

# Speculative Design and Human Behavior in Seeding the Future of Mobility

mobil.TUM 2024 – The Future of Mobility and Urban Space, April 10-12, 2024

Hilda Tellioglu

[hilda.tellioglu@tuwien.ac.at](mailto:hilda.tellioglu@tuwien.ac.at)

Artifact-Based Computing & User Research, TU Wien, Austria

[hildatellioglu.com](http://hildatellioglu.com)



# The Problem (1/3)

Revolution in ways of mobility

Future mobility: in general, but also in particular

→ Focus: technological advancements  
by sidelining human behavior & adaptation in shaping future/mobility

## NOT ENOUGH

It fails to consider how people will interact with, benefit from, or even resist new forms of mobility, leading to a gap in our collective knowledge.

# The Problem (2/3)

Human-centric approaches

- User-centered design
  - User experience design
  - Design Thinking
- Focus: design artifact or design process  
by considering human/user as a central point

**NOT ENOUGH**

It sometimes fails to understand the user context, motivation, circumstances, and rationale behind chosen behavior.

# The Problem (3/3)

We need a speculative lens to view, observe, understand the problem, and think about futuristic solutions.

Speculative design to explore human behavior within the mobility context, to

→ Envision a range of future scenarios, from the individual to societal scales

→ Prepare policymakers, designers, and stakeholders for the complexities of a rapidly changing mobility landscape

Need for balancing technological innovation with human-centric considerations

## MY APPROACH

Use speculative design as a methodology for a more holistic approach to the future of mobility

# My Research Objectives

Employing a hybrid methodology

- Leverage a dual-methodological approach: (auto)ethnography (Ellis et al. 2011) & speculative design (Dunne & Raby 2013; Auger 2013)

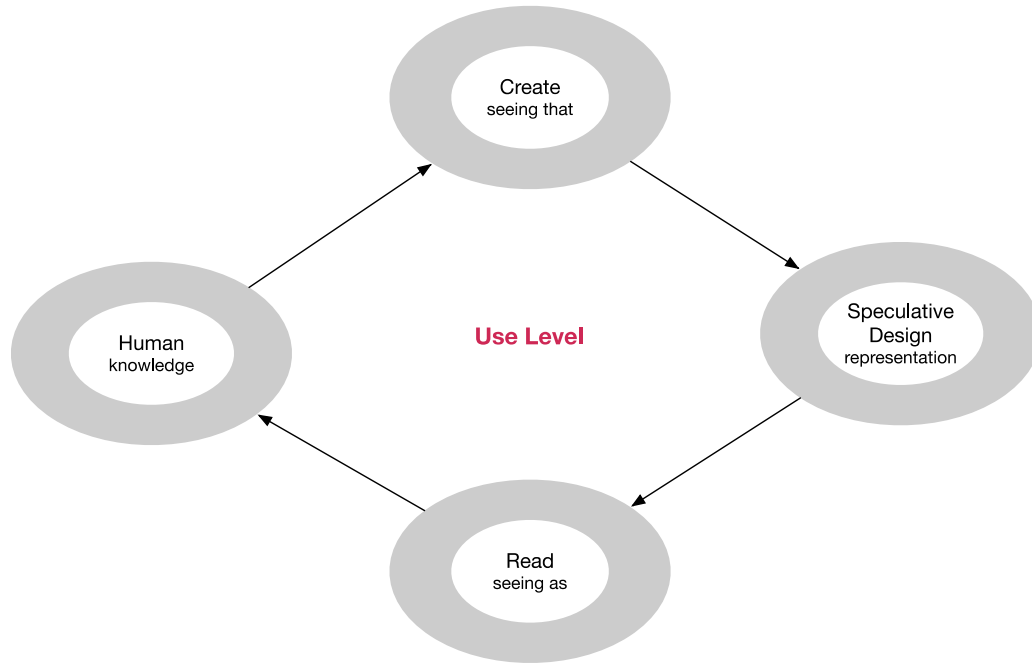
Envisioning future mobility through speculative design

- Utilize speculative design as a tool for generating human-centric models of future mobility
- By creating speculative scenarios

## MY RESEARCH AIM

To bridge the existing gap between technology-focused & human-centric approaches, ultimately contributing to a more balanced and insightful discourse on the future of mobility

