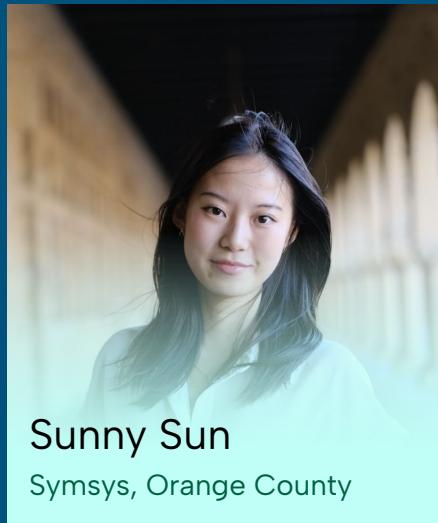
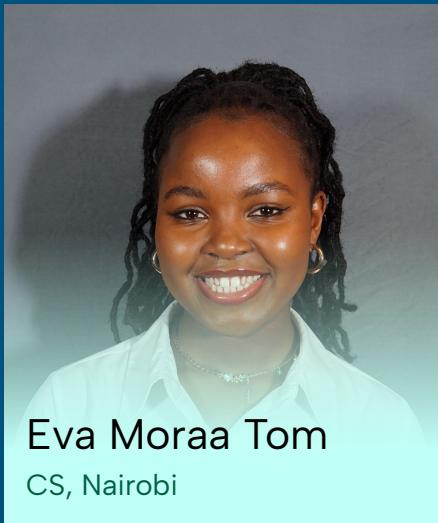


# Community Resilience For Small Businesses

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NorthStar

# Meet The Team



# Recap:

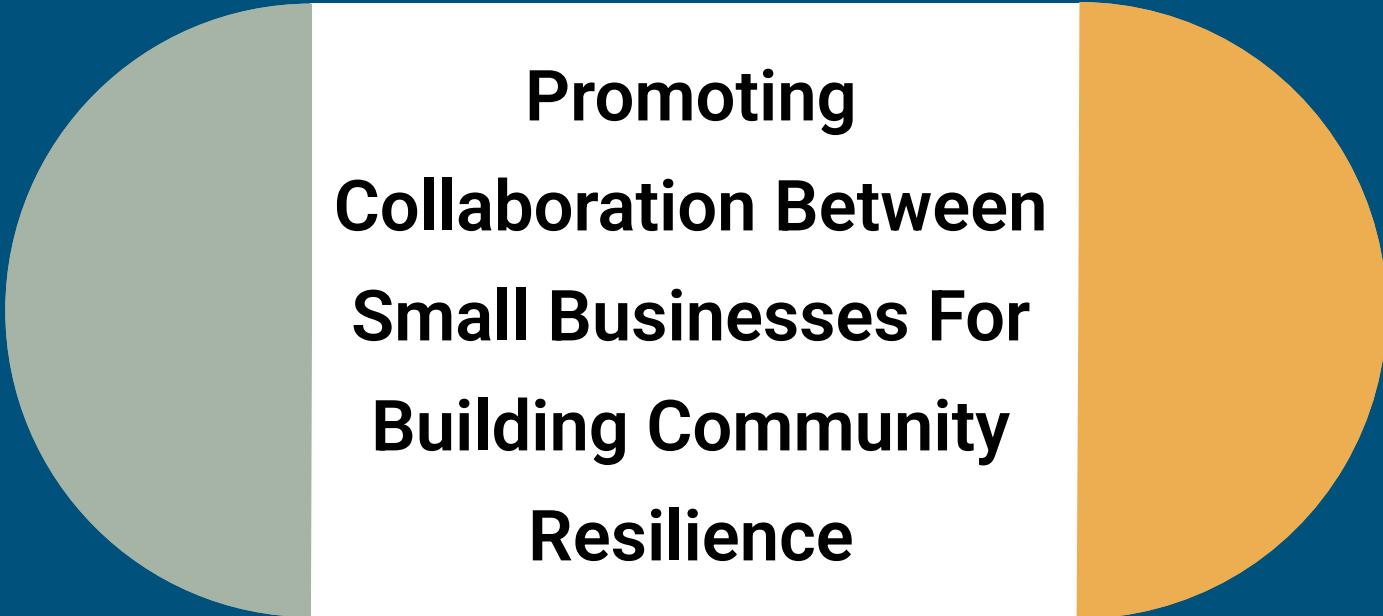
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**Last Week:** Needfinding interviews where we identified key insights from each empathy map we did, this informed our next step.

