Hochschule für
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Project paper on

A PARTICIPATORY APPROACH FOR A SUSTAINABLE MOBILITY VISION IN WAIBLINGEN

In the study course

Sustainable Mobilities

- Problem based research project -

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List of Abbreviations

ALi	Alternative Liste Waiblingen
Approx.	Approximately
CDU	Christlich Demokratische Union Deutschlands
E.g.	For example
Et. al	Et alia
FFF	Fridays For Future
Gen Y	Generation Y
HfWU	Nürtingen-Geislingen University
MIT	Motorised Individual Transport
PT	Public transport
SPD	Sozial Demokratische Partei Deutschlands
STEP	Stadtentwicklungsplan

1 Introduction

An investigation of the mobility situation in Waiblingen –a town in Southwest Germany– reveals that traffic congestion, which invariably leads to increased CO_2 levels and air pollution is a challenge, as emphasized by Alternative Liste Waiblingen (ALi). Waiblingen seems to be missing an overall consistent sustainable mobility concept and remains experiencing a high car dependency. The few occasions of citizen involvement in Waiblingen's traffic situation is conducted over public information events. Citizens may bring up their opinions through those platforms, while the city decides on the planning. Mobilization of and communication to youths (Generation Y) doesn't seem to be taking place or given much attention. This leads to the assumption that decisions on the city's transport situation has not been inclusive and might especially miss out on new (planning) concepts, which would be more relevant for the future and might contribute to a development of sustainable mobility concepts. This study investigates how to build on the results of questionnaires and focus group for the development of youth participation in the planning of mobility in Waiblingen.

We point out that our research is looking at local level approaches, such youth participation, for building sustainable mobility. According to Buehler & Pucher (2011), the federal government in Germany only plays a minor role in promoting sustainable mobility options, specifically walking and cycling. The roles and responsibilities of the German federal government in encouraging walking and cycling has mainly been limited to the establishment and enactment of federal traffic laws for the protection of pedestrians and cyclists and also ensuring that their safety is a fundamental part of the driver's license test in the country (ibid.). Buehler & Pucher (2011) further claims that "most innovations, such as car-free pedestrian zones and integrated city-wide bicycling networks were pioneered and then widely implemented at the local level" (p. 48). Therefore, this study looks at how a participatory approach at a local level could be used to initiate a sustainable mobility development in Waiblingen.

It was found that "in Germany, there is a rising interest in creating better public participation today, fuelled by previous unsuccessful participation processes, for example 'Stuttgart 21', a plan to refurbish the main train station in that city" (Million 2017, p 223). Children and young people have now been identified as important

stakeholders in the participation process (Frank 2006). Including children and young people in the planning process has far-reaching implications for them because "...they are the generation that will experience the results of the decisions the longest" (Frank 2006, p 352). This research identifies research gaps, for example, the inclusion of children and young people in the participation process is not yet part of the German planning culture (Million 2017). The author further claims that "in fact, planners and architects are still often unsure how to involve young people, especially in the formal planning process. This is especially true for young people under the age of 18" (Million 2017, p 223).

Our research involves first understanding the youth's capabilities and their impact in the planning processes when giving the chance to participate. The heart piece of our research is the use of questionnaires and focus group to understand how a participatory approach involving Generation Y can be used to develop the liveability of cities, with special emphasis on mobility in Waiblingen. With this research we aim to raise awareness that participation of Generation Y is underrepresented in Waiblingen's current urban development plan and the city misses out on their potential in the realm of mobility planning. Our research is interesting because we want to communicate not only why we decided to carry out this research, but also the kind of knowledge we can get from this study. More specifically, we need knowledge about the youth's capabilities when involved in the planning process.

Therefore, our research question is: *'How can Waiblingen build on the data set derived from questionnaires and a focus group, which is this work's heart piece, to engage local Generation Y members in the development of sustainable mobility? And why is Generation Y relevant when it comes to increasing a city's livability?'*

2 Problem Definition and Research Question

This chapter will elaborate on a description of the current situation on mobility and few socio-economic facts about Waiblingen, highlight characteristics of the local Generation Y, as well as of Millennials and give an overview of public discussion on the traffic situation. The chapter will finish with the research question and aim of the research.

2.1 Waiblingen

The region of Stuttgart, referring to the city itself and its surrounding counties Böblingen, Esslingen, Göppingen, Ludwigsburg and Rems-Murr, counts 2,8 million inhabitants (Wirtschaftsförderung Region Stuttgart GmbH 2019). With 56.548 inhabitants, Waiblingen is allocated as a city in the county of Rems-Murr (Stadt Waiblingen 2019a).

2.1.1 Socio-economic Aspects

The GDP of the county of Rems-Murr in 2017 amounted to 13.048 MM € (Wirtschaftsförderung Region Stuttgart GmbH 2019). *Stihl* and *Bosch* are the biggest employers in the city of Waiblingen (Stadt Waiblingen 2019a). Being home to one of *Bosch's* subsidiaries, known for producing and developing for automotive and industrial technology, Waiblingen is directly connected to the automotive industry (Robert Bosch GmbH 2019). In 2017, the city revealed a 0,3 percent share of employment to be assigned to the primary sector, 40 percent to the secondary sector, and 59,8 percent to the tertiary sector (Bertelsmann Stiftung 2019).

In respect to the youth ratio, Waiblingen demonstrates to be home for more young people than compared to Stuttgart or the average in Baden-Württemberg: for 100 people within the age group between 20-64, there are 33,4 persons under 20 years of age counted to be living in Waiblingen (Bertelsmann Stiftung 2019). Although statistics proof this town to be relatively younger compared to Stuttgart and Baden-Württemberg. Figure 1 reveals living conditions especially for teenagers in the city to be less attractive than for other groups. This is the result after a citizen survey in 2012. Meeting places for teens and leisure offers showed potential for improvement by then. Public transport (PT) connectivity was mentioned in

one of the survey results affecting younger generations as well (Stadt Waiblingen 2014).

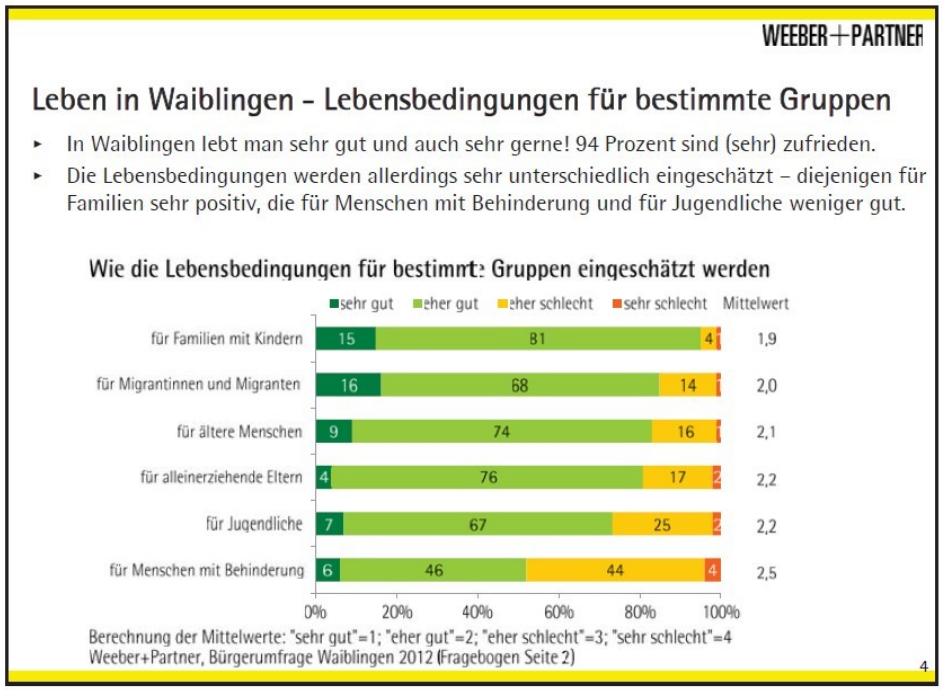


Figure 1: Living conditions for certain groups in Waiblingen (Stadt Waiblingen 2014)

2.1.2 Mobility

Just as early as in its urban development plan 2030 (STEP), published in December 2014, the city commits to traffic calming, improvement of information opportunities on the various modes of transport and expansion of local public transport, cycle paths, footpaths and mobility advice (Stadt Waiblingen 2014). The follow-up published in January 2019, thematizing all measures taken, demonstrates the priority of the traffic situation of the city (see Appendix no. 1).

As shown in figure 2, up till present time, car dominance is revealed to be high in Stuttgart and its region (Eggs 2019). The striking fact of Eggs' study, the culture of automobility in this region is already being established in early ages: the bicycle share of the metropolitan region of Stuttgart among the younger population, 18 years and younger, accounts for 11 percent, which is only half as high as in other German metropolitan areas. Instead, this age group is often driven by car (Eggs 2019).

Figure 2: Modal split in the region of Stuttgart (Eggs 2019)

In 2013, the city of Stuttgart conducted an explorative youth survey on mobility with 350 students. This survey has proofed, among other things, that the young Stuttgart native has an affinity for cars. An impressive 45 percent of the respondents state they want to buy a car as soon as possible. Yet, approx. 50 percent of the respondents stated not to attach importance to an individual/unique car, while at the same time 58 percent believe that electromobility's role will increase in the future. 60 percent think that electromobility is positive for the image of a city. The survey concludes that (Stuttgart's) young people have had little contact with car-sharing and electromobility as part of their mobility socialization by then. Even though there is a significant curiosity about these new mobility systems (Klose 2014). Although this survey was only performed in Stuttgart, the authors assume that its findings are applicable to Waiblingen.

2.1.3 Discourse about Waiblingen's Transport Situation

Mobility is a highly controversial topic among Waiblingen's citizens and other stakeholders. Table 1 below lists some of the articles, which give an overview of the most dominant discourse in media about Waiblingen's traffic situation. The impression arises that the main discussions are dominated by car orientation and traffic issues, led by parties and organizations which are already politically involved. Voices of younger generations don't appear in the discourse.

Media name	Headline	Content
Waiblinger Kreiszeitung (Kölbl 2019c)	Angst vor dem „Straßenmonster“ Nordostring	• Possible bypass street „Nordostring” intended to connect Waiblingen and Ludwigsburg, reduce traffic in Neckarstraße (Hegnach) by 50 percent. • BUT: bypass could cause even more traffic. • Mayor Hesky and CDU party are pro bypass (based on quantitative calculations). • Possibly most affected neighborhoods in Waiblingen’s south, represented in the biggest citizens’ initiative BIG. • ARGE Nord: politicians could already initiate relief by implementing speed limit 60 km/h at B14.
Waiblinger Kreiszeitung (Kölbl 2019b)	Mehr Tempo 30 in der Stadt gefordert	Diverse opinion on traffic issues: • SPD: o 30km/h speed limit for complete city at night. o Make cycling infrastructure more attractive. o Rising parking fees and fines for traffic offenders. • Grüne: o Reduce traffic by making car driving less convenient and less price attractive in comparison to PT and active modes. o Speed limit at 30km/h at Bahnhofstraße. • FDP o Updated traffic survey for the city center. o A solution for routing of bicycle traffic to the railway station and to new "Radhaus".
Waiblinger Kreiszeitung (Pöschko-Kopp 2019)	OB Hesky: “Mehr autofreie Stadt geht nicht“	• Mayor Hensky will obtain car as part of mobility offer in Waiblingen; a bigger car free zone in the inner city supposedly brings disadvantage for inhabitants, employees and hotel. • Car is considered a frequency driver for retail. • Optimized PT offers beginning 15th December 2019 to reduce car traffic.
Waiblinger Kreiszeitung (Kölbl 2019a)	Studenten erarbeiten Konzepte für Fronackerstraße	• Green party and ALi: Waiblingen’s traffic policy is car dominant and old fashioned while active modes of transport are discriminated. • Visible pressure for change on administration: majority of budgetary proposals 2018 regarding mobility. • Presenting research findings: o “Brötchentaste” and wide access road cause higher traffic in Fronackerstraße. o “Shared space” as an approach to change mobility behavior, demand for a reduction of on-street-parking spots necessary.

Media name	Headline	Content
Stuttgarter Nachrichten (Clauß 2019)	Kommunalwahl: Verkehr und Wohnraum sind die Topthemen	Transport and housing as major topics for municipal election: • ALi: free city bus tickets, improved quality of urban space. • Grüne, SPD, BüBi, FW-DFB: development of cycling and walking infrastructure as well as PT offers.
Waiblinger Kreiszeitung (Pöschko-Kopp 2014)	Das Taxi Mama gefährdet die Kinder	Kids getting driven to school by car are less secure in everyday traffic: • Walking has health benefits for the children. • Appeal towards parents has positive connotation.
Waiblinger Kreiszeitung (Striebich 2015)	Zu Fuß statt mit dem Elterntaxi	Report about 4th grade school class walking to school: • Calmer traffic situation in area of the school. • Education for children to stay safe in traffic.