# My Research Approach



## MY RESEARCH AIM

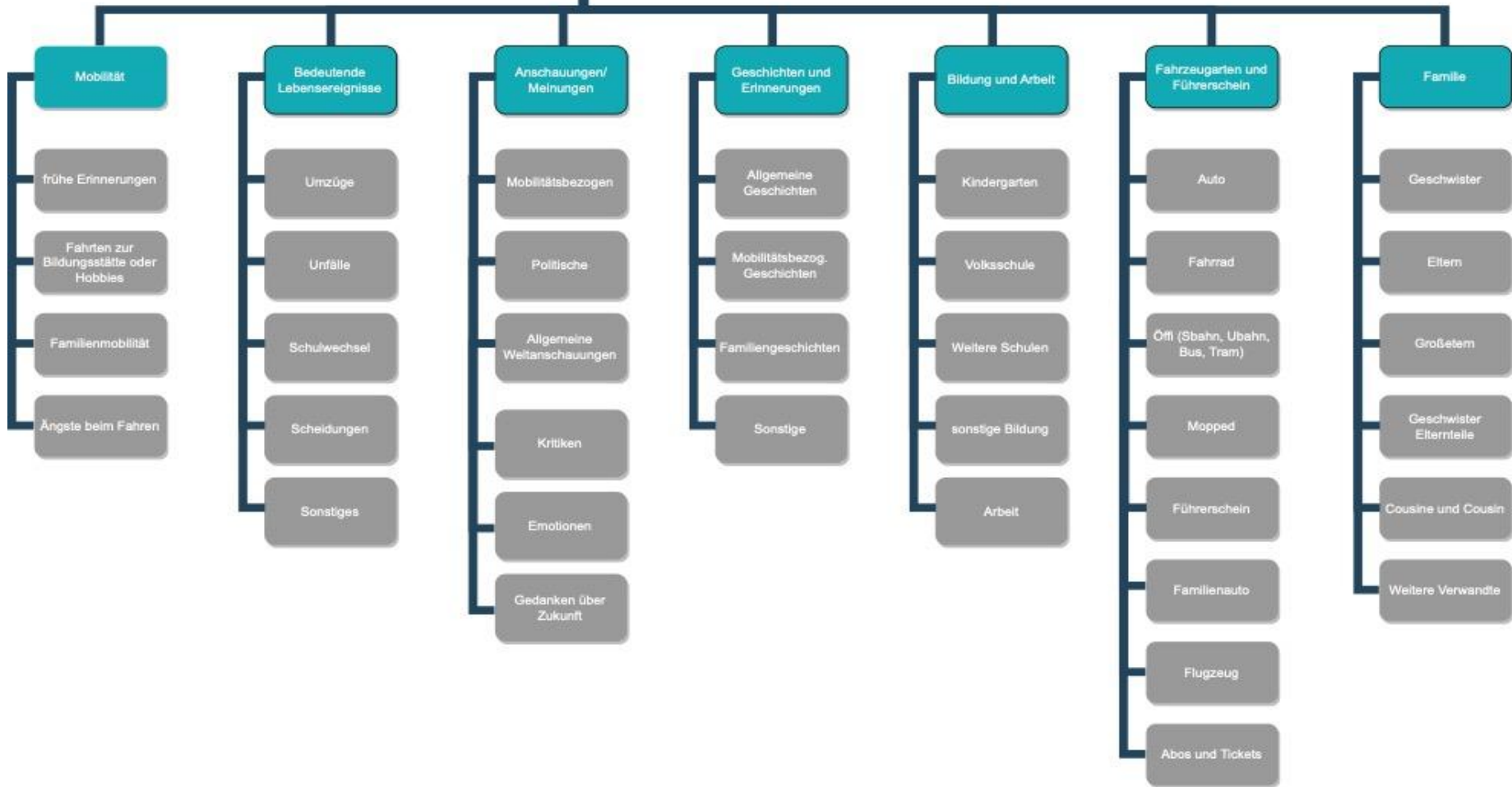
To bridge the existing gap between technology-focused & human-centric approaches, ultimately contributing to a more balanced and insightful discourse on the future of mobility

# My Study

- In-depth interviews with 10 citizens from Aspern, transcribed and coded by MAXQDA
- Within the project aspern.mobil LAB, designed by Gerfried Mikusch & Hilda Tellioglu, carried out by Marcel Peralt Bonell, since September 2022 in Austria

