



# **SNS COLLEGE OF TECHNOLOGY**

Saravanampatti, Coimbatore-35

**An Autonomous Institution**

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade  
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

## **DEPARTMENT OF BME**

**COURSE NAME : 23GEB101 - DESIGN THINKING AND INNOVATION**

I YEAR /I SEMESTER

Unit II- PROCESS IN DESIGN THINKING (EMPATHY, DEFINE)

Topic II : Empathy – Uncovering and Investigating Community  
Concerns





# Introduction to Empathy in Design Thinking



## What is Empathy in Design Thinking?

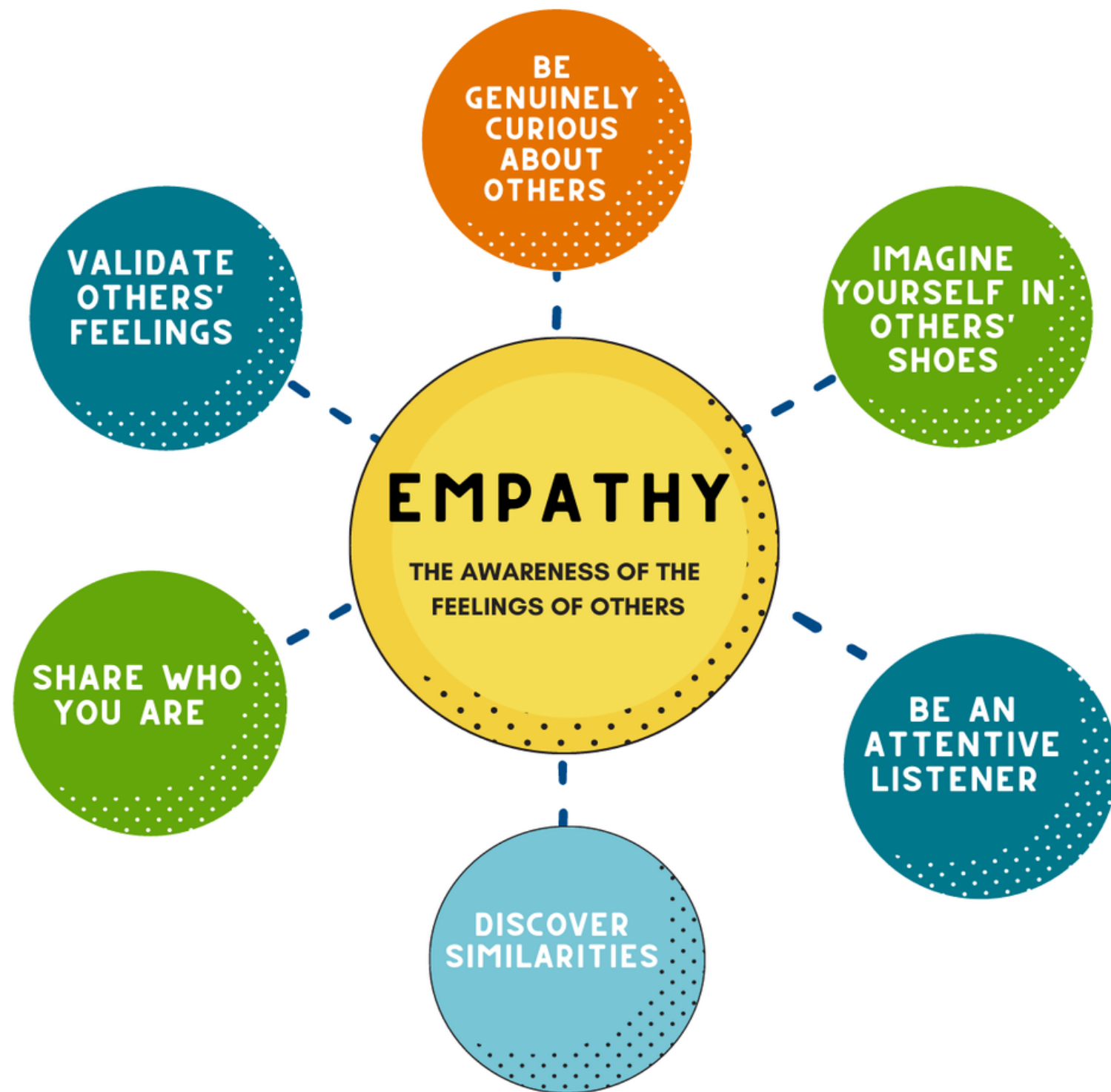
Empathy is the first step in Design Thinking.

It involves understanding the needs, challenges, and emotions of people you're designing for.