**This Week:** Refined our domain, more interviews, testing key assumptions through our prototypes.

# Refined Domain:

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**Promoting  
Collaboration Between  
Small Businesses For  
Building Community  
Resilience**



# Additional Needfinding:

- Small Business
- Expert Interview

# “Val”

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**Type:** Manager at Mini Cat Town

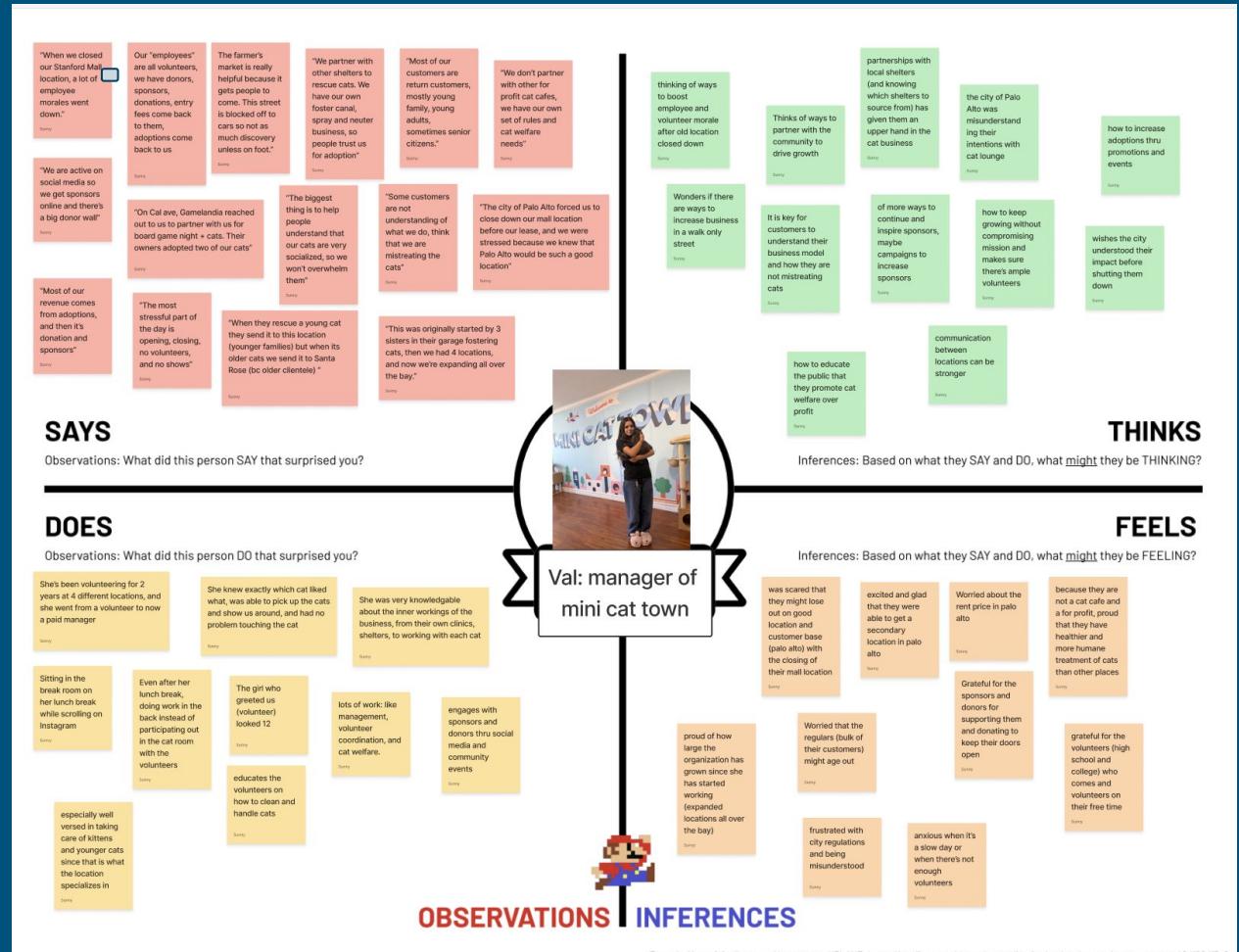
**Location:** Cal Ave.

**Reason For Selection:** The Small Business is an non profit, so it was interesting to see how their operations are different from those of a business that operates for profit

**Key Learnings:** Heavily dependent on volunteers, 2 business models: adoption, drop-ins to pet the cats, few companies that tried to work with them ie Gamelandia cats+board game



# Val's Empathy Map



# Key Insights:

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- 01 “On Cal ave, Gamelandia reached out to us to partner with us for board game night + cats. Their owners adopted two of our cats”
- 02 Have the Palo Alto Location and in proximity to younger families gives them an upper hand in increasing donations, their main source of revenue
- 03 Refrains from partnering with other cat shelters or for profit cat cafes due to their sub standard handling of cat health → engages with community and partners in a selective manner.