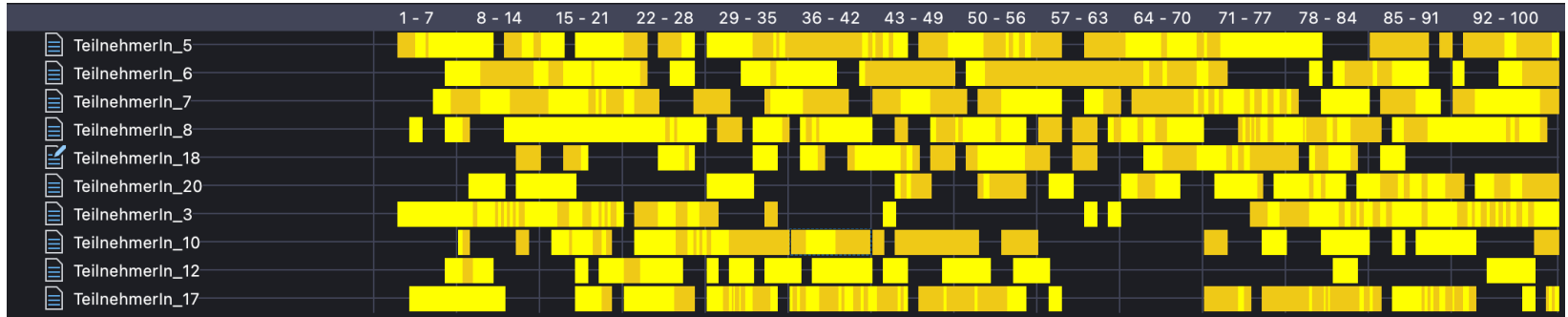
| Nummer | Geschlecht | Wohnort        | Herkunftsort          | Haushaltsgröße      | Alter | Beruf/ Branche                |
|--------|------------|----------------|-----------------------|---------------------|-------|-------------------------------|
| 3      | W          | Wien, Seestadt | Kitzbühel             | Unbekannt           | 65    | Pension                       |
| 5      | M          | Wien           | Wien                  | Mit Frau und Kinder | 38    | Lehrer                        |
| 6      | M          | Wien           | Linz Umgebung         | Unbekannt           | 65-75 | Pension                       |
| 7      | M          | Wien, Seestadt | Kottingbrunn          | Mit Freundin        | 25-30 | Cybersicherheit               |
| 8      | M          | Wien, Seestadt | Wien                  | Mit Frau            | 60-70 | Lotterien                     |
| 10     | W          | Wien, Seestadt | Steiermark, Bretstein | Mit Tochter         | 40-50 | Mobilfunk                     |
| 12     | W          | Wien, Seestadt | Wien                  | Singlehaushalt      | 51    | Kunsttherapeutin              |
| 17     | W          | Wien, Seestadt | Innsbruck             | Singlehaushalt      | 62    | Pension                       |
| 18     | M          | Wien, Aspern   | Kärnten, Villach      | Gemischt            | 49    | Standortbetreiber (Nachhilfe) |
| 20     | M          | Wien, Seestadt | Schweiz, Aargau       | Mit Frau            | 58    | Informatik                    |

