



Mobility Personas for Singapore

Say hello!

Design for Autonomous Mobility

The team of industrial designers in DAM is responsible for the design of autonomous vehicles (AVs) and their related infrastructure (e.g. stations) for public transport. Design research is conducted in parallel, where the team investigates new tools like virtual reality and novel methodologies for design. Guided by a human-centric and empirical approach, the team aims to provide greater comfort and a positive travel experience for all users.

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TUMCREATE

TUMCREATE is a research platform for the improvement of Singapore's public transportation, including the deployment of electric and autonomous mobility. Researchers from Technical University Munich and Nanyang Technological University join forces and are funded by National Research Foundation (NRF) Singapore as part of the Campus for Research Excellence And Technological Enterprise (CREATE).

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Introduction

Personas act as a conduit to convey information from multiple sources in one cohesive package. They help designers focus and prioritise tasks as well as disseminate data collected about users across a product or service team. Each persona represents a specific user archetype and his or her behavioural characteristics, which is useful for understanding local contexts and conditions of use when designing a product or service.

Methodology

The Mobility Personas for Singapore were developed based on a series of individual interviews with local residents. During these interviews, study participants were asked about their mobility habits, such as typical routes and travel modes, personal preferences, and frustrations. The interviews were then coded to identify common themes and, subsequently, distinct clusters. As the study is ongoing, the current family of Mobility Personas will continue to evolve. The goal is to create a full set of personas representing diverse mobility needs and desires to help designers and engineers develop solutions for future mobility in Singapore.

How to use the Mobility Personas

The cards depict the personas through visual representations and accompanying descriptions detailing their background, motivations and frustrations with mobility experiences. Problems faced and preferences for travel help designers identify use cases and pain points to target for design interventions.

Mikhail bin Ibrahim



Mikhail, 20

Undergraduate, lives at home with his parents, usually carries a backpack with a laptop or lecture notes

BIO

Mikhail is a university student who mainly commutes by public bus and the campus shuttle. He purchases the bus concession pass every month, which limits his mode choices. Arriving at his destination on time is important, particularly on exam days or during internships. Inconsistent journey times means he has to rush to his destination sometimes, which makes him perspire a lot and leaves him feeling uncomfortable for the rest of the day. He has extracurricular activities on campus several times a week after classes. On weekends, he might go out with his family. They use the family car on these trips, with Mikhail and his parents taking turns to drive.

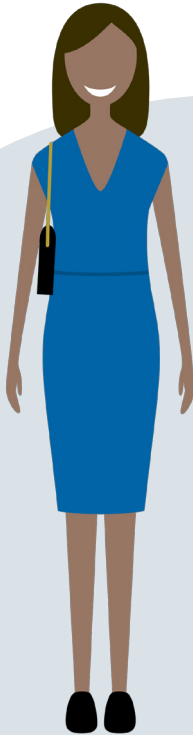
MOTIVATIONS

- The ability to plan journeys on mobile apps and arrive on time
- More space or a seat to spend time productively, e.g. read or study
- Budget-friendly travel options to keep to a strict transportation budget

FRUSTRATIONS

- Inconsistent waiting times for buses and inaccurate arrival time estimates
- Traffic congestion leading to longer journey times
- Routes requiring multiple bus transfers

Josephine Nair



Josephine, 29

Marketing executive, willing to spend more on nice things from time to time

BIO

Josephine commutes daily to her office via MRT as it is the most cost-efficient, and she is saving money to buy a flat soon. Although it is very uncomfortable on the crowded train, her office in the central business district (CBD) is closer to an MRT station than a bus stop. Buses also take significantly longer to cover the same distance. During the journey, she browses social media or watches videos online. Josephine was caught in a service breakdown once and ended up late for an important meeting. She now relies on social media to check the status of train services to account for delays. She takes taxis or ride-hailing services sometimes, either because she worked late or went out with friends.