Eric Liguori: Prof. & Associate Dean, Florida State University

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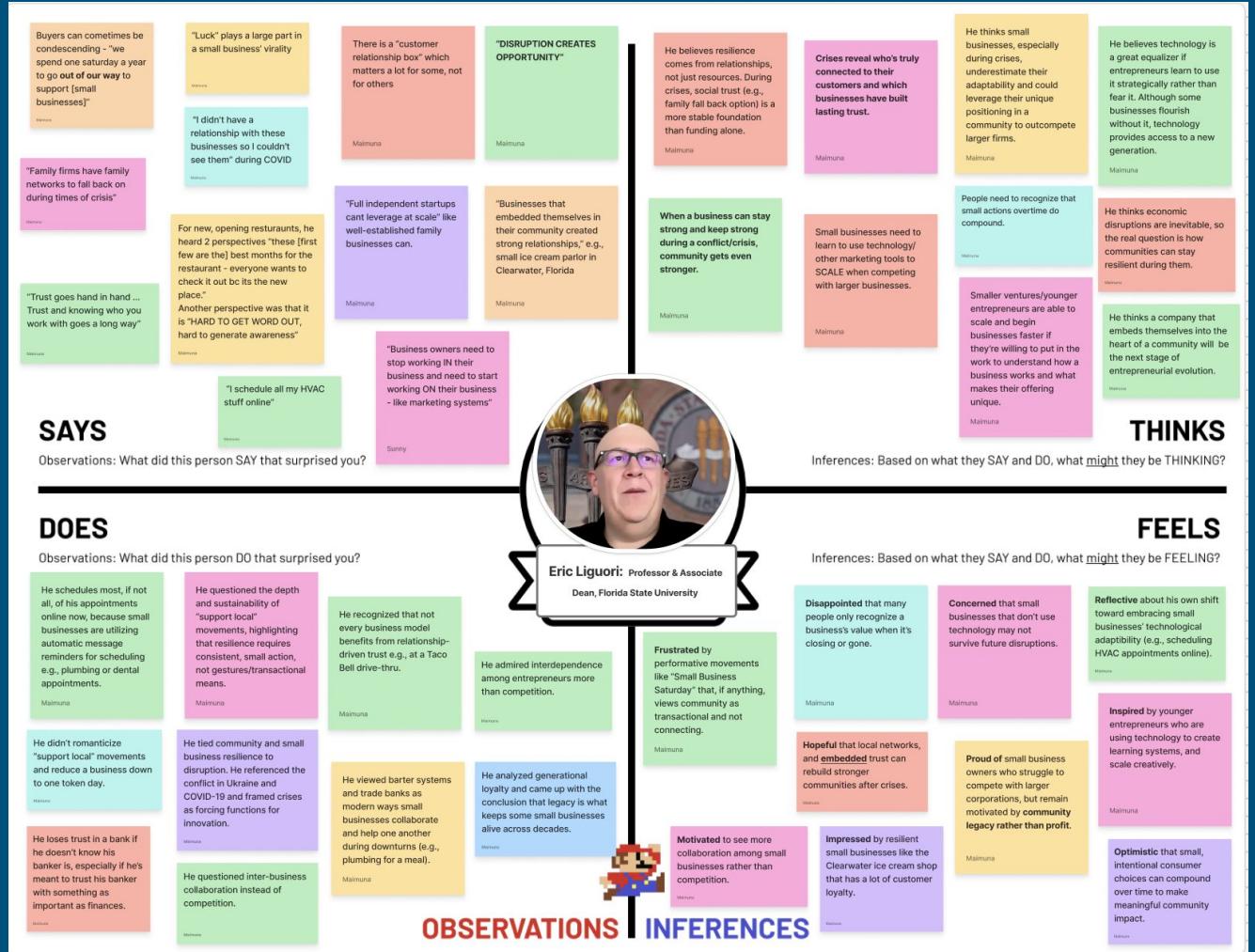
**Reason For Selection:** expert interview

**Location:** Zoom

**Key Learnings:** entrepreneurs always need to operate in their context to survive, stop working in your business to work on your business



# Eric's Empathy Map



# Key Insights:

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- 01 "luck plays a large part in small business vitality" but also that "trust and knowing who you work with goes a long way"
- 02 Eric is "inspired by younger entrepreneurs using technology" but "concerned small businesses that don't use technology may not survive"
- 03 "**resilience comes from relationships, not just resources**" and **businesses embedded in community "stayed stronger during crises like COVID."**



# POVs & HMWs

We met Taryn, a mid 30s co-salon owner with her husband, who is struggling to attract customers, and was surprised to see us come in to her salon.

We were surprised to notice that despite saying that opening the salon was her dream, Taryn doesn't put in any effort into knowing her community or interact with other salons in the area.

We wonder if this means that Taryn's view of success and achievement of her dream is defined by opening the salon rather than building a community or attracting customers.

It would be game changing if Taryn could envision the potential of her business as an anchor in the community, by seeing competitors as collaborators, and embedding herself in her neighborhood

# HMWs

1. **HMW convince isolated business owners like Taryn that community connection and collaboration is profitable?**
2. HMW leverage what makes Taryn's salon unique to convince customers to choose her salon over others?
3. HMW turn the salon experience into more than just a salon, but a place where people can come to connect?
4. HMW leverage a lack of foot traffic as a key part of the salon experience (e.g., exclusivity or private, quality service)?
5. HMW reduce the sense of competition between similar businesses in one area (like salons) and instead promote collaboration or community support?
6. HMW support small businesses with less reviews and market them as, or even more, appealing compared to well-established businesses with many online reviews?
7. HMW redesign the salon appear to be popular when customers walk by it, to attract even more customers?
8. HMW reimagine what "success" looks like for a new salon: is it volume/profit margins or building relationships?
9. HMW support business owners who currently view competitors as threats, and convince them of the potential personal and business value of viewing them as potential collaborators and community partners?
10. HMW use beauty as a shared experience rather than a typical private one that is consolidated in a salon?
11. HMW translates Taryn's dreams and aspirations for her salon as a compelling point to potential customers?
12. HMW improve her marketing towards customers and lets her know what is going wrong with her current strategy?