# Hauptkategorien

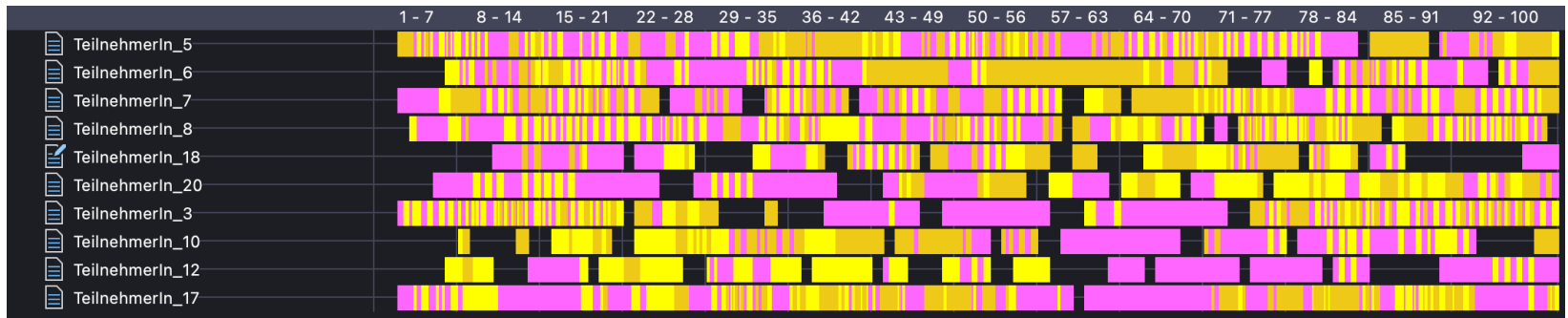




# My Study: “Mobility” found

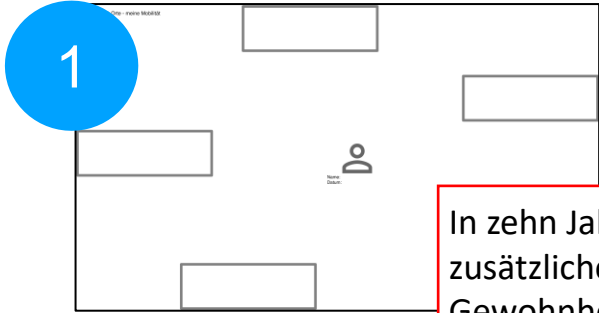


## Storytelling

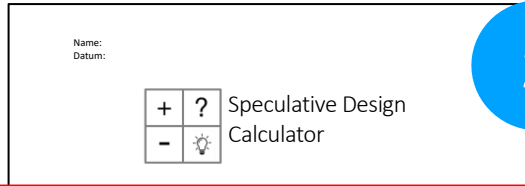


# My Study: Speculative Design

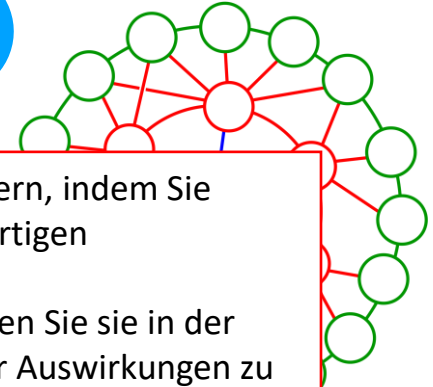
## 1 – my places – my mobility



## Speculative Design Calculator



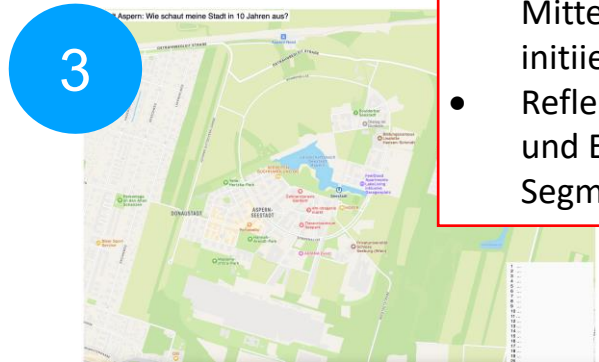
## Future Wheel



In zehn Jahren werden Sie Ihr Mobilitätsverhalten verändern, indem Sie zusätzliche Maßnahmen ergreifen, die über Ihre gegenwärtigen Gewohnheiten hinausgehen.

- Wählen Sie eine dieser Maßnahmen aus und platzieren Sie sie in der Mitte der Abbildung, um weitere Entwicklungen oder Auswirkungen zu initiieren.
- Reflektieren Sie über die unmittelbaren oder mittelbaren Konsequenzen und Effekte dieser Veränderung und tragen Sie sie in die entsprechenden Segmente des Diagramms ein.

## My Seestadt/Aspern

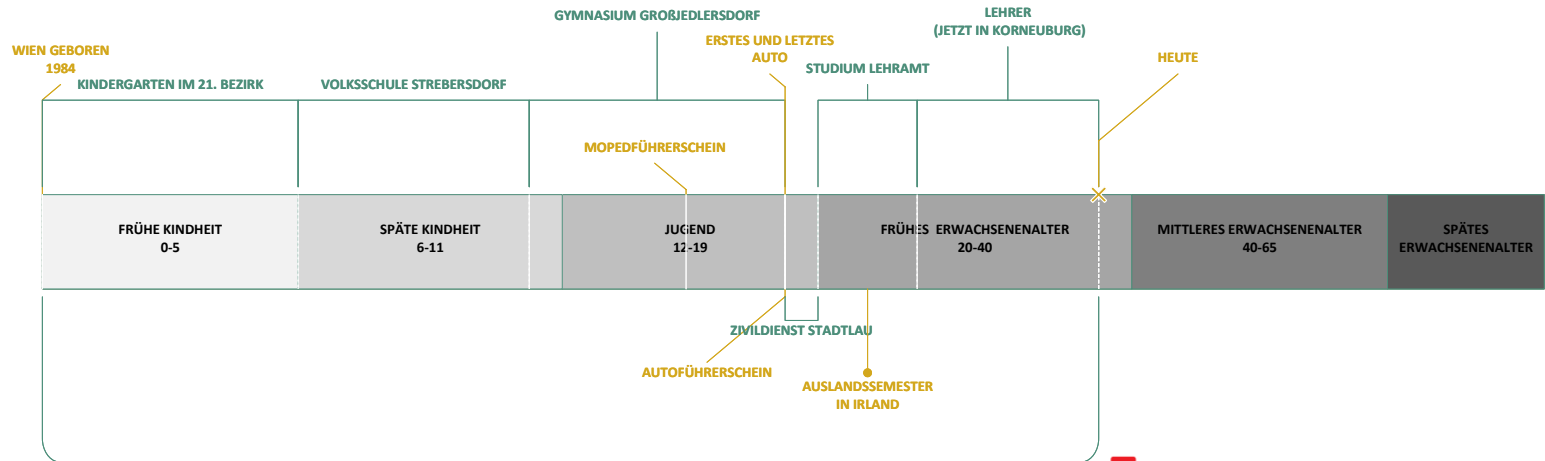


— Sie möchten diese strukturiert erfassen, indem Sie mit der Ursprungsstelle beginnen und sie in die Mitte des Diagramms notieren.  
 Reflektieren Sie über die unmittelbaren oder mittelbaren weiteren Ideen und tragen Sie sie in die entsprechenden Segmente des Diagramms ein.