Table 1: Overview of recent newspaper articles regarding mobility in Waiblingen

2.1.4 Generation Gap

This chapter introduces the generation gap of Waiblingen regarding politics and the voter's motivations.

As shown in figure 3, the age distribution in Waiblingen is mostly evenly distributed, with surplus in the age groups of middle-aged from 40-60, representing the German average (Statitisches Bundesamt 2019). The young generation makes up about 30 percent of the whole population. For our research, we identified people in the age groups of 14-17 and 18-25 to get information about their mobility behaviour. These two age groups make up 13 percent of the whole population in Waiblingen (Statistisches Landesamt Baden-Würrtemberg 2019).

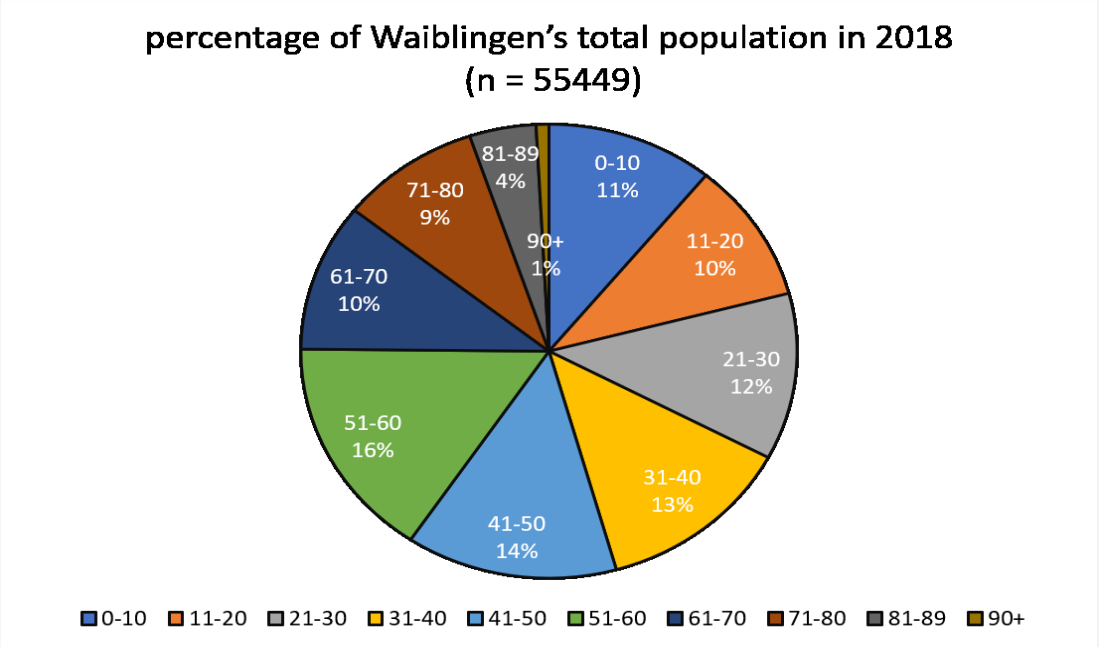


Figure 3: Percentage age group portions of Waiblingen's total population in 2018 (Statistisches Landesamt Baden-Württemberg 2019)

From a political point of view, the classical voter's spread was shaken in the election for the European Parliament. Figure 4 illustrates these changes regarding the federal state of Baden-Württemberg. The Green Party could gain 18 percent more of all young voters in comparison to 2014. Therefore, the classical popular parties of *Christlich Demokratische Union Deutschlands* (CDU) and *Sozial Demokratische Partei Deutschlands* (SPD) lost their young voters to the Green party and other smaller parties, such as *Die Piraten* and *Freie Wähler*, which can be seen by the 23.5 percent share in 2019 under *Sonstige*.

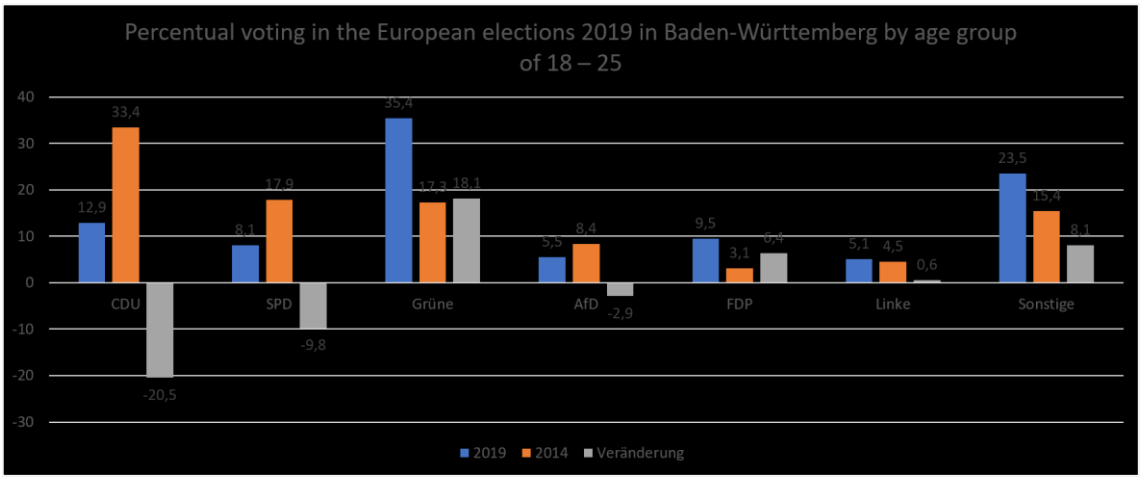
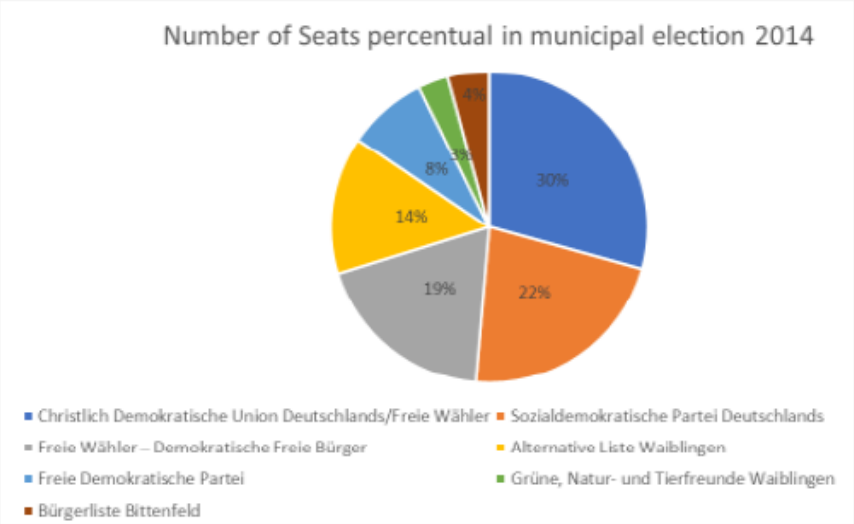


Figure 4: Percentual voting in the European elections 2019 in BW by age group 18-25 (Statistisches Landesamt Baden-Württemberg 2019)

This shift is explained by the swing and motivations the Green party represents, such as support for environmental protection and social justice, especially through the movement of *Fridays for Future* their interests were pushed even more (Bukow 2019).

The mentioned shifts on federal state level are similar for the city of Waiblingen of all eligible voters. Comparing the figures from 2014 and 2019, the Green party gained 8 percent of votes more than in 2014, while CDU and SPD lost voters significantly to the other parties as well. Additionally, the election turnout increased over 10 percent in Waiblingen, marking the importance of this election (Adolf 2019).

The local council of Waiblingen is represented by the traditional German parties of CDU and SPD, yet other parties in comparison to 2014 could gain popularity as well, as figure 5 shows. The political turmoil is visible in Waiblingen too. Combined with the turnouts of the European election in May 2019, there is a difference in the political landscape of Waiblingen. The traditional popular parties of CSU and SPD are still having a major share of the votes but are not able to build bare majority anymore.



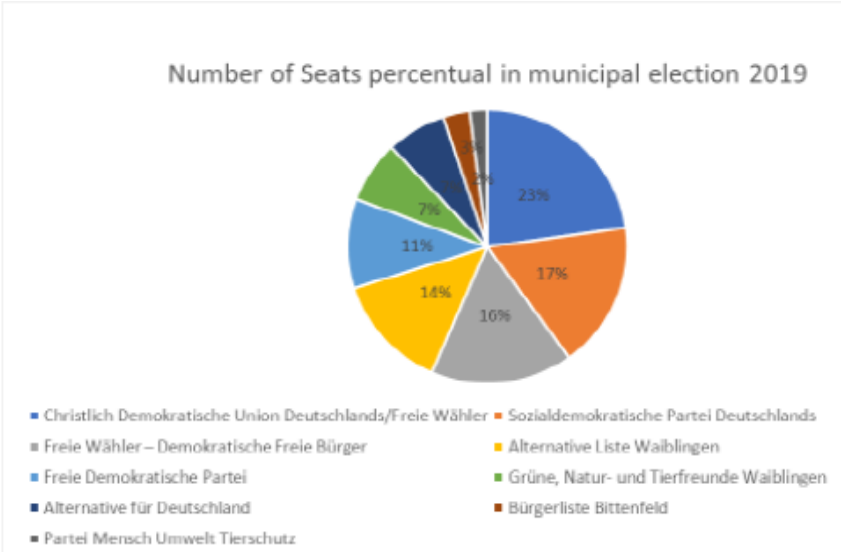


Figure 5: Number of seats in municipal election of Waiblingen 2014 and 2019 (Statistisches Landesamt Baden-Württemberg 2019)

Despite the indicated shift of voters, the local level of engagement of Waiblingen's Generation Y members in the mobility and political discourse draws a contradicting picture: On 1st October 2019, the *Alternative Liste Waiblingen* (ALi), hosted a public event focusing on Waiblingen's mobility, and gave three student research groups from *Nürtingen-Geislingen University* (HfWU) the possibility to present their findings about the city to the interested audience.

Figure 6: Audience during the ALi event on October 1st, 2019 (Source: ALi Waiblingen (2020))

About 170 persons attended the event, including one of this paper's authors. The picture above as well as direct observation during this event shows that most of the audience was middle aged or older. Younger audience was missing. On the other hand, first research has revealed that a platform for political engagement of the city's younger generation is present in the form of a youth community council (Stadt Waiblingen 2019a).

2.2 Research Question and Aim of the Research

A first research of articles in local and regional media shows Waiblingen's younger citizens to be missing out on the public discourse. Although a Youth Community Council exists, indications show that younger generations are excluded from planning practices. The few occasions of citizen involvement in Waiblingen's traffic issues is conducted over public information events mainly attracting and involving parts of the citizenship aside from members of Generation Y. found first proof – looking at STEP 2030 – that the city follows a classical approach of planning and disregards new concepts, such as youth participation, which would be more relevant for the future and might contribute to a development of sustainable mobility in the long-term. The analysis of the political values through last years' elections demonstrate political motivation towards issues interrelating with the environment and social justice, which is shared among younger generations.

We, the authors of this report, decide on the research question as follows: *How can Waiblingen build on the data set derived from questionnaires and a focus group, which is this work's heart piece, to engage local Generation Y members in the development of sustainable mobility? And why is Generation Y relevant when it comes to increasing a city's livability?*

With this research we aim to raise awareness that the city misses out on Generation Y's potential in the realm of mobility planning and to give first suggestions where to raise the degree of participation. Thus, this paper involves a first understanding of the youth's capabilities and their impact in the planning processes when giving the chance to participate. At the same time structural and societal barriers are pointed out. Two case studies will provide a practical approach: the

first case – citizen participation in Freiburg – is elaborate on the successful participation of different stakeholders in transport planning, while the second case – youth participation for building German municipalities – specifically explains the participation of Generation Y. In the latter case, a tool for indicating when and how the participation of children and young people should take place in planning German cities is developed (Million 2017). A focus group interview with local members of Generation Y, complemented by questionnaires for the interview participants and its subsequent analysis are the heart piece of this research. We conclude this research work by giving recommendations, which could help raise the engagement of Waiblingen's youths in mobility related issues.