**Goal:** To gain deep insight into the community's real concerns and frame the problem in human-centered ways.







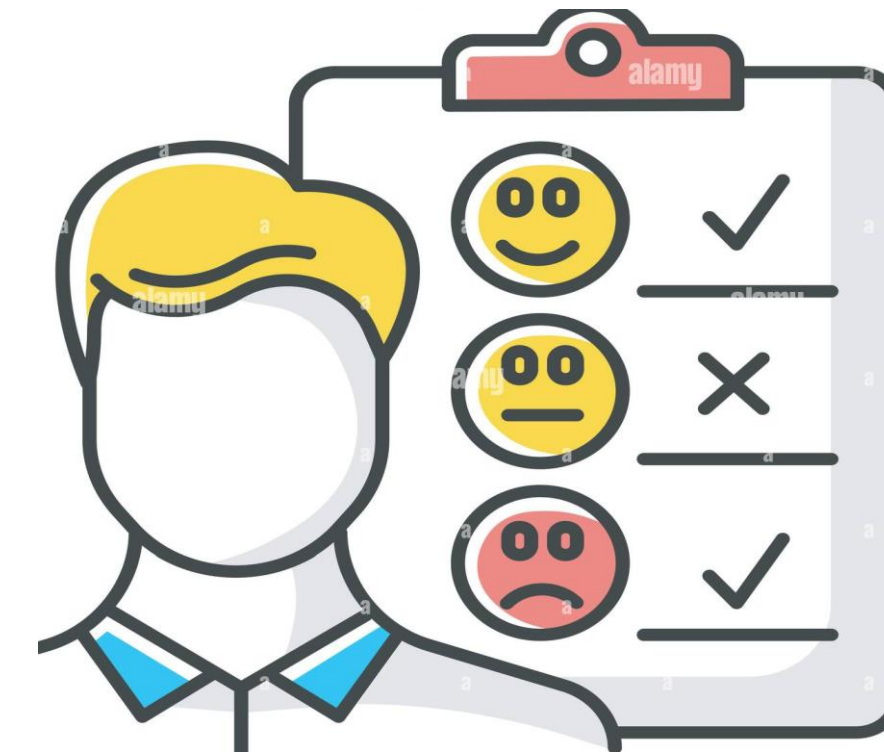
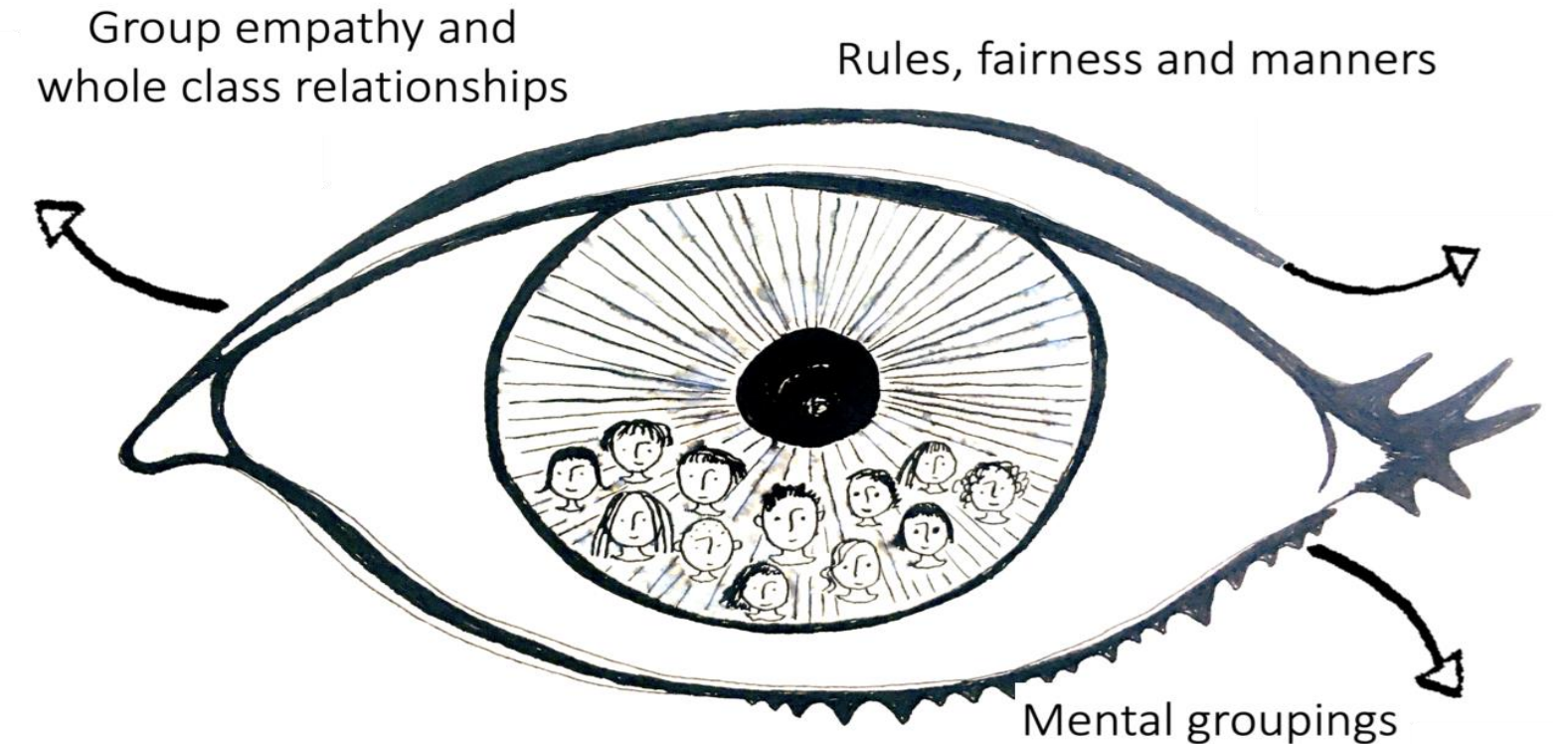
## Why Empathy?