HT, 11.2.2024

# My Study: TN 5

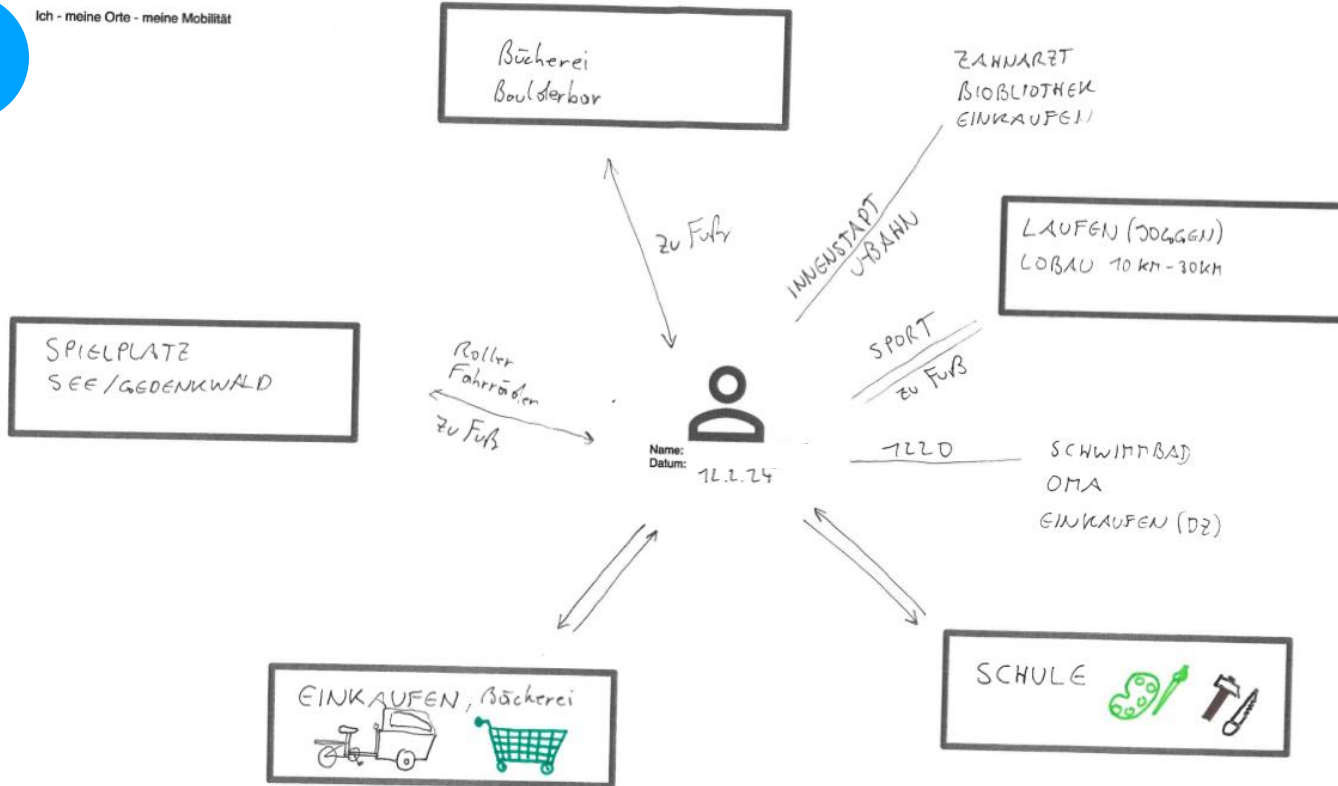
Teilnehmerin 5 | Männlich | 38 Jahre alt | Mindestens 2 Kinder  
Haushaltsgröße mit Kinder und Frau | Lehrer | Wohnort Wien



# My Study: TN 5

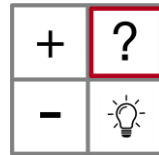
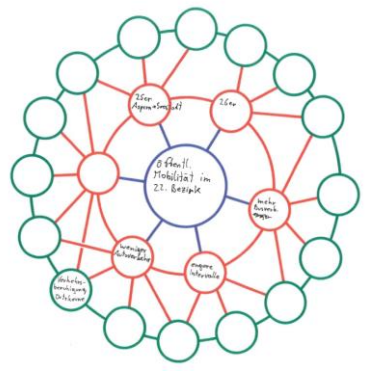
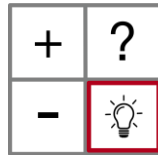
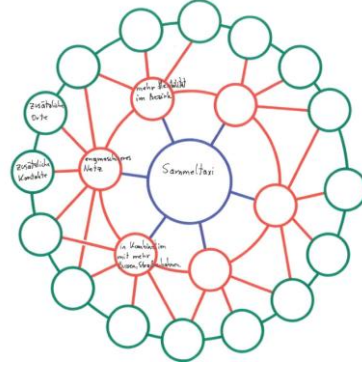
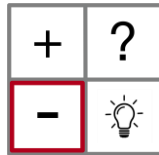
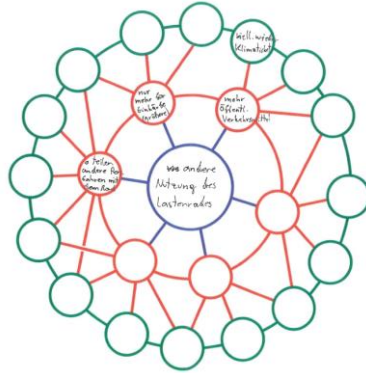
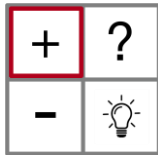
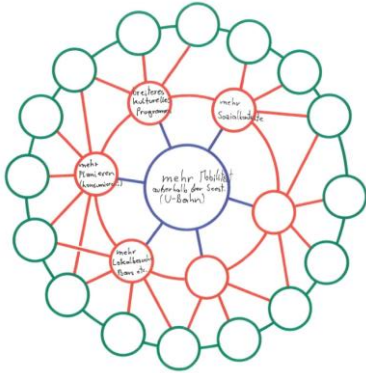
1