3 Methodology

This chapter elaborates on the paper's research design, which is mainly based on qualitative approaches. Secondary data collection in form of literature review is used to draw a theoretical picture of planning, as well as to gain a picture of Waiblingen's situation itself. The case study method also describes the processes of a participatory research. Primary data collection in form of questionnaires and focus group interviews will complement this research by exploring the local target group's needs, habits and perceptions about mobility and communication. A qualitative and quantitative data analysis will ensure a first conclusion on Waiblingen situation and enable a discussion on the findings.

3.1 Literature Review

In order to present the research findings, this paper uses scientific literature and local newspaper sources for presenting and underpinning certain results. As Rosenhead & Mingers (2008) state, this approach is used to decrease complexity and uncertainty over the study's presentation of a problem. While trying to identify a research problem, previous literature might support certain aspects or hypotheses the researchers made in order to conduct the research (Rosenhead 2013). As it often is not possible to obtain a primary data collection, due to e.g. geographical distances, secondary data is used instead for the collection (Juneja 2020).

Since the study focuses on external factors in Waiblingen, the consideration of governmental and local sources, such as the *Statistisches Bundesamt Deutschland* or the local newspaper *Waiblinger Kreiszeitung (ZVW)* need to be included in the research. Moreover, several different topics are approached and analyzed in this study which are mainly supported by scientific literature. These sources arise from various journal, for example *Journal of Transportation, Journal of Transport Geography* or journal series regarding politics, social media use and technology.

3.2 Case Study Methods

Case study research method is defined “as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (Zainal 2007, p 2). In another study, it was found that specific interest in the individual case is what defines a case study, not by the methods of inquiry –the ways that the researcher gathers data or information for the case that they are looking into (White, Drew & Hay 2009). The authors further claim that the primary attribute of case study is its specificity and boundedness (ibid.). For example, studies such as ‘policies of dealing with neglectful parents’ or ‘reasons for child neglect’ lacks specificity and are therefore not clearly defined enough to be referred to as ‘case studies’ (ibid.).

According to Zainal (2007), “the role of case study method in research becomes more prominent when issues with regard to education (Gülseçen & Kubat 2006), sociology (Grässel & Schirmer 2006) and community-based problems (Johnson 2006), such as poverty, unemployment, drug addiction, illiteracy, etc. were raised” (p 1). Noor (2008) claims that case studies are especially useful where there is a need to comprehend a specific issue or an instance of a particular situation in great-depth, and where cases rich in information can be identified. When a researcher intends to understand how and why certain situations unfold, adopting case study as a research method could help untangle the methodological conceptual knots. Case studies or case study as a research method facilitates the investigation of contextual realities and informs the distinction between what was planned and what actually happened (Noor 2008).

Noor (2008) claims that case studies have been criticized by some as a research method that do not address generalizability, and as a method that lacks scientific rigour and reliability. Despite those criticisms, this research identifies the following as strengths of case study methods:

- It allows the researcher to have a holistic view of a series of events or certain phenomenon and can provide a more detailed picture of the situation since it involves the use of many sources of evidence (Noor 2008).

- Case study can be very useful in expressing the nascent and fundamental properties of life in organizations and the changes in organizational activity, especially where the situation is changing very fast (ibid.).
- Case studies are in most cases carried out within the set of circumstances in which an activity takes place (Zainal 2007). For example, a case study might wish to explore the process by which a subject understands an original text (ibid.). To investigate the strategies that the reader adopts, the researcher needs to observe the subject within his or her environments, for instance, observing how the subject reads in the classroom or reads for leisure (ibid.). This shows how case studies investigates a phenomenon from its context.
- It was found that "variations in terms of intrinsic, instrumental and collective approaches to case studies allow for both quantitative and qualitative analyses of the data" (Zainal 2007 p 4). Some longitudinal studies –repeated observations of the same subject over a period of time– use qualitative data to describe behavioral conditions, while on the other hand, some case studies use both categorical and numerical responses of individual subjects as sources of evidence (ibid.). The authors further states that researchers should be careful not to confuse case studies with qualitative research since in certain situations, case studies can use entirely quantitative data as sources of evidence (Zainal 2007 cited Yin 1984).
- It was found that "the detailed qualitative accounts often produced in case studies not only help to explore…the data in real-life environment, but also help to explain the complexities of real life situations which may not be captured through experimental or survey research" (Zainal 2007 p 4).

3.3 Designing a Case Study Research

Researchers can adopt either of two methods —single-case or multiple-case— in the design of a case study (Zainal 2007). The selected method depends on the issue to be investigated (ibid.). Single-case design can be used where events are limited to that single occurrence and the researcher has no other cases available for replication, while multiple-case design can be used with real life events that provides a replication of numerous sources of evidence (ibid.). The downside of a single-case design is that it lacks the ability to come up with a generalizing

conclusion, especially when the occurrences are rare, however, since multiple-case design involves replication of cases through pattern matching, this design method helps support or enhances those results that have been previously concluded (Gustafsson 2017).

Having described the design of a case study, our research intends to provide evidence which shows that the findings of our research study could be applicable to other times, situations, contexts, and population. This approach is known as transferability in qualitative research, which is synonymous with generalizability in quantitative research (Statistics Solutions 2019). As Polit & Beck (2010, p 1451) point out in their research on myths and strategies of generalization in quantitative and qualitative research, “generalization, which is an act of reasoning that involves drawing broad inferences from particular observations, is widely acknowledged as a quality standard in quantitative research, but is more controversial in qualitative research”.

Since generalization is about drawing a general conclusion from a particular observation, for example, looking at a much smaller sample for generalizing about a large population, and to the conclusion that results, the goal of this research is not really to generalize, but rather to provide a contextualized and deep comprehension of some aspects of similar occurrences and the experiences of the people involved through an in-depth study of specific cases.

This research adopts the case study research method and includes a participatory approach. Participatory case study in this project involves the local group in two steps: (1) consultancy in information gathering and acquiring interviewees through ALi and (2) interviewing the affected target group members. In this mode of case study, the participants engage in forming or conceptualizing the study to putting it in writing and communicating the results.

According to Reilly (2010), the following characteristics make a participatory case study:

- “It is ideologically oriented in its focus and explicitly emancipatory in its goals. It generally takes the position of a social critic, and proposes radical change in social structures/processes, as well as reformulating the entire approach to research, voice, power, and knowledge production/use”;

- In this case study approach, the participants are experts into the fundamental causes of the issues within their social world (ibid.).
- In participatory case study, the participants share knowledge with the researchers, thus makes the participants contributing researchers (ibid.).
- Participatory case study gives participants the means or opportunity to move their voices or concerns into a place of centrality (ibid.).

Why a participatory case study?

- The outcome or goal is to understand the mobility-related attitudes and perceptions of Generation Y in Waiblingen, as well as their most common values. Additionally, this case study method is to demonstrate the potential of participatory planning and to show specific outcomes –impacts/methods/approaches– that have been detected in order to engage this target group.
- To tackle those issues specifically identified by the community or local people by developing solutions and applying the results directly to the problem at hand.

3.4 Questionnaire

A questionnaire is considered a useful tool for data collection given certain conditions. Marshall (2005) defines these conditions as (1) a clearly defined and identified target group, even if geographically spread, (2) most of the target group has knowledge about the topic asked, (3) the focus of the gained data's analysis is numerical i.e. the questionnaire yields quantitative data.

As long as the aim is to derive a quantified structure of the participants' information, Marshall recommends questions within this form of data collection to "be short and focused, consisting generally of 12 words or less […] The more structured the questions are, the easier they are for the researcher to interpret" (Marshall 2005).

For this project the authors decide on using a questionnaire to derive rather hard facts from the defined target group, the local Gen Y (see Appendix no. 2). The aim is to gain information about their mobility behavior, communication preferences and state of knowledge of local conditions. As the document is supposed

to be handed out to each focus group's participant before the interview the authors expect more individual information – despite the focus group interview data, from which the researchers expect collective information on "soft" issues such as attitudes and perceptions (details about the focus group will be explained in the following chapter). Besides simple questions about gender, age and occupation, the authors decide on using mainly two question types following Marshall (2005) understanding:

Closed questions. In this case a respondent is offered a choice of alternative replies e.g. do you own a car, a bicycle, an (e-)scooter or others.

Closed questions with a possibility for reasoning. In these cases, respondents will be asked to answer options with yes or no and at the same time give a reason on their decision, which is supposed to be formulated freely and independently from any fixed option.

In ideal situation the questionnaire is to be handed in before the interview dates. Yet, it is designed independently from the focus group question guide in order to enable free and unbiased discussions during the interview.

Proto persona

Compared to other studies, the questionnaire sample is rather small, as it only contains six completed questionnaires. Statistical data or graphs cannot be derived. Instead, this research uses the qualitative approach of a proto persona in order to highlight the results evaluated from the questionnaire (see Appendix no. 2). A proto persona is used to display the mobility needs, experiences, behaviours, and goals of Generation Y in Waiblingen. The term *proto persona* is used in user experience design methods and describes potential user groups and makes them more vivid and tangible to the researchers (Buley 2013). Proto personas usually present some basic context, such as age, name, profession, etc. and a brief description of their everyday user habits of a product or service. Additionally, it is important for the researcher to show the user's goals, needs and pain points in the proto persona (Steimle & Wallach 2018).

Furthermore, a proto persona can provide a basis for further recommendations in regards to the sustainable development of Waiblingen's mobility. Since this

research focuses on Generation Y, the emphasis on this particular user group is important.

3.5 Focus Group

To explore the locals' attitudes and needs in regards to (political) values and mobility, the author's decided to use the method of focus group interviews. Rabiee (2004, p 655) considers this method a "useful tool for involving users in […] strategy development, needs assessment, participatory planning". Asbury (1995) refers to Merton (1987, p 565) who defines focus groups as "a set of procedures for the collection and analysis of qualitative data that may help […] gain an enlarged sociological and psychological understanding in whatsoever sphere of human experience". Both authors see the dynamic of group interaction as stimulating "the thinking and thus the verbal contribution" (Rabiee 2004). Data contribution – in range and type – can be derived from these dynamics, which is advantageous compared to one-on-one interviews where the only interaction is between interviewer and interviewee (Rabiee 2004). A classification of the method can be determined following the argumentation by Morgan (1988):

1. Focus groups are the **only** research strategy on a specific project with the aim to gain understanding of a "new research areas or to examine well-known research questions from the participants own perspective" (p.24).
2. Focus groups are **part of a multi-method** approach in research, where the aim is either a preliminary preparation of the research for a specific issue within a larger project or a follow-up research in order to clarify findings gained through other sources and/or methods.

Asbury (1995) finds a simple frame for orientation stating that focus groups should **consist out of six to twelve individuals**, who are similar in some way. Richardson & Rabiee (2001) are more detailed about the formal frame of focus groups and state: "Participants in this type of research are selected on the criteria that they would have something to say on the topic, are within the age-range, have similar socio-characteristics and would be comfortable talking to the interviewer and each other." Most researchers even recommend that "participants should not know each other, thus encouraging more honest and spontaneous

expression of views and a wider range of responses. It also prevents set behaviors relating to pre-existing relationships and patterns of leadership in the group (Thomas et al. 1995).

The authors of this paper's research consider the application of the focus group method as part of multi-method approach. Through this method, the research group would like to understand the following:

1. What is this target group's perception of mobility in Waiblingen? Are they satisfied with the current situation? Can they name existing problems? What can be optimized in their point of view? How do they imagine mobility in 5 and 10 years?
2. Which perception does this target group have of current movements (such as FFF), can they imagine not to own a car in the future? What is their opinion on sharing concepts and new mobility technologies (such as autonomous driving)?
3. What does this target group expect from the city of Waiblingen? (in regard to mobility and participation).

3.5.1 Sampling

The authors decide on performing one focus group interview: with participants aged 14-25 as they account to the target group of the millennials and are considered digital migrants or even digital natives. The researchers expect that the target group have first parent-independent experience in mobility, some might even be experienced in commuter traffic and car ownership (or at least are about to decide on buying a car) as they are in their first stage of vocational training/studies/jobs.

To find interviewees for the focus group, first contact with Iris Förster from ALi was taken in the beginning of December 2019 and thus before the Christmas holidays. She introduced the authors to an employee in the city's administration, responsible for the coordination of the youth city council's formal tasks. Through the youth city council and the contact with ALi, the group expected to recruit enough participants.

3.5.2 Interview guideline

The group interviews are designed to deliver information on the target group's values, perception of mobility and motivation of (local) change (see Appendix no. 3). They are especially supposed to reveal issues on which the groups agree, disagree and/or support/contradict theory or the information derived from the questionnaires. Open questions are the ground to encourage discussion derived from possible contrasting individual opinions or ideas of how to improve Waiblingen's traffic situation for younger generations. Thus, the authors aim is to be able to draw a concrete picture of the local's Generation Y attitudes and consequently – after analysing the gained information – to point out topics and actions for future mobility planning where engagement of younger generations in Waiblingen would benefit the community.