We met Beatrice, a retired grandmother of 2 who was eating at a small chain restaurant next to her home.



We were surprised to notice she exclusively shops in big businesses for groceries, but she likes to support small businesses in the restaurant and clothing sectors.



We wonder if this means she feels conflicted between her moral obligation to support small businesses for the experience and big chains for the quality and convenience.



It would be game changing if Beatrice had a way to get quality assurance and discover small businesses that offer the same level of services as chains.

# HMWs

1. HMW shift customers' perceptions so that groceries from small businesses feel just as high-quality as big-name stores?
2. HMW spotlight what makes each small businesses offering distinct and worth discovering?
3. HMW translates the same experience of memberships and quality offerings that big businesses offer to small businesses?
4. HMW make customers of small businesses feel genuinely appreciated for their loyalty
5. HMW make shopping at small businesses feel effortless without losing their personal touch?
6. HMW make discovering new small businesses feel natural and rewarding for customers who already care about shopping local?

## **7. HMW translates the same customer experience of a big corporation to level up small businesses**

8. HMW emphasize the human connection and community building aspect of small businesses and highlight that as a benefit of shopping at small businesses?
9. HMW make the warmth of human connection and community the defining reason people choose small businesses?
10. HMW extend the trust people feel at their favorite local restaurants to other kinds of small businesses? HMW make discovering local businesses a gateway for newcomers to feel connected in their new community?
11. HMW inspire people to recommend small local alternatives as passionately as they do big brands
12. HMW connect people's values around sustainability and ethics to real, local shopping choices they feel good about?
13. HMW make the feeling of being a 'regular' a signal of trust for new customers?
14. HMW use the emotional and ethical tensions people feel from big corporations to understand what they crave in local experiences?
15. HMW make the shopping experience at small businesses consistent and dependable rather than random and risky?
16. HMW make discovering small businesses feel like finding hidden gems or finding treasures?
17. HMW promote establishing personal relationships with store owner as a differentiator and a benefit?



We met Mark, a manager at a local bubble tea shop, who had only been working there for 6 months, and it was his first time being a manager.



We were surprised to notice that even as a manager, he has to look up YT videos on how to manage to know how to do certain things and improve the business.



We wonder if this means he feels inadequate as a manager and has to use trial and error to solve current problems he faces instead of drawing from his experience.



It would be game changing if Mark felt validated in his abilities while being encouraged to grow, transforming his lack of preparation into motivation and confidence to succeed in his role.

# HMWs

1. HMW accelerate the learning curve for managers entering a sector where they lack prior experience so they can handle day-to-day challenges with confidence?
2. **HMW support people in their early career who are learning through trial and error with experienced mentors to provide guidance on their community specific challenges?**
3. HMW enable managers new to an area to understand the local customer behaviors, competitor landscape, and community dynamics that impact their business success?
4. HMW capture and transfer institutional knowledge from previous managers so new managers don't have to rediscover solutions to recurring problems?
5. HMW ensure managers encounter learning content that addresses their immediate, context-specific challenges rather than generic management theory?
6. HMW create opportunities for inexperienced managers to learn from peers facing similar challenges in their area?
7. HMW enable managers to track what problem-solving approaches they've tried so they can build on lessons learned instead of starting from scratch each time?
8. HMW equip managers without prior experience to become competent in their role within their first 30 days?
9. HMW transform the anxiety inexperienced managers feel when starting into curiosity and motivation to learn?
10. HMW enable new managers to build trust and rapport with their team before facing their first challenging situation together?
11. HMW make the trial-and-error learning that managers experience feel like progress and skill-building rather than repeated failure?
12. HMW provide managers with immediate, judgment-free support when they encounter problems they don't know how to solve?
13. HMW create connection and belonging for new managers during onboarding so they feel supported rather than isolated in their learning?
14. HMW create a culture where new managers feel empowered to ask questions and seek guidance without fear of judgment or being seen as a burden?
15. HMW recognize and celebrate the small wins and skill development that happens during a manager's learning journey so they stay motivated through the challenging early period?



# Solutions



# Solutions for HMW convince isolated business owners like Taryn that community connection and collaboration is profitable?

