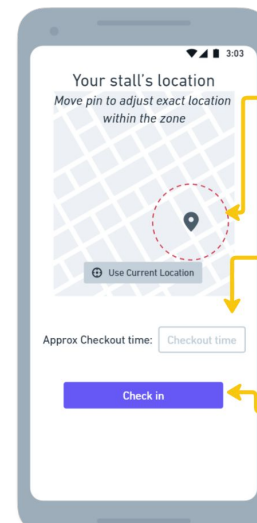


Click to View Met Criterion

Stall's Menu & Consumer Reviews

Navigate / Call Vendor

**Vendor App
Screen 5**



Vendor can adjust exact location within the zone

To get operating hours

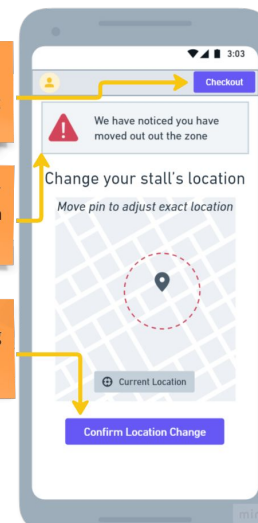
Checkin Button

Click to Checkout

Alert: When Vendor Moved Beyond 50m Zone

Click After Updating the Location

**Vendor App
Screen 6**



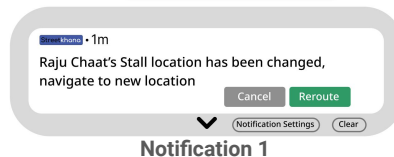
Change your stall's location

Confirm Location Change

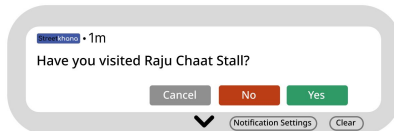
Real Time Vendor Tracking & Hygiene Badge:

Consumers can set their location, filter stalls by badges, view details like timings, menu, and location, and navigate via Google Maps using the 'Navigate' button.

Users will receive notifications if the vendor's location changes or feedback prompts 1 hour after clicking 'Navigate.'



Notification 1



Notification 2

Vendors will check in daily and update their estimated operating hours within the app, which automatically fetches and stores real-time location updates.

If a vendor moves more than 50 meters from their initial location, the app triggers an update location alarm on the vendor's device.

Vendors must upload certificate images & License No. during sign-up ([Screen 4](#)). The License will be automatically verified through the FoSCoS (Food Safety Compliance System) badge will be issued afterward.

System Design, Risks & Mitigations for the app, with a Distribution Strategy focused on street food festivals and QR codes, launching first in Delhi NCR

System Design



Send Request1:

- Req. for Stall details:
 - List of stalls popular for
 - Stalls near the location
 - Badge
 - Ratings
 - Image
 - Distance
 - Special dishes
- Req. Ranking of the stalls

Send Request2:

- Checkin status
- Approx checkout time
- Current location

Receive Request1:

- List of Stalls with details
- Rank

Receive Request2:

- Trigger Update location alarm

Save in Cache Server:

- Stall Images
- Ratings
- Badge Details
- Special Dishes

Risk & Mitigations

Risk	Mitigation Strategy
Vendors may skip hygiene certifications	<ul style="list-style-type: none"> - Offer incentives for regular updates (e.g., higher visibility on the app). - Provide onboarding support to help vendors understand the benefits.
GPS inaccuracies could show wrong vendor locations	Increase minimum location threshold of 50 metres.
Delays in hygiene certification validation	Streamline the validation process using automation wherever possible.
Vendors might relocate without updates	Penalties for non-compliance like lower visibility ranking.

Distribution Channel

Initial Outreach for first 100 users :

- Street Food Festivals:** Collaborate with street food festivals & set up a stall to demonstrate the app's features to attendees.
- QR Code:** Place app download QR codes on street stalls.

Pilot City:

- Delhi NCR : High Density of Target Audience + Street Food Culture

Metrics for tracking app effectiveness in actually discovering hygienic food vendors, along with potential revenue models like vendor subscriptions and sponsored placements

Metrics

Since our main goal is to enhance the discovery of hygienic street food and finding the stall, we should track whether this is getting achieved or not.

North Star:

Conversion Rate of Users on Landing Page to “Navigate” Button:

- Directly measure app’s effectiveness in helping users discover street food vendors and take action to visit them.

$$\text{Conversion Rate (\%)} = \left(\frac{\# \text{ Users Who Click the “Navigate” Button}}{\# \text{ Users Who Landed on the Home Page}} \right) \times 100$$

Leading Metrics (I1):

Conversion Rate from Hygiene Filters: To track the effectiveness of hygiene badge system.

$$\text{Hygiene Filter Conversion Rate (\%)} = \left(\frac{\# \text{ Users Clicking “Navigate” After Using Hygiene Filter}}{\# \text{ Users Who Used the Hygiene Filter}} \right) \times 100$$

Location Accuracy Rate:

To track the utility of the real-time vendor tracking feature, but it will have drop-off as consumer may ignore notifications.

$$\text{Location Accuracy Rate (\%)} = \left(\frac{\# \text{ Users Clicking “Yes” In Location Feedback Notification}}{\# \text{ Total Users Who Navigated}} \right) \times 100$$

Lagging Indicators:

- Monthly Active Users
- Vendor & User Retention Rate (3 Months)

Additional Leading Metrics (I2):

Hygiene Badge Adoption Rate: % of users who use the hygiene badge filter when searching for vendors.

Vendor Participation Rate in Real-Time Updates:

(# vendors regularly check in & update location / Total # vendors) x 100

Non functional metrics:

- Response Time:** Vendor location updates delivered in shortest time.
- %Error Rate:** Proportion of errors, out of total operations or requests

Revenue Model:

- Vendor Subscription Model:** Charge vendors for featured listings that give them higher visibility on the app.
- Sponsored Placements:** Sell ad space to related businesses
- Hygiene Inspection Service** (Future Potential): Charge vendors for detailed third-party hygiene inspections with special badge.
- User Subscription Model** (Future Potential): Offer ad-free browsing, exclusive deals for a subscription fee.

Streetkhana , designed to help Indian urban consumers find & track street food vendors while ensuring hygiene. Key features include real-time location updates & hygiene badge system, aimed at improving the street food experience of consumers (~ 40 million) & vendor visibility (~2 million)