Ich - meine Orte - meine Mobilität



# My Study: TN 5

2

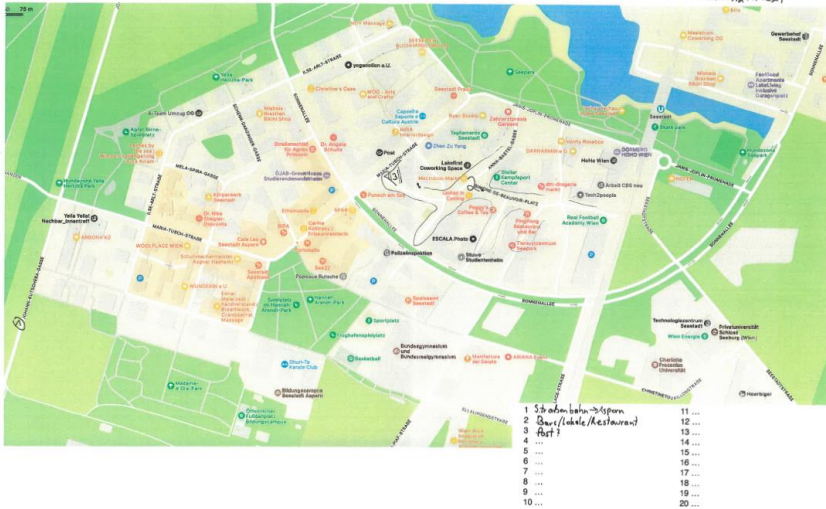


# My Study: TN 5

3

Seestadt Aspern: Wie schaut meine Stadt in 10 Jahren aus?

Name: Markus Glatz  
Datum: 12. 2. 2014



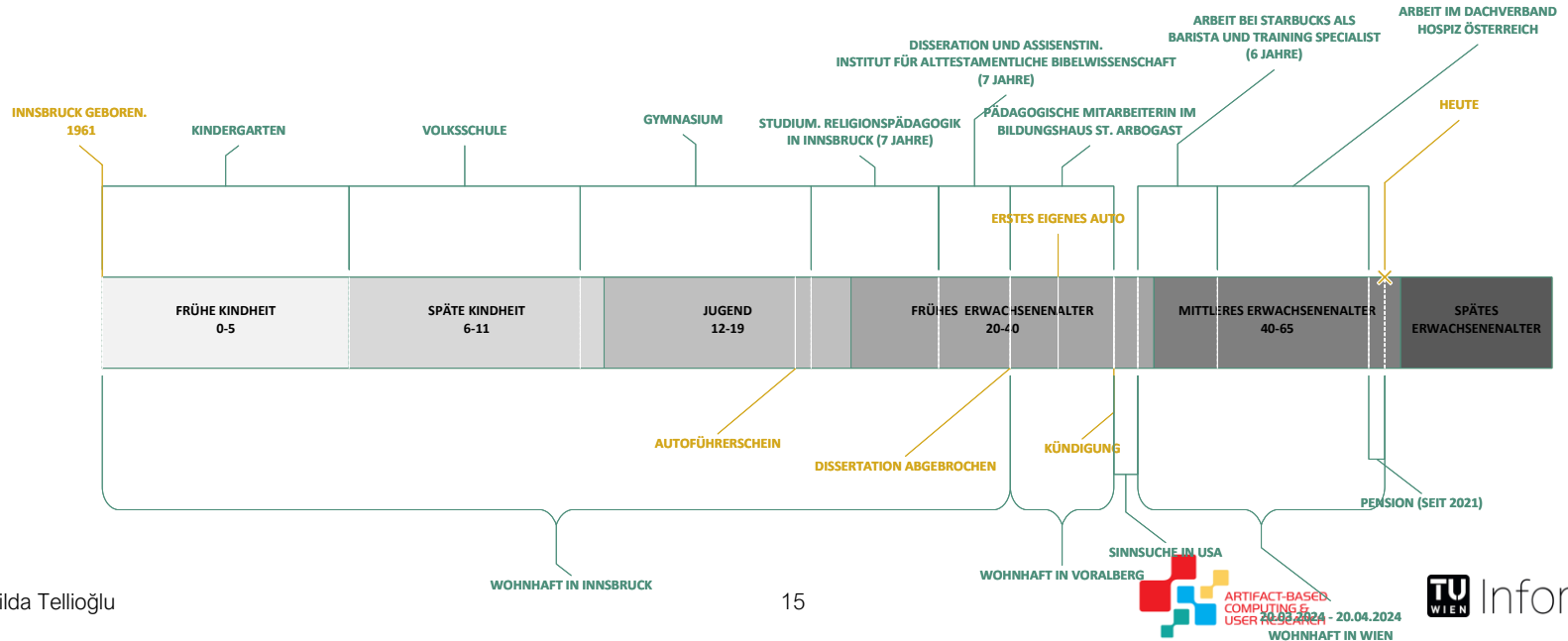
Seestadt Aspern: Wie schaut meine Stadt in 10 Jahren aus?