- 1.1.1. Connect with small businesses in the area → look at different businesses that would have synergy with yours (THROUGH Alllllll) and you can contact them for potential collaboration; ex) boba and cats, cats and board games. **Sunny Sun**
- 1.1.2. Small business collaboration platform: small businesses can post events they're having and ask other businesses if they want to join in. For example, a cat shelter is having video game night and would love to see if any arcades in the area would be willing to give/partner with them to bring digital games to the shelter. **Sunny Sun**
- 1.1.3. **AI collaboration matcher:** instead of businesses reaching out manually, AI can match businesses with potential events to embed businesses in their community and raise revenue and community support. **Sunny Sun**  
**Maimuna M Muntaha** **Eva Moraa Tom**
- 1.1.4. Coffee roulette/chats where business owners in the neighborhood can meet and hangout if they have never met before.
- 1.1.5. Shadow a neighbor program where a new business owner can spend some time in another business to see what they do
- 1.1.6. Shared wins board where a business owner can post their success weekly so others can celebrate them.
- 1.1.7. Small businesses can access a community feed where people can only upvote or downvote a post, and businesses post events they're having e.g., flea market or pop up.
- 1.1.8. Small businesses can ask the community weekly: are there any new flavors you guys want to see at our store e.g., how Crumbl cookies has a rotating menu.  
**Maimuna M Muntaha**
- 1.1.9. Shared map between small businesses to visualize foot traffic
- 1.1.10. Data analysis tracker to track the top trending topics through google and reddit and social media (social listening) and AI suggests campaigns each small business can, or collaborate with each other
- 1.1.11. **AI/AR Scavenger hunt to get to and discover small businesses**  
**Maimuna M Muntaha** **Sunny Sun** **Eva Moraa Tom**
- 1.1.12. Gamified small business explorer where you explore small businesses in a game, unlock new characters toylines and achievement badges THAT YOU CAN TRANSFER AS POINTS INTO REAL SMALL BUSINESS DISCOUNT



# Solutions for HMW support people in their early career who are learning through trial and error with experienced mentors to provide guidance on their community specific challenges?

- 1.3.1. Mentor-mentee roundtable.
- 1.3.2. Text/call experienced managers like an on-call?
- 1.3.3. Manager office hours.
- 1.3.4. New manager onboarding kit for new or early career managers that is made by experienced managers.
- 1.3.5. Monthly “what would you do?” workshops where you go through hypothetical scenarios in your day to day managing life and solve them
- 1.3.6. Manager shadow experience
- 1.3.7. Slack for managers
- 1.3.8. Personalized videos and tutorials made by other mentors in the area. As a reward to the mentors who are willing to give support, they can get certain benefits (like discounts at the small businesses they mentor) [Sunny Sun](#) [Eva Mora Tom](#)
- 1.3.9. Mature training program of similar stores ACROSS different community in different types of stores → ex) boba shop to boba shop.
- 1.3.10. Empower managers to set and track milestones, with AI-driven recommendations that suggest personalized learning videos and unlock new goals as they progress. [Sunny Sun](#)
- 1.3.11. Community case library where managers can share MISTAKES and failures they've had and what they wish to do better. [Eva Mora Tom](#) [Sunny Sun](#)
- 1.3.12. Trade mentorship → younger managers can trade their expertise (like in tech and AI) for experience with the older managers
- 1.3.13. Gamifying training and managing (learning how to manage), make it consistent with in person goals (“take a pic of the new item on your menu to unlock this part of the map / achievement”). [Maimuna M Muntaha](#)



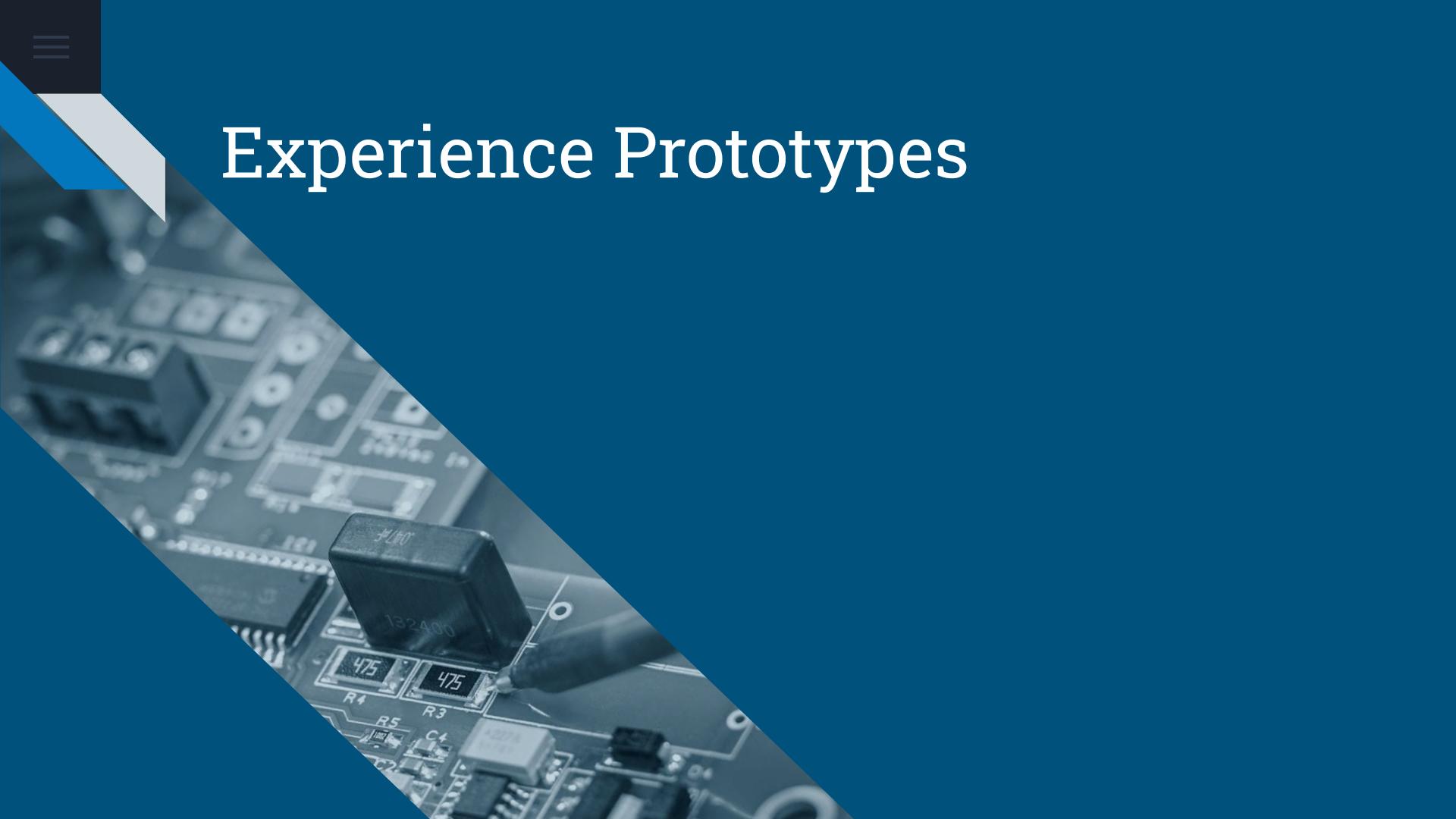
Empower manager to set and track milestones, with AI-driven recommendations that suggest personalized learning videos and unlock new goals as they progress.