Both, questionnaire and the focus group interview, were conducted in the target group's native language, which is German. The interview will be transcribed in German and summed up in this paper in English. The proto persona elaborated from these findings is consequently based on the German answers of the questionnaire and will result in a translated user type.

3.6 Qualitative and Quantitative Analysis

After conducting the focus group interview and desktop research on the research question, this study uses qualitative and quantitative methods to analyse the gathered data in a second step.

On one hand, qualitative methods are being analysed. The focus group interviews are transcribed, afterwards the analysis is an important step to identify the topics the interviewees talked about regarding the questions the researchers asked. For analysis of the data, Mayring (2015) uses the term "qualitative content analysis". He structures such analysis into three parts:

1. Scientific orientation for everyday tasks
2. Analysis of feelings, belief and actions of human beings
3. Interpretation of spoken word aiming to give room for re-interpretation

The aim when following these steps is to have room for interpretation of the perspective the interviewee has. For the focus group interview, the researchers see

an opportunity to highlight certain aspects of the interviewed group which should give an impact on how mobility in Waiblingen might be structured in the future.

Quantitative methods, such as analysing and comparing statistical data, are important for this study, too. Using such kind of data helps to understand why the situation in Waiblingen appears to be and to underline certain points of the research. An example for such action is the comparison of election turnout of the European Parliament in Baden-Württemberg and Waiblingen.

Leech & Onwuegbuzie (2009) describe the process of using both research strands for supporting each other. It depends on how the researchers weigh their data and give it more room for interpretation. In the context this study is placed in, the focus of analysis is on the qualitative side, since the data is gathered mainly through literature analysis, and the focus group interviews and questionnaires as described above:

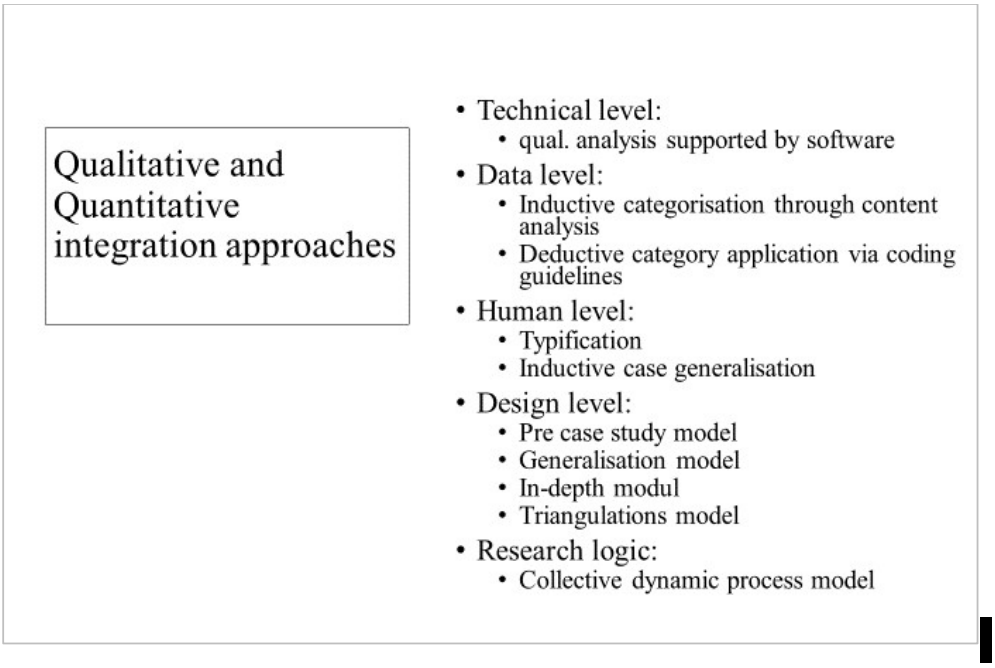


Figure 7: Qualitative and quantitative integration approaches, adapted by Mayring (2001)

As mentioned before, in the case of this study the researchers use the inductive approach as focus groups and semi-structured questions tend to get users into the mood of talking (Schmidt 2010). Therefore, the researchers expect to achieve on the human level to discover some form of typification of the participants, such as heavy car users who are not willing to change their mobility behaviour because

it would indent a heavy discomfort in their everyday life (Freudendal-Pedersen 2009). On the design level, this study uses the triangulations model, as the quantitative and qualitative data is used to create a conceptualisation for the mobility behaviour perception of young people in Waiblingen (Mayring 2016).

Thus, as it can be seen in figure 8, the analysis of the research will look as follows:

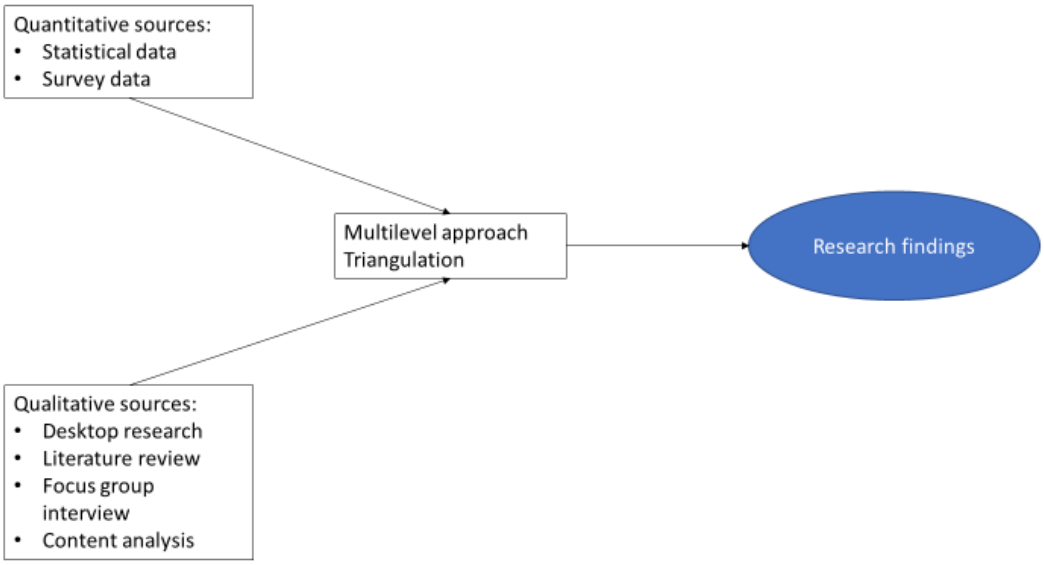


Figure 8: Triangulation Model, adapted by Mayring (2001)

At the end of the research during discussion the researchers will achieve, depending on weighing of each method, a so-called multi-level approach and triangulation. The following research findings will provide room for discussion and give an outlook for further research (Tracy 2007).

4 Research and Literature Review

This chapter will deal with the theoretical background this paper's research problem is based on and will build a bridge to the local context within each sub chapter.

4.1 Generation Y

In order to answer the research question, some theoretical definitions for understanding the problems must be taken into consideration. First, this chapter will explain the term *Generation Y*, as researchers are using different terms in the definition, followed by the analysis of their mobility and communication perception.

4.1.1 General Understanding and Characteristics

Research in general is not coherent about the definition of the terms of Generation Y and Millennials. Klaffke (2018), a German researcher, defines Generation Y as people born between 1981 and 1995, whereas people born between 1996 and 2010 are called millennials. On the other hand, the American "Pew Research Center", a major opinion research institute defines people born between 1981 to 1996 as Millennials, younger generations towards 2019 are defined by Pew Research Center as "Generation Z" (Dimock 2019). The term Millennials was first introduced by Strauss & Howe (1992) defining the time frames of 1996-2010 as Millennials. The term was first used in human resource management sciences, as Gen Y/Millennials tend to be more open, reflective and eager to learn, meaning their personal development in a society seems very important to the cohort of Gen Y (Huber & Rauch 2013).

As definitions of the terms overlap and researchers all over the world are not corresponding with each other, this study refers to the age group of 17-25 years old participants of the focus group interview as *Generation Y* born between 1995-2002.

4.1.2 Mobility

As definitions differ a lot between the terms for Generation Y and Millennials, mobility behaviour for the generations born after 1994 is different in comparison

to their parents' generation. First, there is a noticeable decrease in car-dependency. Germany with its very car-centred society experiences these effects as well, as a study by the German Federal Statistical Office shows: the number of registrations of new cars by the age group of 18-25 stays on the same level since 2010, with an increase of inhabitants as well (via Twitter (VDA) 2019). Regarding transportation, the sharing economy is upstaging the personal car, for example if MIT (Motorised Individual Transport) is needed, younger generations tend to go by carsharing. Also, public transport and biking, especially in an urban context are getting more important for younger generations (Canzler & Knie 2016). The development towards sustainable modes of transport can be seen all over the world, for example in New Zealand: the need for a personal car is especially in rural areas extremely important while public transport systems are not very much developed, yet the interviewees of a study by Hopkins (2016) showed consciousness regarding useless trips especially because of CO_2 emissions and the running costs of a personal car. Therefore, the need for getting a driver's license gets more irrelevant for this generation. As van Audenhove et al. (2014) show in their report about the future of urban mobility, cities will have an increase in km-travelled by all generations.

Secondly, both generations are considered more environmental conscious. This development can be seen especially in transportation. As mentioned before, the need for MIT and getting a driver's licence decreased/stagnated over the last ten years, yet Gen Y and Millennials are more determined of multimodal transportation (Szmelter-Jarosz 2019). Multimodal transportation is also connected to socio-demographic characteristics, such as heritage or residential preferences (Anable 2005; Nash & Mitra 2019). Nonetheless, travel behaviour despite the Gen Y characteristics is depended on several personal and societal factors which makes it difficult to generalise.

Thirdly, it is proven that the organisation of mobility of Gen Y and Millennials differs from older generations, too. Due to the multimodal transportation and the connection and availability of ICT, the tendency to organise trip chains such as going to university, meet friends and lastly going to buy groceries, get longer. This development is defined as "everyday mobility" which is by definition "(…) the centre of constellations of power, the creation of identities and the microgeographies

of everyday life" (Cresswell 2011, p 551). Everyday mobility in this sense is another term for conceptualisation of mobility, focusing on the everyday life of individuals. Due to the availability of public transport and sharing concepts, smart mobility nowadays is no problem anymore. The trends of multimodal transportation can be seen especially in urban contexts, nevertheless this development can be applied to rural areas as well (Tully & Alfaraz 2017).

Lastly, worth mentioning is the entry into parenthood of Gen Y: the current mobility situation changes when becoming a parent, as the organisation of mobility no longer only is depended of their own choices. Therefore, when becoming older and parents, the need for MIT increases. A Dutch study by Oakil, Manting & Nijland (2016a) supports this finding. By testing and relating car ownership, age and parenthood, the participants either relied more heavily on using their already existing car, and the new car ownership increased (Oakil, Manting & Nijland 2016b). McCarthy et al. (2019) reflects on such changes and criticises political and environmental decisions which turn carless household towards car-owning households whereas they rather would not like to own a car because of housing or environmental reasons (McCarthy et al. 2018). Furthermore, McLaren (2016) shows sociodemographic reasons in Toronto, whereas when living in an urban context with short ways, the need for a car is not available. The author also refers to income, which especially in sub-urban neighbourhoods makes it more difficult to run the costs of a car without having a cut in other areas of comfort.

4.1.3 Communication Behaviour of Generation Y

Last to be analysed is the communication behaviour of Millennials. Main important for this behaviour is the omnipresent use of media, such as social media (Masters, Macintosh & Smith 2004). To understand such shift, it is important to highlight certain aspects of communication theory. A very known concept of communication behaviour, remarkably known for its applicability in various research fields, is the *sender receiver* communication by Shannon & Weaver (1975, c1949). This model describes how two mediums interact with each other in a linear way: first, one medium acts as an information source which then transmits information via noise or signal. Secondly, the receiver, a second medium, collects a message which ends at a certain destination (Bryant & Miron 2004). An example for this theory is when two human individuals talk to each other and exchange

information. Shannon & Weaver (1975, c1949) furthermore researched about how technology can support communication between humans. As mentioned before, when technological revolution such as printing, newspapers, drop of illiteracy in society, TVs and portable phones came in popularity, the need for direct communication dropped. These technological revolutions made it easier to implement quick information access through media outlets (Fang & Cressman 1997).