- Empathy uncovers hidden concerns and unspoken needs.
- It helps avoid assumptions about what people need.
- Leads to human-centered solutions that resonate emotionally.
- Empathy fosters collaboration between the community and designers.

# Empathy Methods to Investigate Community Concerns

## Empathy Methods for Uncovering Community Concerns

- 1. Observation:** Watching behaviors and interactions in real-life contexts.
- 2. Interviews:** Asking open-ended questions to hear personal stories.
- 3. Surveys:** Gathering quantitative data to identify patterns.
- 4. Workshops:** Collaborative sessions where community members voice concerns.
- 5. Empathy Mapping:** Documenting what people say, think, do, and feel.







# Empathy Through Observation



**Goal:** To immerse yourself in the community's environment to observe behaviors, habits, and interactions.

**Method:** Spend time in areas where the community gathers, such as parks, public transportation hubs, schools, or markets.

**Example:** Suppose you're investigating issues related to public transportation in a neighborhood. By spending time at the bus stops and observing passengers, you might notice that many people seem frustrated by long wait times or crowded buses during peak hours.



# Empathy Through Interviews



**Goal:** To gather qualitative insights by engaging in deep, meaningful conversations with community members.

**Method:** Conduct open-ended interviews with a wide variety of people from the community. Focus on listening more than talking and ask questions that help you understand the root of their concerns.

**Example:** Continuing with the public transportation example, you might interview daily commuters and ask:

"Can you tell me about your daily commute?"

"What are the biggest challenges you face when using public transportation?"

"How do delays or crowded buses impact your day?"

A commuter might express, "I'm always late to work because the buses don't arrive on time. I wish there was a more reliable way to know when the bus will actually show up."



# Empathy Through A survey



**Goal:** To gather quantitative data from a larger portion of the community and identify broader patterns.

**Method:** Distribute surveys to gather responses on key concerns. Surveys can include both multiple-choice and open-ended questions to gauge the importance and prevalence of certain issues.

## Example:

A survey might ask:

"On a scale of 1-5, how satisfied are you with the reliability of public transportation?"

"What is the most frustrating aspect of your commute?"

"What improvements would you like to see?"

By analyzing the responses, you might discover that 80% of respondents identify unreliable bus schedules as their biggest frustration.



# Empathy Through Workshop



**Goal:** To directly engage the community in problem identification and collaborative solution design.

**Method:** Organize focus groups, workshops, or town hall meetings where community members can voice their concerns collectively. Encourage them to brainstorm ideas for solutions.

## **Example:**

Host a workshop on improving transportation. Commuters, local officials, and transit workers participate in a discussion where they collectively brainstorm potential solutions, such as introducing real-time bus tracking apps or increasing bus frequency during rush hours.





# Empathy Mapping



**Goal:** To organize and synthesize the insights gained during observation, interviews, and surveys into actionable insights.

**Method:** Use empathy maps to document what the community members say, do, think, and feel. This helps to visualize concerns from different perspectives and identify emotional drivers.

## Example:

When creating an empathy map for a commuter, you might note:

**Saying:** "The bus is always late."

**Doing:** Checking their phone for updates or calling a rideshare service when the bus is delayed.

**Thinking:** "I'll be late for work again."

**Feeling:** Frustrated, anxious, stressed.

By mapping out these elements, you can better understand the deeper emotional impact of unreliable transportation, which may go beyond inconvenience to affect people's work, mood, and financial stability.



# Identify Patterns and Personas



**Goal:** To identify recurring themes and create personas that represent key groups within the community.

**Method:** Group the concerns into common themes and create fictional personas that represent different types of community members based on their needs, challenges, and goals.

## Example:

From your interviews and surveys, you might identify two key personas:

1. **Busy Professional:** Values punctuality and needs reliable transportation to get to work on time.
2. **Parent with Children:** Needs transportation that is safe and consistent, especially when commuting with young children.





# Simulating the Challenges



**Goal:** To build even deeper empathy by personally experiencing the community's concerns

**Method:** Experience the challenges first-hand. For instance, take the same bus routes at different times of the day to understand the daily frustrations of the commuters.

## Example:

After taking the bus during rush hour, you might experience the same delays and crowded conditions that commuters face, helping you fully grasp the urgency of the problem.



# Synthesize Insights into Problem Statements



**Goal:** To transform insights into clear, actionable problem statements that drive the design of innovative solutions.

**Method:** Use the “How Might We” (HMW) framework to convert community concerns into opportunities for innovation.

## Example:

After analyzing all the data, you might formulate a problem statement such as:

HMW improve the reliability of public transportation so that commuters can arrive on time?