# Solutions for HMW translate the same customer experience of a big corporation to level up small businesses?

- 1.2.1. Small businesses in the area enroll in the same points system, people can collect loyalty points through shopping at different small businesses in the area and get discounts by supporting small businesses. [Sunny Sun](#)
- 1.2.2. Small business transparency app → transparency in terms of quality, manufacturer, sourcing, and prices. Therefore people feel as safe and secure and assured as big businesses. [Eva Moraa Tom](#)
- 1.2.3. Customers and small businesses have their own separate log in screens where customers can search for a specific service they want (e.g., red star nails) and an AI detector can parse through small businesses' images on the app and help customers find the exact look they want to know how well small businesses are doing. For example, if I'm South Asian and I have specific hair, I can search for a blowout done on South Asian hair and see which salon's style I like the most.
- 1.2.4. Customers can customize their preferences like they would at a large store instead of being limited. They would have access to a whole catalog of small businesses in the area: search by product.
- 1.2.5. Trust Badge certificates for small business
- 1.2.6. Try before you commit samples for small business. [Eva Moraa Tom](#)
- 1.2.7. Verified customer reference network.
- 1.2.8. Small business report card(A+, A, B..)
- 1.2.9. AR powered store visit experience (try before u go), visualize owner story and community building
- 1.2.10. Search by product (AI powered) by categorizing reviews so people can find specific images for services (e.g., red nails done at different salons).  
[Maimuna M Muntaha](#)



AI/VR Scavenger Hunt to get to and discover small businesses



# Experience Prototypes



# AI collaboration matcher

Which of these assumptions, if false, would cause the idea to fail?



Enough small businesses are willing to use this opportunity to build community



**small business owners are financially incentivized to collaborate with other small businesses.**

customers would attend events that the

AI can match events

Small businesses that are struggling with connecting with their community will follow through with the AI generated collaboration opportunities if the matches are relevant and minimum effort.

Business owners are financially incentivized to collaborate with other businesses.

These small businesses will make money from collabs

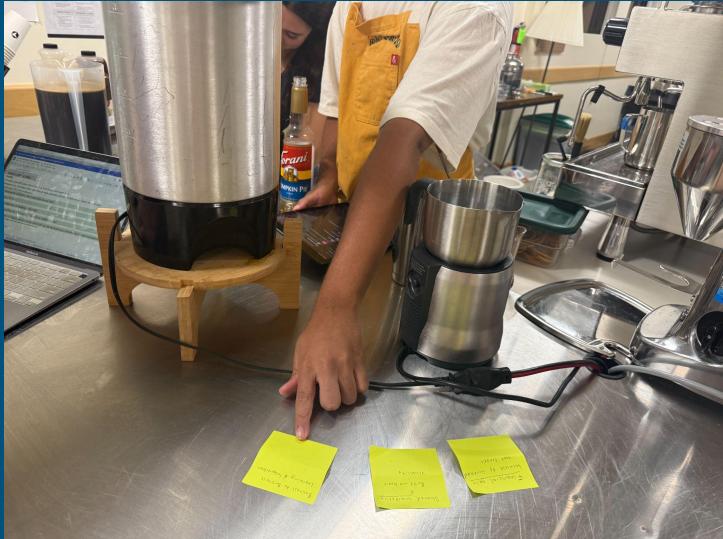
**Assumption:** small business owners are financially incentivized to collaborate with other small businesses.