Nowadays, it is easier than ever to receive thoughts and opinions. As Lutter et al. (2017) show on the case of Germany, 95 percent of 14-29 years old own or rather use a smartphone on a regular basis. According to Gu (2019), it is estimated that half of the world's population owns/uses a smartphone on a regular basis. Social media and ICT changed gathering information in the early 2000's again, as everyone with a proper working internet connection was able to receive information about current events happening in the world if desired. Additionally, this change also took place for changing e.g. business behaviour (van de Wijngaert, Pieterson & Teerling 2011; Edosomwan et al. 2011) and political engagement (Bolton et al. 2013; Cantijoch, Cutts & Gibson 2016; Jandura & Karnowski 2015).

As this study also refers to political engagement of young people, a closer look on their participation behaviour is necessary. It seems Millennials tend to have "disenchantment with politics". This term means in general the displeasure with the current political situation and feeling ashamed when talking about politics (Schneider & Toyka-Seid n.d.). It is expected by younger generations not to have political engagement and interest. Nonetheless, current movements such as "Fridays for Future" or petitions against certain topics, for example the debate about Article 13 by the EU, weaken this argument (Römmele 2019; Seidel 2019). Young people, mostly in the age of school or university, can be seen on the streets to protest for their future. Additionally, towards regular media use younger generations tend to share their opinions on each possible medium, for example Snapchat, *Instagram* or *Twitter* (Ohme 2019).

Concluding it can be said that Gen Y and millennials reportedly have a shift from classical media outlets towards mixture of various digital media sources, which can be seen by the development of the German population (Frees & Koch 2018). Figure 9 by Breunig & van Eimeren (2015) shows this development for Germany:

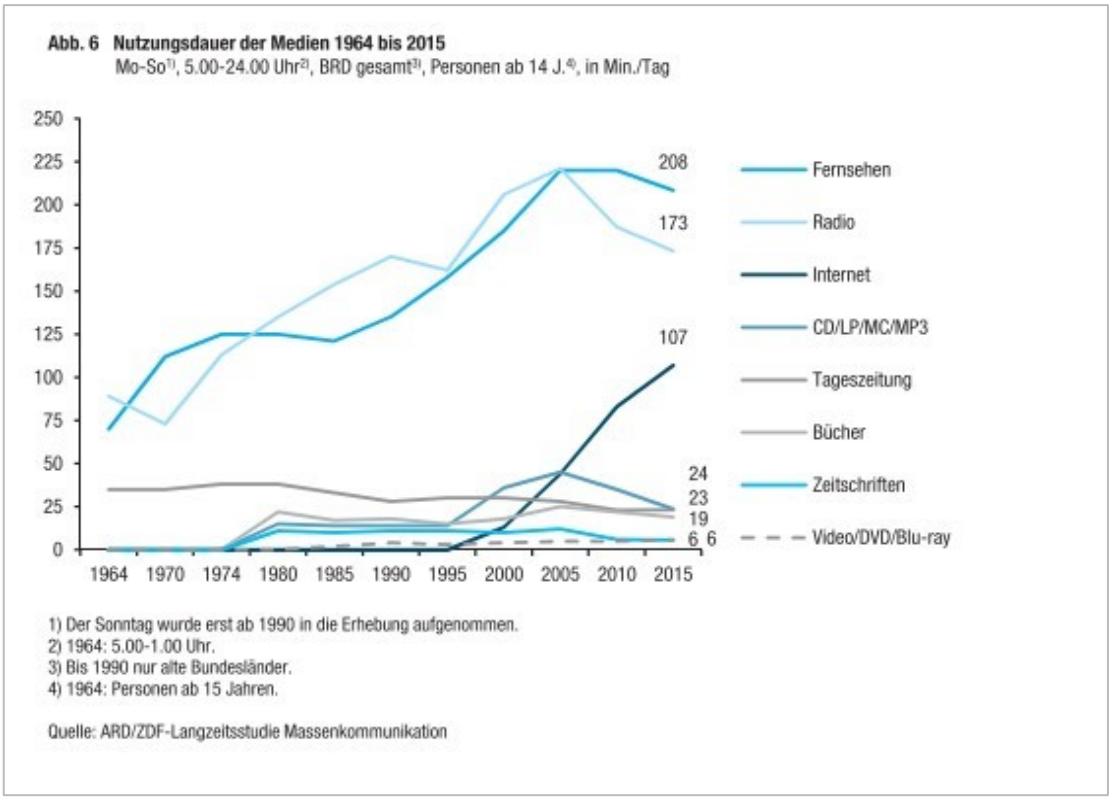


Figure 9: Uptime of different media outlets in Germany 1964-2015 (Breunig & van Eimeren 2015)

4.2 Planning and Participation

This subchapter starts to elaborate ground for the authors' understanding of transport planning, followed by the specification of participation in planning, its guiding principles and a comprehensive overview of the state of youth engagement. We conclude this subchapter by describing two practical cases. First, the case of Freiburg gives an insight into how a participatory approach was used to develop a sustainable city district (Vauban), which later became a model for further initiatives (Sperling 2006). Second, the case of youth participation for building German municipalities develops a tool, which shows when and how the participation of children and young people should take place in German city planning (Million 2017).

4.2.1 Transport planning

Transport planning in this research paper is considered "the science which provides the measures and methods to order the present and, above all, future transport as well as to guarantee its unobstructed flow" (Schmucki 2001, p 83). Following Rodrigue and Slack (2017), transport planning focuses upon the public

provision and financing of transportation assets, particularly roads and public transit systems usually addressing specific problems or broad transport concerns at a local level. Consequently, it has been a preoccupation of lower-tier governments (state, county, municipal) and is therefore most developed in the urban sphere, where most experience has been gathered. The standard approach is mainly determined by four steps: trip generation, trip distribution, modal split, and route selection. The process itself thus makes use of quantitative methods such as regression analysis, entropy-maximizing models, and critical path analysis. Science has initiated a growing realization by decision makers though, that the quantitative process of planning might have failed. “Rather than estimate traffic increases and then provide the capacity to meet the expected growth, it is now accepted that what is required is better management of the transport system, particularly maintenance, through new approaches to planning” (Rodrigue & Slack 2017).

Stakeholder engagement as a rather young part of planning originates from the growing awareness that transport planning has the potential to influence numerous elements of society. Identifying transport problems affected groups is important in order to resolve or even prevent upcoming issues. This requires recognizing the role of citizen participation. Failure to do so runs the risk of a project to meet significant opposition from stakeholders perceiving that they have been left out, which can either have a negative impact on planning progress or another form of neglection of an offered solution (Rodrigue & Slack 2017). A prominent example of missing out in stakeholder engagement is Stuttgart’s main train station project *Stuttgart21*.

4.2.2 Participatory Planning

Maithani (2003, p 32) states that “participatory planning is a process by which a community undertakes to reach a given socio-economic goal by consciously diagnosing its problems and charting a course of action to resolve those problems”. Certain principles guide participatory planning and acting in accordance with those principles could help trigger success.

General guideline principles of participatory planning

According to Maithani (2003), the following are guiding principles on participatory planning:

- Local institutions support the development process with community-based groups or users, local groups, or youths playing a lead role –the participants whose societies are to be investigated works as experts, together with the researchers;
- To build confidence and experience with the locals, it is best to start with few measures to solve the immediate problems of the community or society;
- The development process should allow for changes and adaptation to local conditions, for example, if the targets and goals change, the schedules and plans should be flexible enough to accommodate those changes and adapt to local conditions;
- The development should be viewed more as a 'bottom up' change process rather than a top down approach.

Maithani (2003) further identifies the following as ways of initiating participatory planning:

- Identification of local or community needs, which involves talking to the community members directly to find out what the community needs and what they see as probable solutions to those problems;
- Collection of basic data about the community to get a factual baseline picture of the current situation –this involves collecting information such as demographic data, data on socio-economic status, resource situation, characteristics of the area, and so on– which helps to set goals and measure those changes brought about by the project at a later period;
- Formation of working groups, which involves working together with local officials or experts to verify collected data, as well as drawing a relationship between the problem situation and the community characteristics (i.e. what relationship exist between traffic congestion and a wealthy community), identifying priority areas for intervention, and working together with the experts to prepare status report and develop perspectives;

- Formulation of the objectives – this involves defining precisely by stating in concrete terms the specific objective to be achieved or developed for recommendation;
- Ensuring feasibility – this involves deciding how realistic the objectives are and deciding how the proposed actions will be implemented;
- Preparation of work plan – this is a blueprint for managing a project, which details the 'who, what, when, where, why, and how' of project implementation. A work plan provides answer to questions such as who is responsible for an activity, what is it about, when should it be done, where should it be done, why should it be done, as well as how should it be done?

4.2.3 Engaging Younger Generations in Planning

Although stakeholder engagement and citizen participation in specific has been acknowledged as part of positive planning practices, research shows youth to be less considered compared to participation of adults. Even though this cohort is the one being affected the longest by public decisions impacting either city design, social services, and environmental quality (Lennard & Suzanne H. Crowhurst Lennard 2000; Chawla 2002) Planners are encouraged to realize needs and capabilities of youth by the *children's rights'* and the *sustainable development movement,* both recognizing that strong tools for serving youth is the empowerment of this target group to influence civic affairs, including community and environmental planning (Frank 2006).

Today, participation of younger generations in urban development planning is mainly applied for youth oriented public services such as the design of a neighbourhood playgrounds and elementary schoolyards. Despite this practice, young participants decide for youth and community specific concerns when they are given the possibility to decide on planning topics by themselves. "Youth chose to research and work toward solutions for diverse community concerns that included housing, graffiti, tenant-landlord problems, vacant lots, natural areas, toxic sites, library services, and drug and alcohol abuse" (Frank 2006, p 361).

Comparisons across the research sites detected a strong sense for social integration, freedom of movement, safety, and a varied environment, which are the most persuasive arguments to involve this target group in planning processes for

community issues. Priorities expressed by younger generations proof preference of interaction, greater social exchange, diversity, accessibility and autonomy. These are conditions for making cities more livable for *all* ages. Included in planning, participation of younger generations has potential to lead society toward the ideals of sustainable development (Frank 2006). As youth tends to rely more heavily on public services such as alternative modes of transport and access to public spaces their proposals have been proofed to tackle community livability, “improvements in public services resulting from youth participation […] had the potential to benefit other served populations such as low-income and elderly individuals” (Frank 2006, p 362)

4.2.3.1 Barriers

One of the main barriers of youth participation is planners’ limited knowledge of young people or experience working with them. Researchers detected little room for incorporating youth concerns in land use planning as processes in this specific realm show to be legalistic, reactionary and dominated by economic interests (Knowles-Yánez 2002). “The presence of adult-oriented institutions and powerful competing interests and adults’ lack of understanding of youth combined with other political, economic, and cultural barriers to restrict the occurrence and impacts of youth participation” (Frank 2006, p 353).

Besides structural barriers, scientists proof the societal view of youth as another source of barrier:

The developmental view. This position considers youth as not capable of participating in planning processes due to their insufficient level of knowledge, skills, attitudes, behaviors and social connections of adults as a result of their stage of psychosocial growth. This viewpoint considers adults to be more competent.

The vulnerable view. This position considers youth as less powerful, object of abuse by adults, which leads to the necessity of adult protection. It questions youth as being capable to participate as of their missing power and the risk of disenchantment once members experience reality of politics or even see their participation used as tool to advocate for stronger adults’ interests.

The legal view. This position assigns youth partial citizenship status as minors don’t hold the same rights compared to adults. Consequently, they should not be

given the same opportunity to influence community change. The educational benefits are the most important to this viewpoint.

The romantic view. This viewpoint privileges younger voices over adults' opinions as they are considered to hold values and capabilities such as creativity, curiosity, enthusiasm and concern for community and environmental concerns, that are distinct and even superior from adults (Baldassari, Hart & Lockett 1980; Checkoway, Pothukuchi & Finn 1995; Simpson 1997; Matthews, Limb & Taylor 1999; Francis & Ray 2002; Hill et al. 2004).

4.2.3.2 Results from youth participation

There are three different products, which can result from engaging youth in planning.

Generation of information about the community or environment. In this case the target group serves as a source of information, which can be a significant resource for community change. For example, when children in Italy surveyed their neighborhood, they identified the main problems as excessive automobile traffic and a lack of recreational areas (Salvadori 1997).

Raising awareness. Engaged participants hold diverse roles: the one of the informants is to raise awareness for planners or other deciders about a specific issue to be optimized. Second, the one of the multipliers, which evolves when participants communicate their findings to others and thus raise awareness in their community – possibly within the same age group. Awareness also rises within the engaged group themselves. Specifically, the participants gain knowledge about planning practices and community problems, which again gives participatory planning an educational character.

Recommendations and/or implementations. In three European countries, children were involved in neighborhood improvement projects. They valued communal spaces, and in Italy in specific, the children designed a pedestrian-oriented street. A school class in Finland along with neighborhood residents presented traffic safety findings that evolved into a citizens' initiative that received public funds (Horelli 1998; Frank 2006).