HMW reduce stress and anxiety related to public transportation delays?





## Improving Public Transportation

City faced increasing public transportation challenges: delayed buses, overcrowding, unreliable schedules.

**Objective:** Uncover the root causes of these concerns and design solutions.



## Step 1: Observation

Designers spent time at bus stops observing behaviors and emotions.

### Key findings:

Frustration due to long waits.

Overcrowded buses skipping stops.

People checking phones anxiously.

Example Scenario: A mother with children waiting 20 minutes for a bus, only to see it bypass her stop because it was full.







## Step 2 – Interviews

Conducted interviews with working professionals, parents, elderly, and students.

### Questions:

Tell me about your daily commute?

What challenges do you face with public transportation?

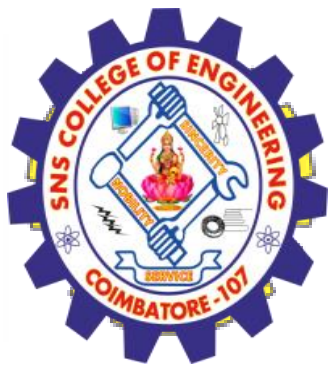
### Insights:

Professionals often late to work, facing conflicts with employers.

Parents worried about getting children to school on time.

Elderly riders felt unsafe waiting for buses at night.





# Case Study : Improving Public Transportation



## Step 3: Surveys

Distributed online surveys to reach a larger portion of the community.

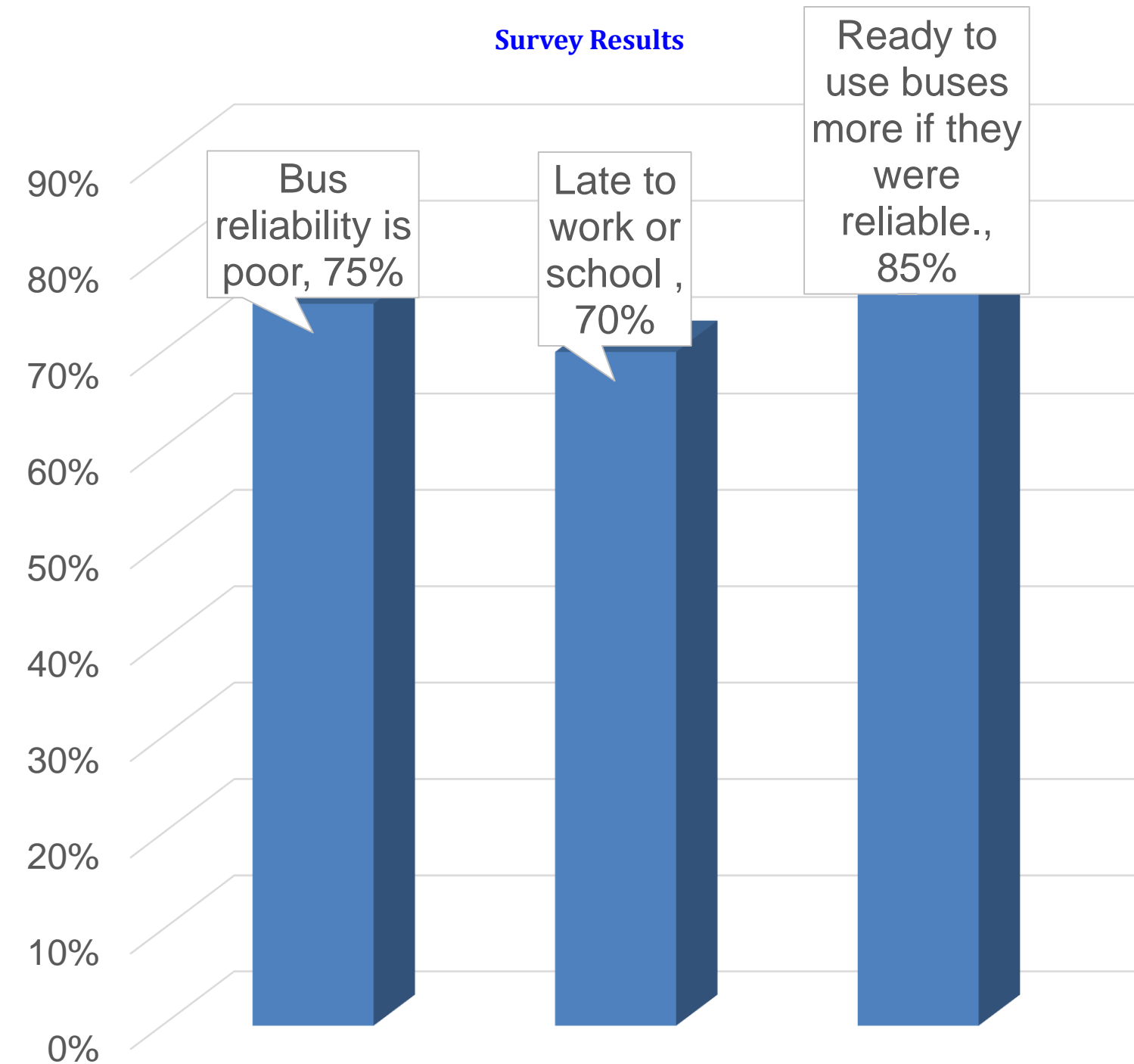
### Survey Results:

75% rated bus reliability as poor.