## **Experience Prototype:**

**Props:** sticky notes with various incentives for small business manager

**Actors:** Benedict, on call cafe manager

**Data:** have a small business manager choose what incentive would make them collaborate with another small business for an event.



**Description:** we went to on-call cafe and asked the on-call manager to choose from 3 cards what incentive would make him collaborate with TAPs.

**Participant:** on call cafe manager

**What Worked:** he validated the assumption which was small businesses would collaborate for financial gain

**What Didn't:**unless we tested on many businesses this can't be a sure test

**Assumption:** validated

# AI milestone collaboration

Which of these assumptions, if false, would cause the idea to fail?



Managers are willing to spend their time setting goals and take recommendations.

Managers believe milestones allow them to improve.

Managers will act on AI recommendations.

“

Confidence in management skills increases when small milestones are achieved and achievements are validated.

AI would provide good recommendations.

Managers prefer content over choosing manually.

Managers have time to use the system regularly.

**Assumption:** Confidence in management skills increases when small milestones are achieved and achievements are validated.

**Experience Prototype:**

Situation: "It's the first night of the quarter, on-call is having its grand opening. At night, the ***line goes out the door***, students complain about slow service, and your baristas feel rushed. In addition, on opening night, you realized ***one of your toasters (out of 2) is broken***. The university administration has asked you to come up with a plan to *reduce average wait time by 30% without hiring more staff or cutting product quality*"

Actors: Toby, a On Call Cafe manager of 1 yr. He was there to interview candidates today

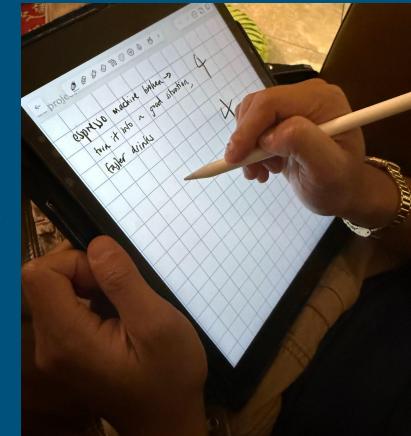
Data: Pre milestone/post milestone self reflection ranking:

- How confident are you in your plan? (1–5)
- How stressed do you feel about handling this? (1–5)
- How feasible do you think it is to cut wait time by 30%? (1–5)

# Detailed Methodology

## Initial Calibration

- "How would you approach this problem tonight?"
- Write down plan
- Collect self assessment: confidence, stress, feasibility



## Create milestones (AI)

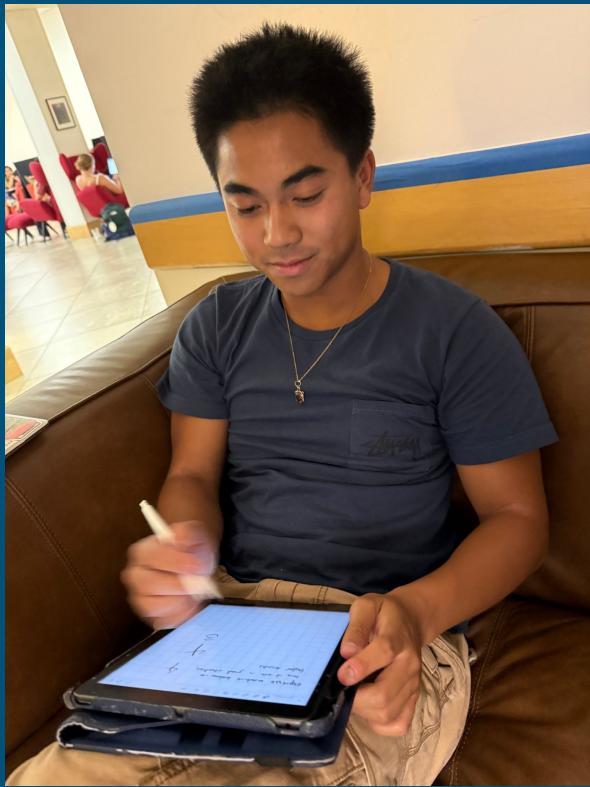
1. Assess capacity bottlenecks (map queue, machine usage, and staff tasks).
2. Reassign staff and optimize to balance load during peak minutes.
3. Fix toaster machine or find workaround for it
4. Set up a simple pre-order or express pickup station.

## Watch personalized tutorial

- <https://www.youtube.com/watch?v=YWyfA-l9yM4>

## Solve milestone 1

## Self reflection (did scoring change)



## What Worked:

- His stress level after solving one milestone decreased from 4 → 1

## What Didn't:

- Feasibility score and confidence did not change
- AI generated milestones don't take into account the nature of the business:
  - "on call would not do milestone 4 because we are focused on the human center experience, so we don't want a just pick up and go situation"
- The video wasn't helpful because it was focused on restaurants. I couldn't find video specific enough, so maybe the personalization part of the video is not feasible.