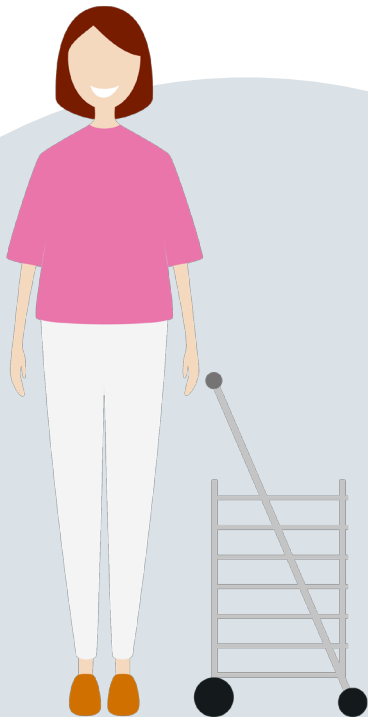
MOTIVATIONS

- Short, consistent travel times
- Minimal walking outdoors to avoid perspiration or bad weather

FRUSTRATIONS

- Crowds leading to lack of personal space or inability to board the vehicle
- Lack of affordable alternatives

Marie Khoo



Marie, 41

Stay-at-home mum to two young children, environmentally conscious, enjoys taking the family out on weekends

BIO

Marie used to work in accounting and sometimes does freelance consulting work, which requires her to travel to clients' offices in various locations. While she shares a car with her husband, she prefers to take public transport as she finds it more environmentally friendly. During the journey, Marie enjoys looking out the window at the city landscape or checking emails on her phone. Her mobility preferences change depending on whether she is traveling alone or with her kids. For example, she avoids travelling during peak hour when her children are with her. Marie switches between the bus and MRT frequently. She plans trips by checking both online maps and station or bus stop network maps.

MOTIVATIONS

- Comfort: seats, easy access to facilities like restrooms or eateries
- A wide network of transport services covering many locations
- Routes which combine different to-do items like meetings and grocery shopping

FRUSTRATIONS

- Long-distance travel and crowds when travelling with her kids
- Inaccessible locations requiring multiple transfers
- The hassle of carrying bulky or heavy items like groceries or her laptop

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Peter Tan



Peter, 82

Retiree, relies on a wheelchair to cover longer distances, feels anxious when traveling alone on public transport

BIO

Peter lives with his oldest son and his family. He stays at home most of the week watching television or reading the newspapers. There is no one in the family who can drive him around during the day as they are either at work or school, and taxis are not worth the cost. He feels it is a hassle to use his wheelchair on public transport as unexpected obstacles such as crowds or stairs can greatly impede movement. Plus, he is embarrassed by his reliance on it. Although Peter has a smartphone, he rarely uses it as he is not really sure how it works, except for making and receiving phone calls. He would like to be able to visit his friends and his younger children, but they live in different parts of Singapore.

MOTIVATIONS

- The ability to travel independently
- Space to move at his own pace, and places to rest
- Friendly service staff or fellow passengers who can guide him along the way

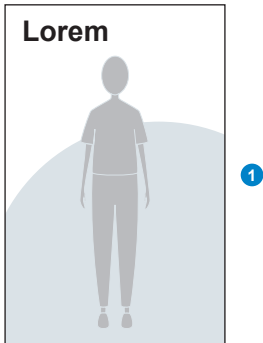
FRUSTRATIONS

- The unpredictability of travelling on public transport
- Crowds, exacerbated by people buried in their phones or music
- Discomfort caused by abrupt stopping or cold temperatures on buses

Build Your Own Persona

Want to create personas for your own project? Use this template to get started!

A persona should bring user needs and desires to life, so give your personas rich detail to make them feel real. Think about a typical user of your product or service as you apply these questions. Data can be collected through qualitative methods – interviews, contextmapping or observations. Focus on creating a few specific, essential personas to enable yourself to prioritise design tasks.



- 1 Image**
Create a visual representation of your persona. It could be illustrations or photographs. Try to include elements specific to the user's context.

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BIO

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MOTIVATIONS

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- Nam gravida vestibulum ipsum, non tristique velit mattis viverra.

FRUSTRATIONS

- Lorem ipsum dolor sit amet, consectetur adipiscing elit.
- Nullam dignissim condimentum justo sit amet placerat.
- Nam gravida vestibulum ipsum, non tristique velit mattis viverra.

- 2 Name, Age**
Give your persona a name and age. Other demographics you could add are occupation, education, ethnicity, religion and family status.
- 3 Key Details**
Specify some key details about the persona for a quick overview of who they are.
- 4 Goal**
State what the persona wants to achieve by using your product or service. Why are they using this product or service?
- 5 Bio**
Introduce the persona's background and context of product/service use. What is a typical day like for this persona? What influences their behaviour and decisions? You could include scenarios where they use your product or service or their expectations of the product or service.
- 6 Quote**
Provide a relevant quote that captures the essence of your persona.
- 7 Motivations**
Explain the persona's behaviour through their preferences, perspectives and personal situations. What do they need and want? What do they expect from the product or service?
- 8 Frustrations**
Describe the problems faced in this persona's use of the product or service. What are the pain points? What causes them to cease usage?

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