70% said they were late to work or school at least once a week.

85% of respondents would use buses more if they were more reliable.

Collected data helped identify key patterns and areas for improvement.







## Step 4 – Community Workshops

Engaged the community in workshops to discuss concerns and brainstorm solutions.

### Participants suggested:

Real-time bus tracking apps.

Increased bus frequency.

Dedicated bus lanes.

**Outcome:** Collective agreement on the most urgent problems and feasible solutions.





## Step 5: Empathy Mapping

Empathy Maps document what the community:

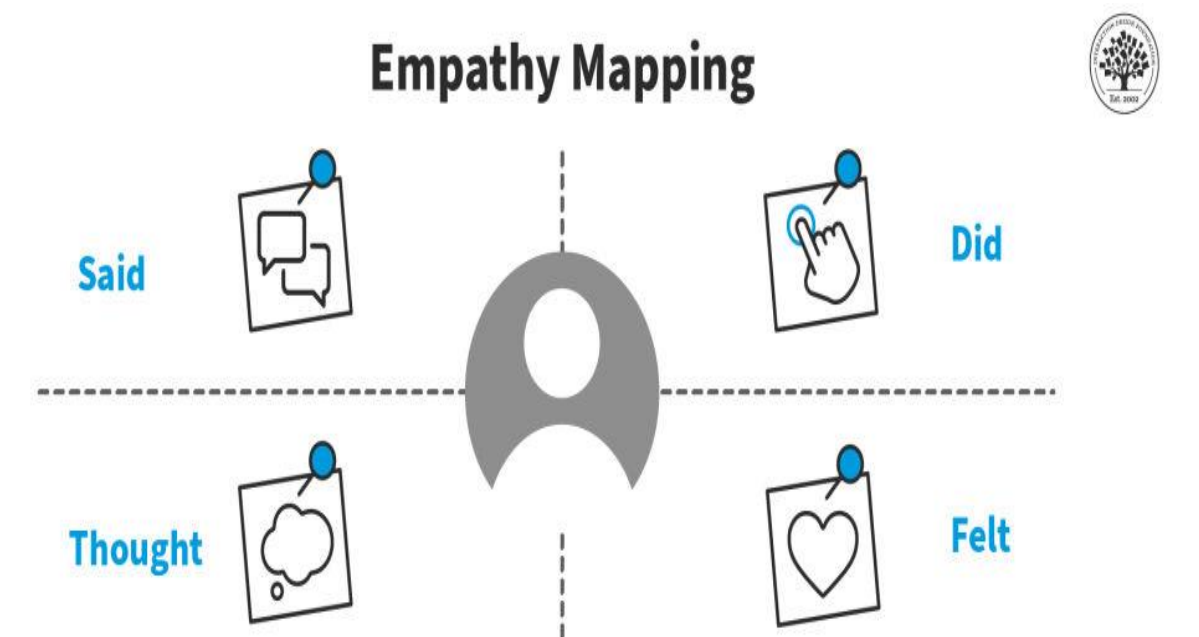
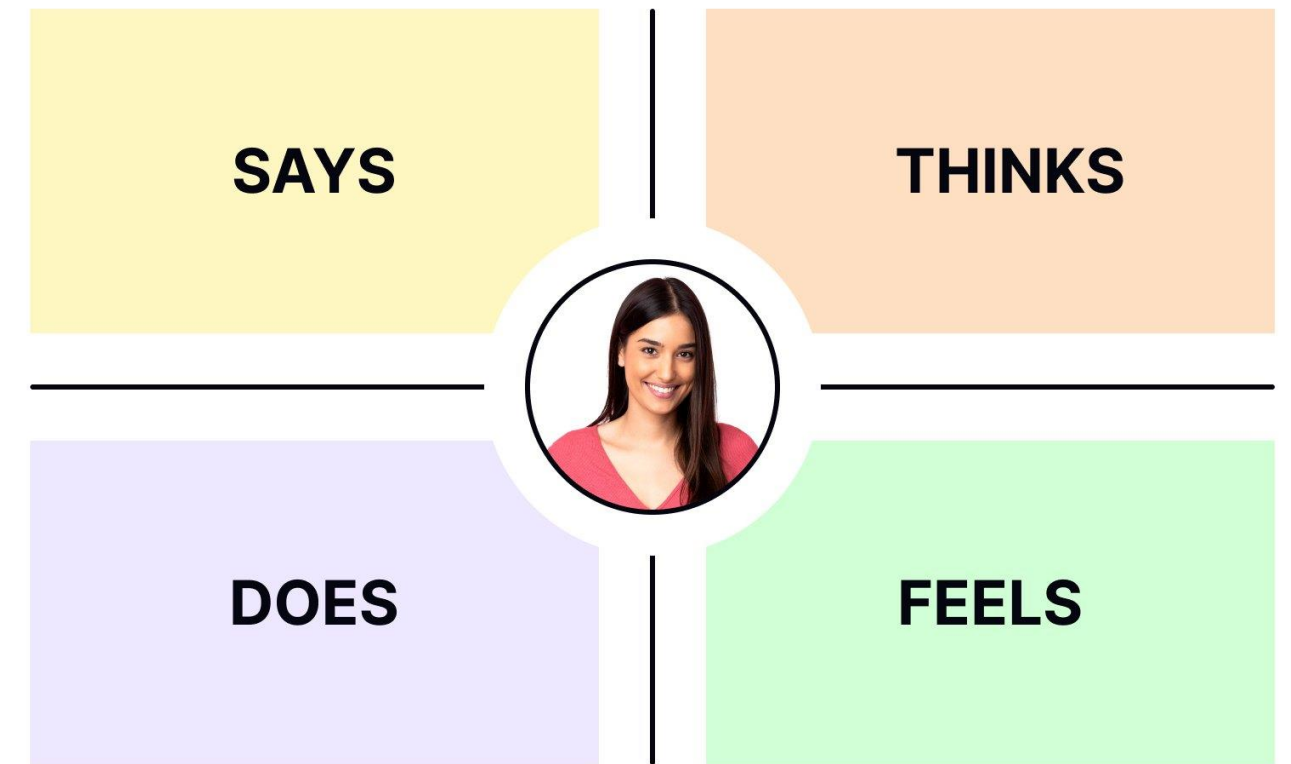
**Says:** The buses are always late.