## Assumption:

- Invalidated

## Going Forward:

- If we want to continue with this solution, we can set up guardrails to create more personalized milestones, or test another solution all together

# AI/VR scavenger hunt

Which of these assumptions, if false, would cause the idea to fail?



Small businesses are willing to provide free meals/promotions/exchange for feedback into their stores.

“

People will be puzzled about businesses they visited before.

People have the ability to go to many small businesses (transportation and mobility limitations).

People have the time to do a scavenger hunt.

People can be incentivized to do a scavenger hunt to explore small businesses in the area.

Businesses will want people in for a

Businesses are comfortable with having QR codes, or clues placed inside their stores.

**Assumption:** People can be incentivized to do a scavenger hunt and they have time to explore small businesses in the area.

**Experience Prototype:**

**Situation:** It's a weekday afternoon at Stanford. A student walking through Tressider sees a QR code that reads:

"It's Wednesday, isn't it? I'm feeling musical! I love Alicia Keys too – try to find me!"

Curious, they follow the clue to CoHo, where a small sign on the piano reveals the next puzzle. They see a prize is waiting for them.

**Actors:** Daniela, Cole, and Max who are a friend group that knows about different places on campus, but don't frequent them.

**Data:**

They visited three different small businesses on Stanford's campus.

# Detailed Methodology

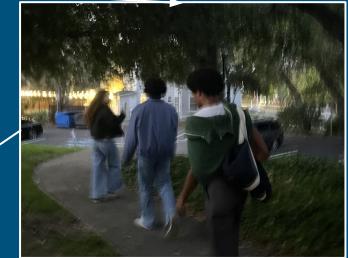
They read the initial clue, e.g., *"It's Wednesday isn't it? I'm feeling musical! I love Alicia Keys too and try my best to be near her!"*

They go to a location and try to find a clue.

They have to explore the area and find the hidden next clue. Each clue they find leads them closer to understanding what the prize is.

Repeat steps until they find the last clue at the final location indicating what the prize is.

After they found the last clue, they were able to go to get a free meal (\$15 value) of any of the small businesses they visited.



# What Worked:

- They went to every location, and were more engaged as they visited more and more small businesses, they wanted to know what their “prize” was.
- Every location they visited, they explored the space when trying to find the clue, and saw things they hadn’t seen before. For example at On Call, Daniela (pictured on the left) said, “I didn’t realize how much they revamped this place since when it first opened.”



# What Didn't:

- They knew all the businesses they visited, and didn't really spend time looking at the menu. Rather, they explored the space.

# Assumption:

- Validated

# What's Next?

## Solution: AI Community Embedding and Collaboration tool

### Evidence

- “Work on your business, not in your business” - Prof Liguori
- Financial gains as #1 motivation for collaboration → motivation for businesses to use the app
- “On Cal ave, Gamelandia reached out to us to partner with us for board game night + cats. Their owners adopted two of our cats”
- Our expert, Professor Eric Liguori discussed an ice cream store in clearwater FL that **embedded** themselves in the community by collaborating with local carnivals and showing up at baseball games.
- “It would be game changing if Taryn could envision the potential of her business as an anchor in the community, by seeing competitors as collaborators, and embedding herself in her neighborhood”

# Ethical Implications of our solution

- Ethical implications of Llama: pirated books for training, court case.
- Bias
- Who does it leave out: Old small businesses may not have access to technology (ex, bookstore)
- Who does it serve: young businesses with technological presence who wants to advance through AI
- Cross -business data exposure: competitive insights may be leaked

# Questions?

# Appendix

# Ethical Implications of Solutions

## 1. Solution 1: AI for collaboration

- Ethical implications of Llama: pirated books for training, court case.
- Bias
- Digital divide: Old small businesses may not have access to technology

## 2. Solution 2: AI/VR scavenger hunt

- Ethical implications of Llama: pirated books for training, court case.
- Free samples, customer acquisition costs may not be worth it for small businesses.
- Digital divide.

## 3. Solution 3: Personalized milestone and tutorial system for managers

- New managers may be misled if the AI milestone does not align with the values of the brand -> on-call cannot do food pickups.
- Work in your business for too long to work on your business.
- Privacy -> sensitive info about the business could be used.

# Looking for interviewees

The screenshot shows a Reddit post in the **r/smallbusiness** subreddit. The post title is **In this post, share your small business experience, successes,...** with 16 votes and 102 comments. Below it is another post titled **Promote your business, week of September 29, 2025** with 21 votes and 142 comments. The main post content is from user **u/Ok-Difference-1714** and reads:

**Looking for small business owners for class project interview**

Hi! I am a Stanford student taking a class in introduction to human computer interaction(HCI) and this week we are looking to interview 2-3 people who are small business owners and are willing to give us an interview. Our team's project focus is on how small businesses have been resilient even in the face of economic downturns, and we want to explore what factors have helped those who have survived especially in relation to community, and for those who did not survive we want to see what led to their business shutting down. If this interests you and you are around the Bay area in the next 2 days or are available for a zoom...

Below the post are standard Reddit interaction buttons: upvote (1), downvote, comment (1), share, and a reply icon.