4.2.4 Cases of and about Participatory Planning

The following case studies show participatory planning in an urban context. At first, Freiburg im Breisgau is analysed, followed by a case of youth participation for building German municipalities.

4.2.4.1 The case of city district Vauban and Freiburg in general

Community participation led to the development of numerous urban planning projects in Freiburg. Following the works of Innovation Academy e.V., “a well-known example of this citizen participation in Freiburg is in the city district Vauban, which only came into existence as a result of intensive citizen participation”. The authors claim that community residents played an active role, especially during the 1970's urban renewal projects in the district of Freiburg, as well as during the development of the current urban perspectives of the city (ibid.). Ellis & Henderson (2014) state that the developments in the 1970’s started with the plan to pedestrianize the historic center of the city and the following decades witnessed the development of a network of cycle routes.

In another study, it was found that the Cycle Path Network Plan was incorporated into the traffic plan of Freiburg during the 1970’s (Beim & Haag 2011). The city council designed and approved the plan, thus cycling became a vital element of the transport policy (ibid.). Buehler & Pucher (2011, p 54) claim that “the early 1970s also saw Freiburg’s first integrated bicycling network plan and a new carfree pedestrian zone in the center of old town —the largest pedestrian zone in all of Germany at the time”. Citizen participation has been an integral part of Freiburg’s transport and land-use planning since the 1970’s – a groundbreaking development was how the city administration worked with the citizen groups to redesign Vauban into an environmentally friendly community (Buehler & Pucher 2011).

UN-Habitat (2013) claims that the urban planning projects within the Vauban community has witnessed significant levels of participation and engagement of the locals who help decide priorities and alternatives especially through the present-time Forum Vauban. It was found that “the Forum’s priority is to develop a sustainable city district in a participatory way which could become a model for further initiatives” (Sperling 2006, p 2). As part of the participatory process, Forum Vauban has brought together citizens, managers, financial experts, engineers,

architects and many other stakeholders. Citizen participation through general public activism, newsletters, workshops, as well as the communication of broad citizen participation within the 'planning that learn' principles are the major strategic initiatives used to realize the goals of the forum (Sperling 2006).

Various actors are involved in the participatory process, but three major stakeholders have been identified, which includes the following: the Forum Vauban - an association of local citizens acting as the body in charge of the social work within the district, as well as the legal entity of the participation process; the City Council Vauban Committee - this is the central platform for disseminating information, discussion and exchange of ideas, as well as decision preparations, although the city council makes the final decision; Project Group Vauban - responsible for the administrative coordination and monitoring of local authorities involved in the Vauban Project (Sperling 2006).

Through community participation, a crucial decision was reached in 1970 to develop Freiburg's first bike network plan (Buehler & Pucher 2011). Freiburg has since developed an extensive bicycle network. It was found that "one of the more interesting bike projects in Freiburg was the special addition of a bike path along the Dreisam River, connecting peripheral areas to the city-center" (Beatley 2000, p 174). As of 2007, the city has 410 kilometres of bike lanes (Buehler & Pucher 2011). Bicycle use which once accounts for 18 percent of all trips in 1976 has now increased to 28 percent (Beatley 2000). One of the biggest challenges of this plan is the insufficient bike parking places, although efforts have been made to address those issues by providing bike racks through the bike-and-ride-program, increasing the number bike spaces within the city, and converting the autopacking into bike-rack areas (ibid.).

In another case, a participatory approach changed the mobility situation in Freiburg. In a bid to restrict the use of cars and promote green modes in Freiburg, it was found that in 1999, there was a "land use plan with broad citizen participation – citizen's demanded more mixed use and dense development than the city administration had proposed" (Buehler & Pucher 2011, p 53). Over the last forty years there has been a strong tradition of negotiation and corporation among Freiburg's citizen groups, local businesses, and the city administration (ibid.). Accordingly, "public discourse, citizen participation, and cooperation paved the way

for a gradual change towards sustainability in Freiburg" (Buehler & Pucher 2011, p.53 cited Bratzel (1999)).

Since various stakeholders are always involved in a participatory project planning and implementation, the possibility of conflicts or disagreement cannot be ruled out. According to Buehler & Pucher (2011), the citizen groups had successfully influenced (through lobbying) the city council to restrict the use of cars to Freiburg's downtown (ibid.). This development received a lot of criticism, for example, owners of local businesses strongly opposed the idea (ibid.). It was found that "jointly, the city administration, citizen groups, and local businesses reached a consensus of banning cars from downtown and providing automobile parking garages along a ring road at the fringes of the car-free zone" (Buehler & Pucher 2011, p. 55 cited Bratzel 1999). The shows how public discourse, citizen participation and cooperation, as well as consensus decision making among stakeholders' help address the mobility issues in Freiburg.

The 2008 land-use and transport plans of Freiburg is the most recent, which focus on strengthening local neighbourhood service and commercial centers, mixing housing with schools, offices, restaurants, stores, and other non-residential land uses, as well as compact development along the light rail routes (Buehler & Pucher 2011). It was found that every stage of the plans was developed with broad public participation and an extensive citizen engagement that garnered the sustained inputs of 900 citizens contributing towards the development of this latest land-use plan (ibid.). The citizen groups found the initial draft of the land-use plan as proposed by the city administration to be too car-focused with low planned development densities. Accordingly, "in a second round the city and 900 citizens jointly developed land-use strategies and goals and developed a new draft of the land-use plan. This plan focused on higher density and more mixed-use infill development, had broad citizen support, and was finally approved by the city council" (Buehler & Pucher 2011, p 55).

To comprehend how urban planning works, we found that planning in German cities, such as Freiburg, happens on different levels (Beatley 2000). Two main types of plans are of crucial importance: "there is a citywide development plan (the *Flächennutzungsplan*), and then a more detailed development plan for specific districts or development areas within the city. This plan, the *Bebauungsplan,*

is binding on private landowners (and must be consistent with the citywide plan)" (Beatley 2000, p 57). The latter mechanism has brought about most of the urban planning developments in Freiburg (ibid.). This research emphasizes the importance of participation in planning. As such, "participation of all stakeholders, throughout the planning process, is needed in the development of mobility systems" (UN-Habitat 2013, p 108). UN-Habitat (2013) further claims that including the social facets throughout the transport project's lifecycle can result in sustainable end-users' satisfaction. Therefore, "the additional effort invested in social analysis can bring disproportionate returns: projects that are more appropriate, sustainable, safe and high quality, and that enhance community engagement and participation" (UN-Habitat 2013, p 107).

4.2.4.2 Case of Youth Participation in German City Planning

This subchapter first gives a general overview of the models of youth participation, followed by a case of youth participation in the planning of German cities. Researchers in the field of social sciences have developed different models/frameworks for the conceptualization and planning of youth participation in projects (Cahill & Dadvand 2018). One of the most used frameworks for conceptualizing and planning youth participation in programs is the 'ladder of participation' developed by Sociologist Roger Hart in 1992 (ibid.). Hart published a book on 'Children's participation: The theory and practice of involving young citizens in community development and environmental care' for UNICEF in 1997 (Fletcher 2008). This innovative and pioneering research has helped pushed the global movement for participation, providing required guidance, as well as the analysis and judgement of the merits and faults of many efforts (ibid.). The ladder of youth participation is one of the numerous vital tools that Hart's book provides.

Accordingly, eight hierarchical levels are been illustrated in Hart's (1992) ladder of participation (Cahill & Dadvand 2018). It was found that the "these ascending levels are represented as the 'rungs' of a ladder" (Cahill and Dadvand 2018, p. 244). The rungs of: manipulation (young people are manipulated), decoration (young people are decorated), and tokenism (young people tokenised) make up the bottom three rungs, which are labelled as 'non-participation', while the higher and probably more expedient levels of participation are the top five rungs, which consists of the following: young people assigned and informed; young people

consulted and informed; adult-initiated and shared decisions with young people; young people initiate and lead action; young people initiate and share decision making with adults (Fletcher 2008). The model below shows Hart's 1992 ladder of participation (Figure 10).

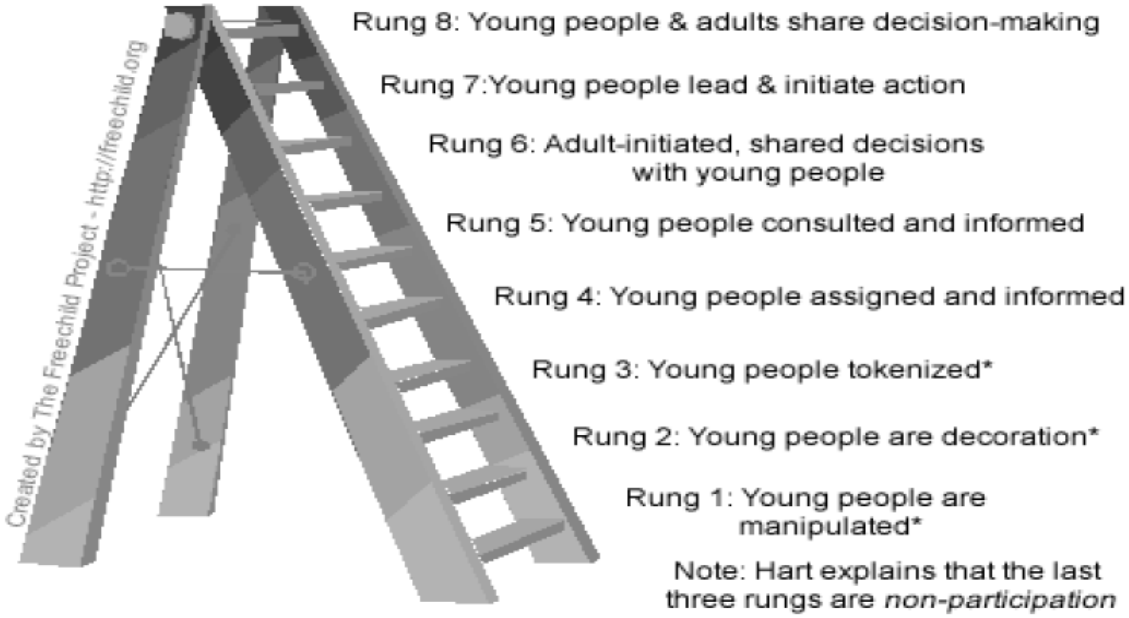


Figure 10: "Children's participation from Tokenism to Citizenship" (Fletcher 2008, p. 1 adapted from Hart (1992))

According to Fletcher (2008), the bottom three rungs, labelled as non-participation are described as follows: the rungs of manipulation, decoration, and tokenism of the ladder exhibits adultism, for example, manipulation occurs where adults use young people to push for something, for example, support a cause and then make-believe that the causes are influenced or inspired by young people; decoration occurs when young people are indirectly used to support or strengthen a cause, although in this rung of the ladder, adults do not pretend that the development or change was brought about by the young people; tokenism is when young people seems to be given a voice, but in reality what they do and how they participate in the project is been influenced by adults.

The top five rungs of the ladder reflect the degree of youth participation, for example, 'assigned but informed' is when a particular role is assigned to young people and they are well informed about why they are being involved in the project and how they should participate (Fletcher 2008). The community youth boards can integrate this rung of the ladder into their practices (ibid.). 'Consulted

and informed' occurs when adults design and initiate the projects, but the young people are the ones being consulted for information or advice on the project (ibid.). In this case, the young people are well informed about how their ideas will be implemented as well as the outcomes of decisions reached by adults (ibid.). This rung of the ladder can be incorporated into the programs and policies of the youth advisory councils.

The 'adult-initiated, shared decisions with young people' happens "when projects or programs are initiated by adults, but the decision-making is shared with the young people. This rung of the ladder can be embodied by participatory action research" (Fletcher 2008, p. 1). The 'young people-initiated and directed' ladder is the stage where the project is initiated and directed by young people, but adults only plays a supportive role in the entire process (ibid.). Accordingly, this rung of the participation ladder can be fulfilled by youth-led activism (ibid.). The 'young people-initiated, shared decisions with adults' occurs when young people initiate the projects, and both parties (young people and adults) share the decision-making (ibid.). It was found that projects in this topmost ladder of participation "empower young people while at the same time enabling them to access and learn from the life experience and expertise of adults. This rung of the ladder can be embodied by youth/adult partnerships" (Fletcher 2008, p. 1).