**Does:** Checks phone for updates, calls rideshares when buses don't show up.

**Thinks:** I'm going to be late again.

**Feels:** Frustrated, anxious, stressed.

This helps to understand emotional and behavioural drivers.







# Case Study : Improving Public Transportation



## User Personas

Let's break down the types of users we want to target.  
Who are they? What are they interested in?



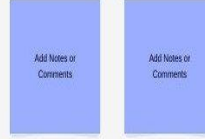
Name

Age:  
Occupation:  
Location:  
Income range:

GOALS



QUOTE



DESCRIPTION



PERSONALITY



BRANDS/APPS



## Step 6: Identifying Patterns and Personas

### Identified recurring themes from research:

Reliability issues.

Stress and anxiety.

Lack of real-time updates.

### Created personas to represent community members:

Mark (Busy Professional): Needs punctuality to avoid conflicts at work.

Sarah (Parent): Needs reliable transport to get her children to school on time.



# Case Study : Improving Public Transportation



Framing the Problem with “How Might We” (HMW) Statements

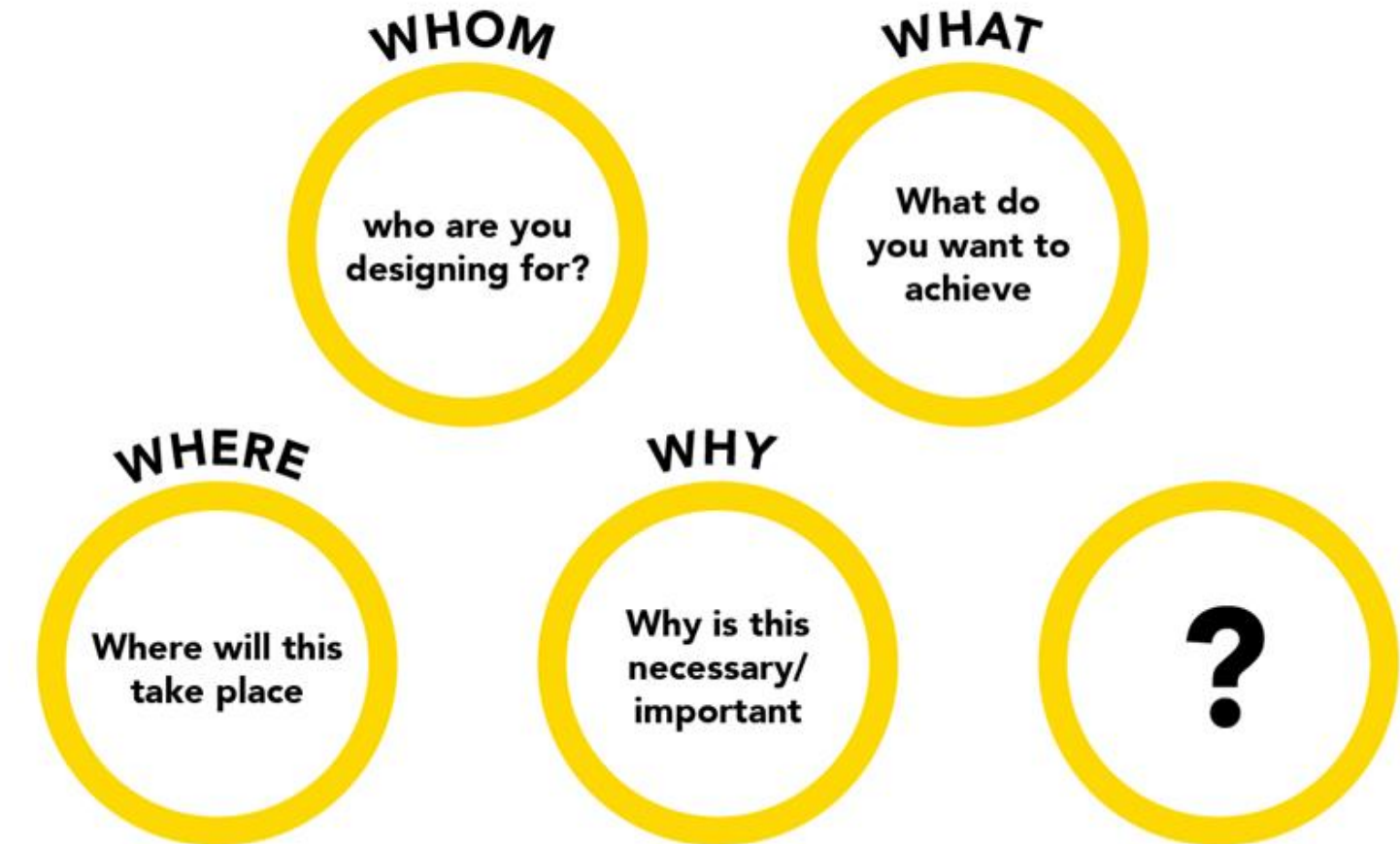
**Problem statements guide the design of solutions:**