Name: Markus Glatz  
Datum: 12. 2. 2014



# My Study: TN 17

Teilnehmerin 17 | Weiblich | 62 | Keine Kinder  
Singlehaushalt | Pension | Wohnort Wien









# My Study: TN 17

3

Seestadt Aspern: Wie schaut meine Stadt in 10 Jahren aus?

Name: Anna Pissarek  
Datum: 18.2.2024



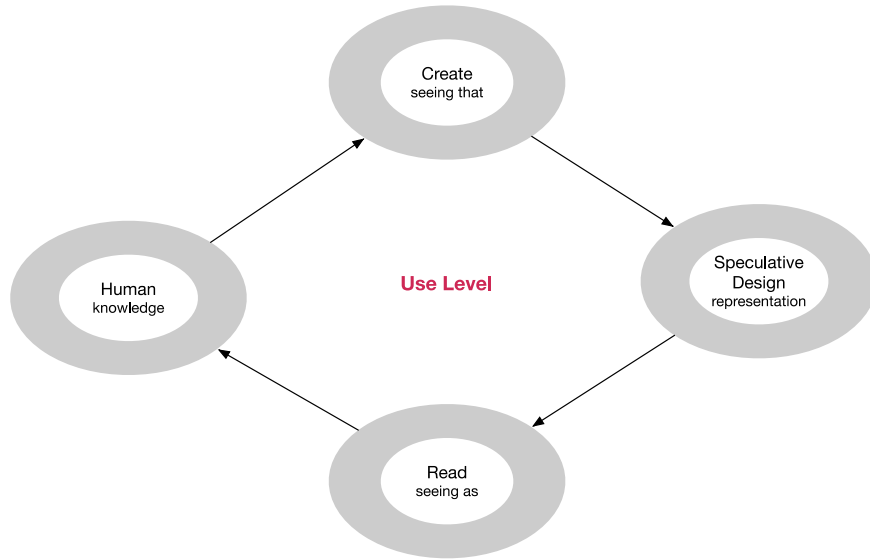
⊗ Wohnort

- 1 bleibe soll: Seestadt  
 2 kommen soll: Tram via Z5  
 3 soll mit Hotel mit  
 4 mehr grüne Plätze
- |        |
|--------|
| 11 ... |
| 12 ... |
| 13 ... |
| 14 ... |
| 15 ... |
| 16 ... |
| 17 ... |
| 18 ... |
| 19 ... |
| 20 ... |

# My Results

- The method of **ethnography-informed speculative design** represents a comprehensive and dynamic strategy, suitable for individual usage yet broadly applicable and strategically viable. It functions by leveraging ethnographic insights to inform and catalyze visionary speculations.
- It integrates and produces a multi-dimensional analytical framework that enriches our understanding of both current mobility choices and potential future scenarios.
- It provides actionable insights that possess the potential to influence policy deliberation and design interventions.