According to Cahill and Dadvand (2018), Hart's model provides knowledge on how participation can happen across a spectrum of agency. There occurs a discourse around step 7 and 8 of Hart (1992) ladder of participation. The topmost step – 'young people-initiated, shared decisions with adults' – is immediately followed by 'young people-initiated and directed' (Fletcher 2008). The controversy surrounding the debate is knowing the most meaningful level of participation (ibid.). According to many, both young people and adults get the most benefit when there is a shared decision making amongst both parties, while others believe that young people are empowered the most when adults do not influence their process of decision makings (ibid.). Regarding the influence of decision-making process, the reality of the fact is that, most cases do not exclude adults, but rather minimizes their roles to that of support (ibid.). Fletcher (2008) further argues that the discourse surrounding both arguments can be justified; therefore, it is up to each group to decide which process of decision-making best fits the needs of the groups.

However, due to the linear structure of hart's model, limitation occurs in a sense it signifies an intrinsic hierarchy of progression from the bottom three rungs of the ladder (non-participation) to the top five (full participation) (Cahill & Dadvand 2018). As a result, "critiques have argued that the model's presumed hierarchy disregards the contexts within which participatory activity occurs" (Cahill & Dadvand 2018, p. 244 referenced Lightfoot & Sloper 2001).

Following Cahill and Dadvand (2018), up to present time, different participation models for design, delivery, and evaluation of projects involving child/young people/youth participation have been developed. In most cases, these models tend to systematize participatory practices and frequently adopts hierarchical structures which fails to fully consider the socio-cultural circumstances in which youth participation takes place (ibid.). Consequently, Cahill and Dadvand (2018), draw knowledge from critical theory, post-structural and feminist approach, as well as citizenship research and youth studies to put forward a new framework that will inform actions to improve youth participation techniques. This new framework not only conceptualize youth participation in projects, but also provides information on planning techniques. It was found that "the framework directs attention towards the seven inter-connected domains of purpose, positioning, perspective, power relations, protection, place and process" (Cahill & Dadvand 2018, p. 243). Youth projects were used to demonstrate the framework and the analysis reveals that using the model helped to improve the vision, quality, and impact of the projects (ibid.). Figure 11 shows the model that re-conceptualises youth participation techniques towards a more informed approach.

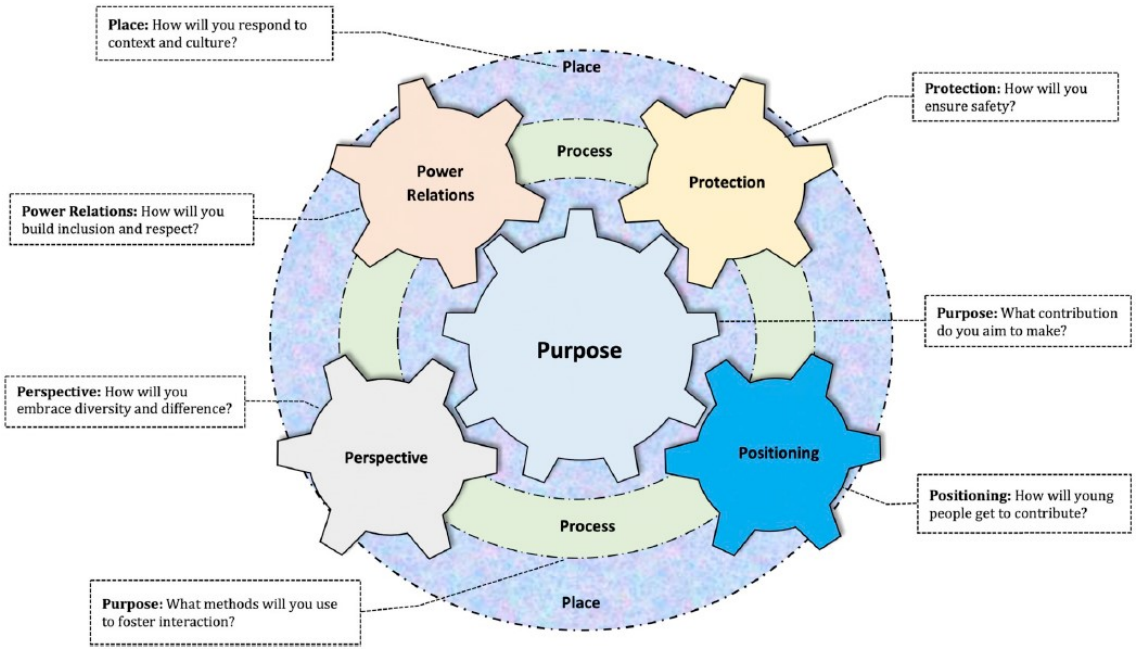


Figure 11: “A thinking tool for visioning, planning, enacting and evaluating youth participation” (Cahill and Dadvand 2018, p. 248)

A case of youth participation for building German municipalities

Here, we look at the case of ‘Adolescents in Urban Neighborhoods’ - a research program launched by the German Federal Ministry of Transport, Building and Urban Development in 2009 to promote the participation of youths in urban planning and decision-making process in Germany (Heinrich & Million 2016). It was found that, “in all, 55 pilot projects were funded and implemented across Germany to explore methods, instruments and strategies to involve youth in urban planning and decision-making processes between 2009 and 2013” (Heinrich & Milllion 2016, p. 56). The projects which occurred in three phases/sets of pilot projects: first pilot project was the innovative youth participation that occurred between year 2009 and 2010; the second pilot project was the youth funds that occurred between 2010 and 2011; the third pilot project was the youth-revived spaces that occurred between 2011 and 2012 (ibid.). The analysis of the research findings reveals that the 55 pilot participatory projects involving youth participations were grouped into scales, topics, and subjects, which serves as a tool for indicating when and how the participation of children and young people should take place in planning German cities (Million 2017). Table 2 shows the subjects and themes that have very strong relation to the interests and needs of young

people, as shown in the participatory pilot projects carried out by the youths themselves.

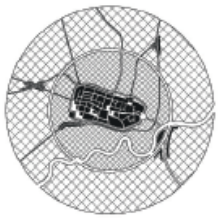
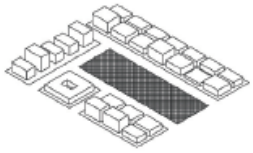
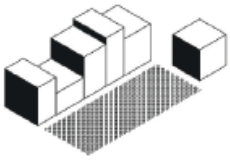
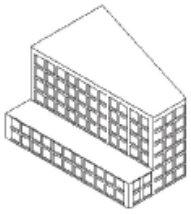
Scale	Tasks & instruments	Superordinate themes & questions	Concrete topics
City & region 	Land use plans City visions Guidelines Integrated development plans	•Mobility •Climate adaption •Demographic change •City marketing	•Public transportation •Cycle path networks •Greenways •Cross-generational communication
Neighbourhood 	Integrated action plans Master plans Urban renewal Subconcepts adressing specific topics	•Leisure •Education •Land-use conflicts •Conversion	•Sport facilities •Playgrounds & recreation areas •Schoolyards •Local networks
Public space design 	Binding land use plan Feasibility studies Re-development plans Urban design plans	•Areas for sporting activities & recreation •Qualification of public space •Events •Temporary uses & installations in public space	•Temporary constructions •Trend sports •Art, culture and music •Meeting points
Site & building design 	Project planning Modernisation Building alterations Utilisation concepts	•Vacancy •Refurbishment •Monumental protection •Re-use	•Self-employed construction work •New media •Transformation of youth facilities •Non-commercial art projects

Table 2: “Scales and themes of participation by children and young people in city planning and design in Germany” (Million 2017, p. 225)

According to Million (2017), “it explicitly shows where children and youth need to be involved in the processes of planning at several scales, including the region, city, or neighbourhood; public space design; or at micro-level of a building or site” (p. 226). The author further states that the table does not show the complete list of all scales, topics, and subjects for youth participation, as trends and developments continue to bring in new ideas regarding where and how participation is required (ibid.). For example, the current influx of refugees in Germany brings about new demands on planning urban development such as housing, mobility,

and so on (ibid.). Moreover, neither does the table indicate the level, form, or ladder of participation required for different scales of planning and design (ibid.).

5 The Case of Waiblingen

This chapter describes the results of current participatory planning projects in Waiblingen, Generation Y in Waiblingen, as well as the description of a proto persona gained from the information out of the questionnaire and a comprehensive overview of the contents obtained from the focus group interview.

5.1 Participatory Planning Projects

Waiblingen reveals to involve stakeholders in the planning process. The following paragraphs describe three representative fields:

5.1.1 STEP 2030

Regarding transport planning, the city of Waiblingen orients on the STEP 2030, the local urban development plan, which “lists goals and measures for Waiblingen in different areas and is the result of a strategic discussion of local politics and citizenship. It summarizes all municipal planning which also considers the overarching planning specifications. The derived measure planning reflects all essential municipal functions for a period of about 10 to 20 years and was developed in close cooperation between municipal politics, administration, external planners and the citizens” (Stadt Waiblingen 2019c). Thus, a certain extent of participatory planning can be seen from the STEP 2030 project.

In regards to transport and mobility issues, the follow up publication on the action plan of STEP 2030 reveals the city to aim on traffic relief especially for the districts of Hohenacker, Hegnach, Beinstein and Neustadt. Improvements of PT connectivity is considered as a separate measure. Besides, the city sums up actions fostering alternative modes of transport under the chapter *Neue Mobilität* – e.g. setting up a fully automated bicycle parking garage, funding city tickets for PT as well as the participation on a regional mobility management (see Appendix no. 4) and the bike sharing program (Stadt Waiblingen 2019b).

The city considers children and youth related issues in several measures of its plan thereby focusing on places of encounters, sporting activities or playgrounds. Active participation is apparent when it comes to demand query regarding sporting activities and needed space. Yet, in the field of mobility there is no such visibility of different target groups and thus no engagement of Generation Y.

5.1.2 Quartier 2020

With the project *Gemeinsam auf der Höhe* the city's municipality is engaging in the strategy *Quartier 2020 – Gemeinsam. Gestalten* with its neighborhood *Korber Höhe*. The Ministry of Social Affairs and Integration is responsible for the strategy on state level and supports Baden-Württemberg's cities, municipalities, districts and civil society actors in developing neighborhoods that are suitable for the elderly or older generations – also in the aspects of mobility supply. The aim is to design lively neighborhoods – e.g. in which people get involved, assume responsibility and support each other – while following a participatory approach in planning (Laun 2019; Stadt Waiblingen 2019c). Although this initiative shows to be a very suitable example of participation in planning. The strategic aim of the project also indicates that it targets other generations than Generation Y. Furthermore, it is not visible whether younger generations are involved in this local project.

5.1.3 MobilitätsWerkStadt 2025

At this point of research, the city of Waiblingen is in the application phase of a program called *MobilitätsWerkStadt 2025*, for which the Federal Ministry of Education and Research is responsible. Within this competition, up to 50 municipalities will test innovative mobility concepts from 2020. "The funding of systemic, transdisciplinary and implementation-oriented mobility research by the Federal Ministry of Education and Research (BMBF) is intended to show ways of making the complex mobility system more sustainable" (Federal Ministry of Education and Research 2019). Waiblingen's mayor aims on funding for the operation of an autonomous bus and corresponding test track to be established on (semi) public roads within the city – including the industry park *Ameisenbühl*. The University of Esslingen cooperates with the city and elaborates a first mobility concept for the autonomous bus operation (Hauck, Daudel & Zückmantel 2019). The presented mobility concept is based on the consideration of three possible routes and examines parameters such as acquisition and operation costs, costs for technical changes in infrastructure, geographical and technical point of problems as well as possible break-even points. First calculated ticket prices are set between 1.67 Euros and 4.02 Euros. Presumed the results of this project work is ground for the mayor's considerations, the authors assume that the city considers following three routes:

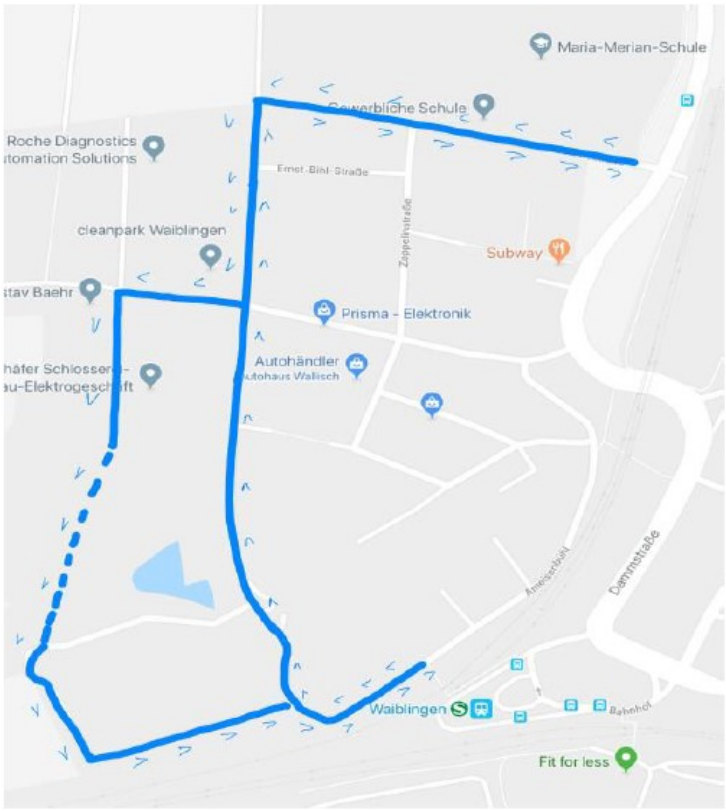


Figure 12: Route 1 through Ameisenbühl (Hauck, Daudel & Zückmantel 2019)

The first route runs through Waiblingen's industry park *Ameisenbühl*. The autonomous shuttle bus could pass the resident school center at *Steinbeisstraße 4* in Waiblingen, hosting diverse school types and field of studies offering various graduation levels. Direct neighbour is the vocational training center for young adults with mental or slight physical handicap.