HMW improve bus reliability so that commuters arrive on time?

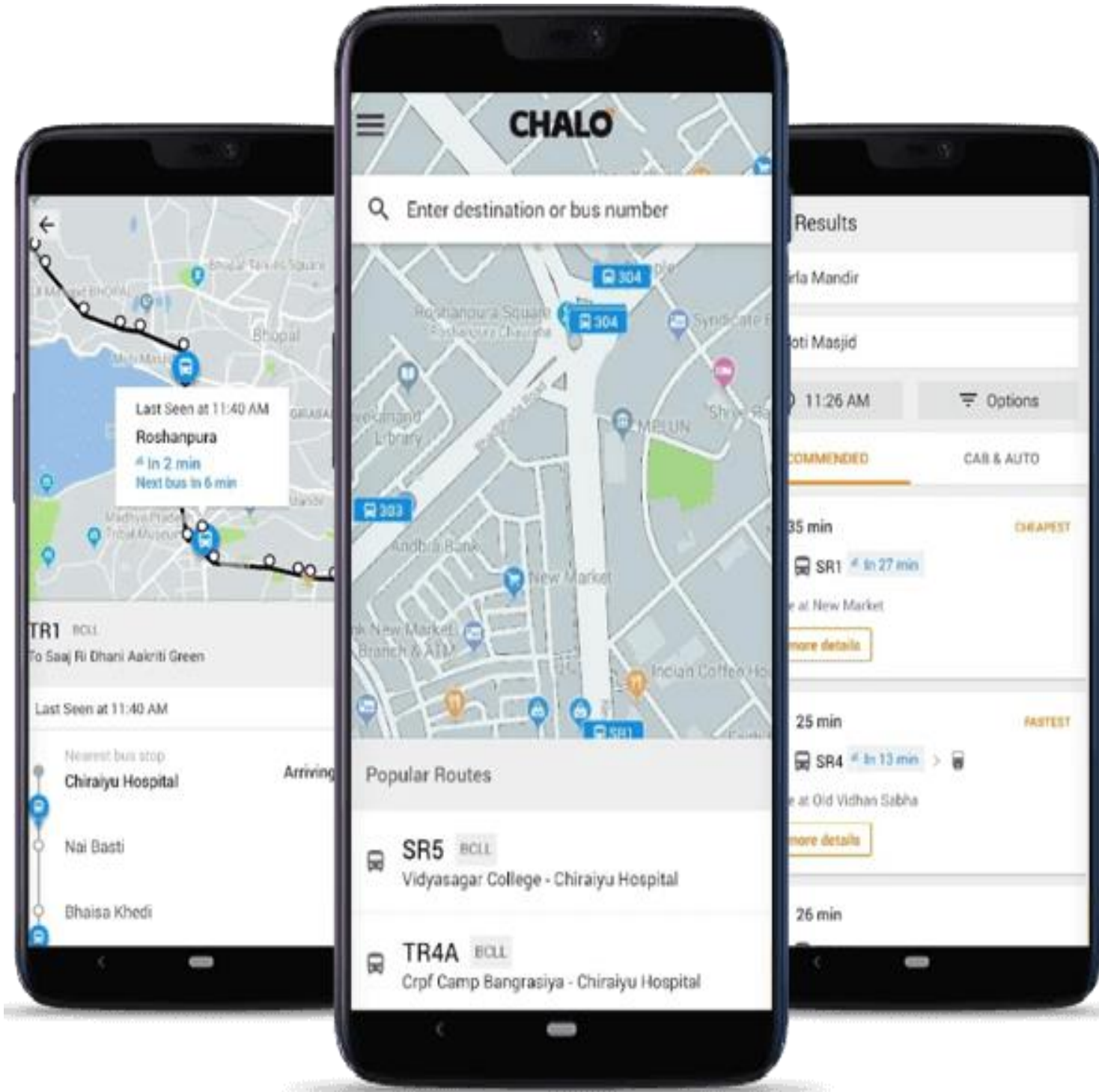
HMW reduce stress from unpredictable bus schedules?