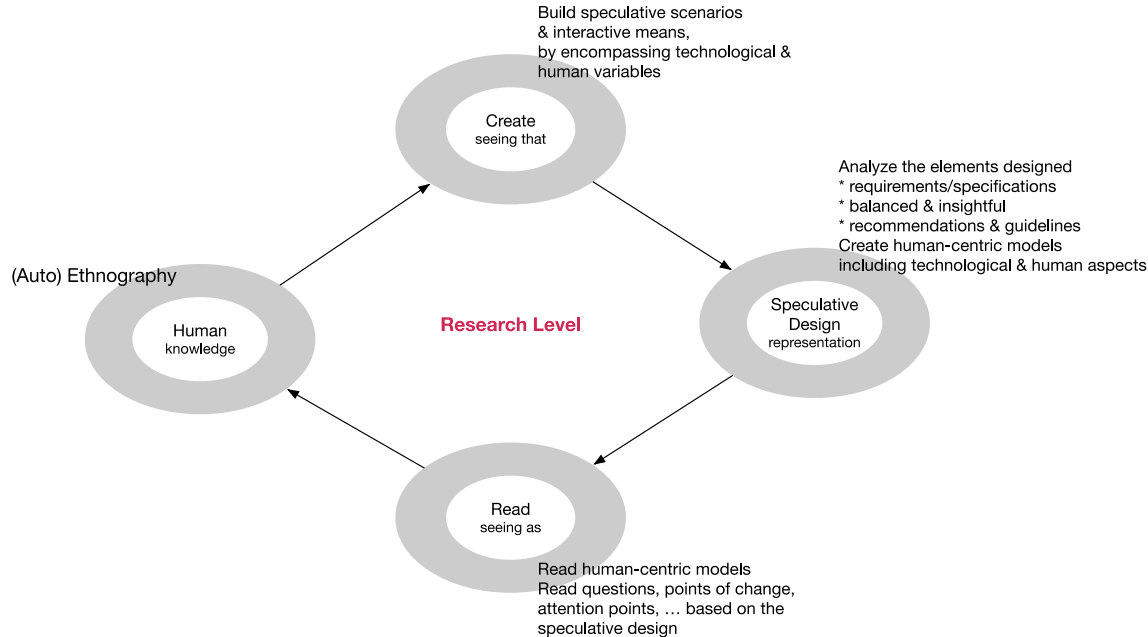
# My Results



## MY RESEARCH AIM

To bridge the existing gap between technology-focused & human-centric approaches, ultimately contributing to a more balanced and insightful discourse on the future of mobility

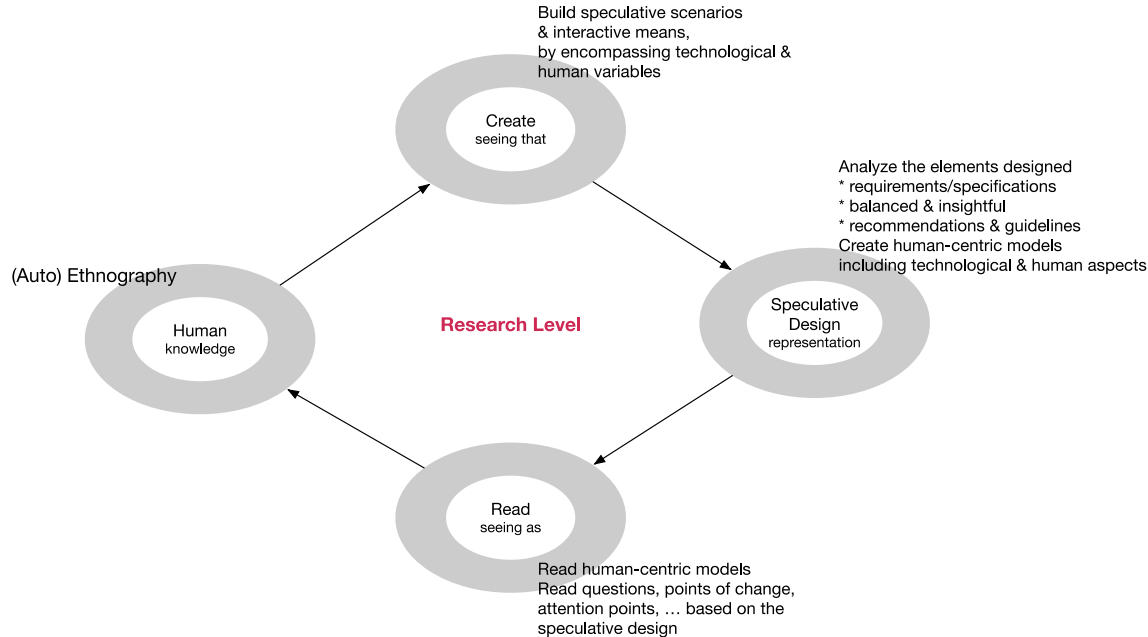
# My Results



## Human-practice based research

- Empirical insights via (auto)ethnography
- The envisioning role of speculative design
- Unveiling societal and economic consequences
- Informing policy and design

# My Future Work



- Further development of the ethnography-informed speculative design method
- Research on human-centric models: for individuals & for others

# Speculative Design and Human Behavior in Seeding the Future of Mobility

mobil.TUM 2024 – The Future of Mobility and Urban Space, April 10-12, 2024

Hilda Tellioglu

[hilda.tellioglu@tuwien.ac.at](mailto:hilda.tellioglu@tuwien.ac.at)

Artifact-Based Computing & User Research, TU Wien, Austria

[hildatellioglu.com](http://hildatellioglu.com)

**Thank you!**