HMW implement real-time tracking technology to enhance the commuter experience?

## HOW MIGHT WE







**Prototypes created based on community input:**

Real-time bus tracking app providing live updates.

Increased bus frequency during peak hours to reduce overcrowding.

Pilot of dedicated bus lanes on high-traffic routes.

Tested with users, receiving positive feedback.





# Results and Impact

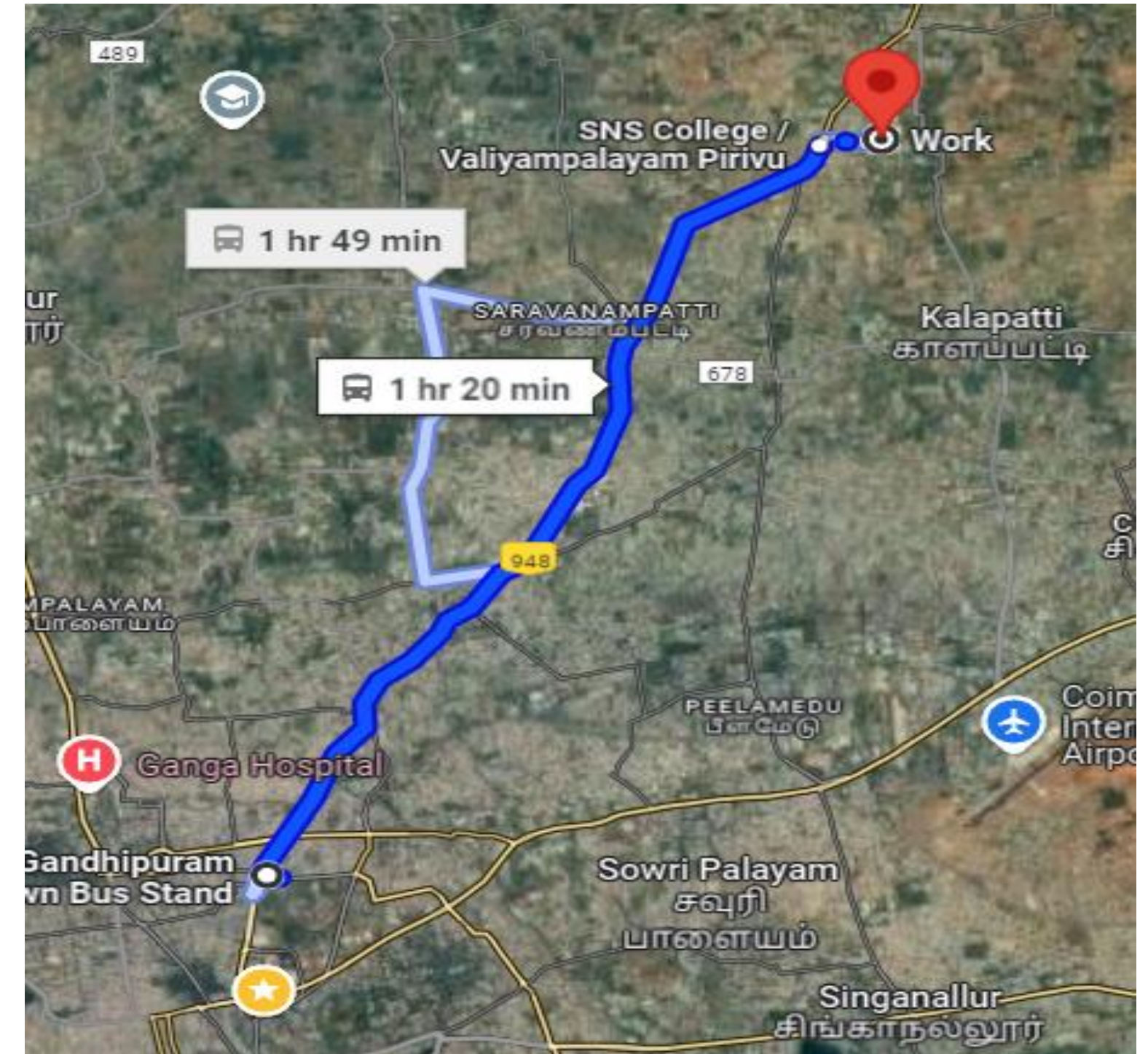


Increased community satisfaction due to improved reliability.

Reduced stress and anxiety with real-time updates.

20% reduction in overcrowding after increasing bus frequency.

Community-driven solutions led to real, human-centered improvements.





# Empathy as a Driver for Change



The empathy phase leads to meaningful, user-centered innovations.

Collaboration with the community is essential for designing impactful solutions.

Call to Action: “Let’s keep empathy at the core of our design processes.”



# Thank You