Figure 13: Route 2 through the inner city of Waiblingen (Hauck, Daudel & Zückmantel 2019)

Figure 13 demonstrates the second route, which is mainly leading through Waiblingen's inner city. The yellow line describes the main route, whereas the blue and red lines represent possible expansions.

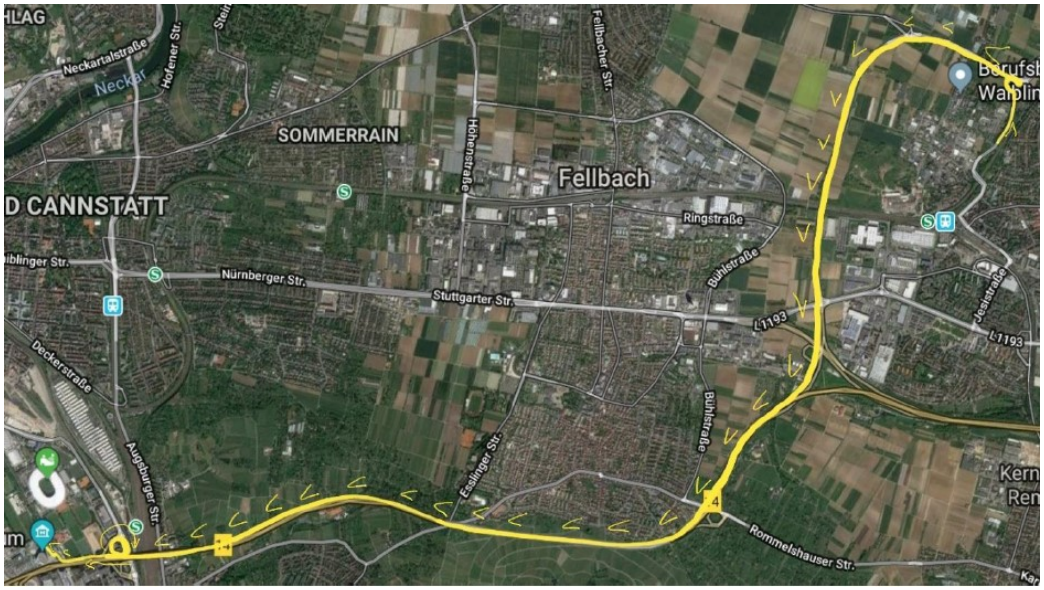


Figure 14: Route 3 from Ameisenbühl to the Daimler site in Bad-Cannstatt (Hauck, Daudel & Zückmantel 2019)

This route mainly aims to connect Waiblingen's industry park *Ameisenbühl* (soon hosting a new Daimler plant) with Daimler's main plant in Bad-Cannstatt. (Hauck, Daudel & Zückmantel 2019).

5.2 Generation Y

Waiblingen in general has 20 schools, separated in six elementary schools, five secondary schools, two high schools, two schools for special education and five vocational schools. The schools are spread out through all urban districts of Waiblingen (Stadt Waiblingen 2020). Secondary education can be acquired from other institutions outside of Waiblingen's city borders, such as in Schorndorf or Ludwigsburg. Due to the proper connection towards the metropolitan area of Stuttgart, tertiary education such as the University of Hohenheim can be reached in under an hour via public transport or car.

VfL Waiblingen is a multi-sports club, e.g. including gymnastics and soccer, especially with a big focus on youth sports (Städteverlag e.V. 2019). Everyday life activities takes place in several areas such as the inner city and Fronackerstraße, but e.g. for shopping, through the closeness of Stuttgart, many young people travel to Stuttgart for such activities.

Waiblingen's average age in 2017 was at 43,3 years, therefore being slightly under the federal state's mean and slightly above Stuttgart's average (Hochstetter 2015).

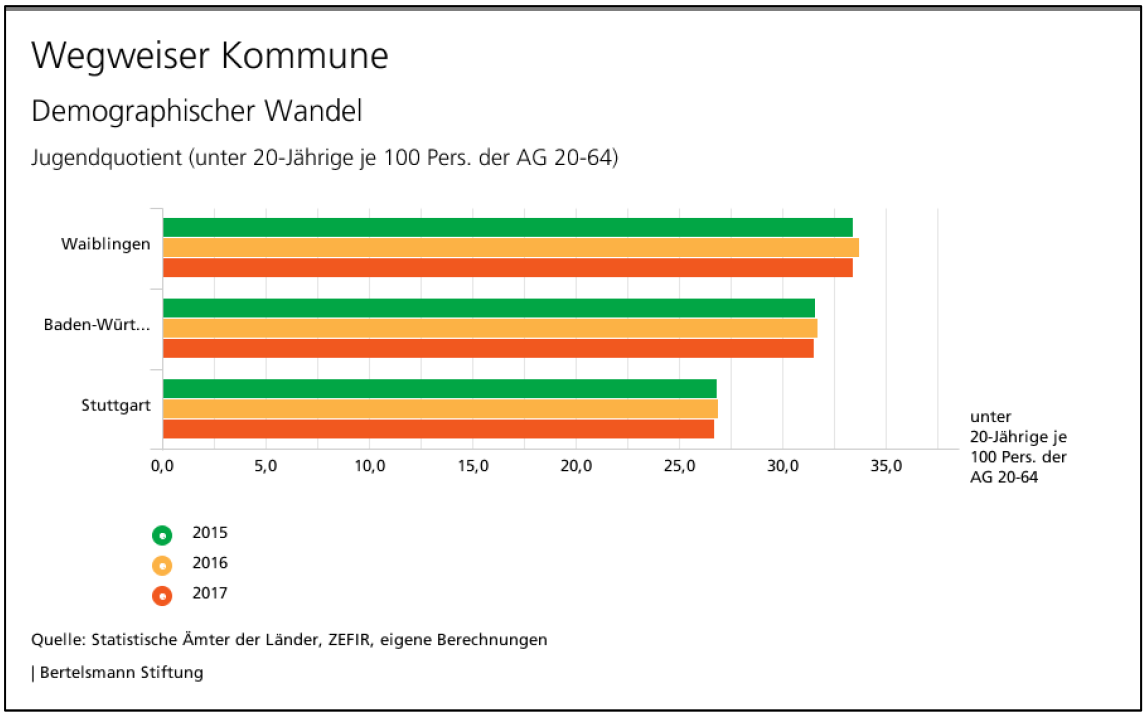


Figure 15: Youth ratio in Waiblingen compared to Stuttgart and the state of Baden-Württemberg (Bertelsmann Stiftung 2019)

As shown on figure 15, Waiblingen demonstrates to be the home of more young people than compared to Stuttgart or Baden-Württemberg's average (Bertelsmann Stiftung 2019).

Waiblingen's youth community council is a non-party committee, which represents the young people's (14-19 years old) interest towards the mayor, the municipal council and the city administration. It can be appropriately involved in planning and projects affecting youth interests in the municipalities. In addition, members can initiate their own projects or organize events. The Waiblingen Youth Community Council has existed since 1994 and is re-elected every two years (Stadt Waiblingen 2019a). The city points out: "Youth community councils are a widespread form of youth participation, particularly in Baden-Württemberg, which is characterized by continuity and commitment compared to other forms of participation" (Stadt Waiblingen 2019a).

The trend of motorized transportation shows in Waiblingen, too. As mentioned before, the trend of getting a new car in the age group of German 18-24 years olds stagnates on the same level. Such movement can be exemplified by schools in Waiblingen which started pilot projects either including the promotion of walking to school or encouraging parents to not drive their kids to school (Pöschko-

Kopp 2014; Striebich 2015). The response on these projects were mostly positive for the promotion of alternative modes of transport for going to school and enhancing education and awareness to get around safely in everyday traffic.

5.2.1 Proto Persona

As mentioned in chapter 3.3, the following subchapter presents a proto persona based on the findings of the questionnaire. Since the focus group contained 50 percent male and female participants, the research mostly does not differ between both sexes on these topics since the answers in the questionnaire did not differ much between both sexes. In order to present the findings, figure 16 displays an example of a Gen Y inhabitant of Waiblingen regarding their mobility needs and activities in everyday life. The findings about the general information, motivators, needs and behaviour are derived from the questionnaire, which was handed out before the focus group interview:

Isabelle Neuheuser

- 18 years old
- Lives in WN-Hegnach with parents
- 12th grade, finishing her Abitur this year at Staufer-Gymnasium
- Main form of transport: public transport
- Most travels are done for school, twice a week soccer training
- Information sources are friends & family, but also online newspaper
- Communication with friends via smartphone

Source: alamy.com

Motivators:

- Independent from parents
- Mobile on her own, parents cannot bring or pick her up from school since they both have full-time jobs

Needs:

- Quick and easy access to school as it is her main way for commuting
- Communication with others is very important
- Smartphone is an important companion in organising her everyday life (school timetable, homework assignments, looking up the connection of buses, …)

Behaviour:

- On good weather days, ride bicycle to school, otherwise by bus
- Discussions about topics, such as politics with parents and friends from school rather online

Figure 16: Proto Persona Isabelle Neuheuser

Isabelle is living with her parents in Waiblingen-Hegnach and goes to Staufer-Gymnasium Waiblingen for finishing her Abitur. Her main forms of transportation are public transport and personal bike. She doesn't own a car and holds her driver's license since a couple of months. She can use her family's car occasionally since her mother uses the car to commute to work, while her dad uses public transport and the bike as well to get to work. Reasons for using modes of

transport are mainly going to school, visiting friends and going to a sports club twice a week for her soccer training. Her parents pay for her VVS ticket without any discount on the ticket supported by the city of Waiblingen. Also, the *RegioRad* bike-sharing offer by *Deutsche Bahn* is familiar to Isabelle, despite crossing several drop-off stations on her everyday travels she did not consider using it as an addition to her transport portfolio.

Regarding communication, she mainly uses *WhatsApp* and *Instagram* for entertainment purposes and getting information during her bus rides. Otherwise she listens to music on Spotify while riding her bike or the bus back home from school. Other social media platforms are important, but they are mainly used at home and not during commuting, such as *Snapchat, YouTube* or *TikTok*.

For gathering information, Isabelle usually gets the news about Waiblingen through her parents, for instance if new roadwork is coming up on her regular way to school. Rarely, when gathering information about Waiblingen, Isabelle uses the online and print version of ZVW. Additionally, *Instagram* sometimes offers her information and up-to-date news by others. She likes to talk about her own ideas regarding politics and the current world affairs with her friends and family, rarely presenting them on paper or online, for example through *Instagram*.

5.2.2 Focus Group Interview

The researchers performed a focus group interview on 11th February with six participants between 17 and 22 years. Three participants were male, three females, none of them owning a car.

Figure 17: Meeting for the focus group interview on 11th February

One interviewee is a university student, another interviewee is currently doing an internship, the rest of the interviewees are currently attending secondary school. All of them are Waiblingen citizens. The focus group interview took place in the office space of the local group of the Green party in *Mayener Straße 24*, Waiblingen, began at 5:30 p.m. and lasted about one hour.

The questions were structured in three blocks represented in the structure of the following subchapters. The transcription in German language can be seen in Appendix no. 6.

In the first set of questions about political values, engagement and communication the group was asked (1) whether they feel that the *Fridays For Future* (FFF) movement stands for their generation, (2) if they would consider *YouTube* an adequate communication channel for addressing local topics to their age group, and (3) what they would like to change if they were the mayor of Waiblingen.

The second set of questions let the focus group participants describe their personal and general perception of mobility, more precisely about (1) what being mobile means to them, (2) how they perceive mobility in their everyday life and (3) how their ideal mobility situation in 5-10 years might look like.

The last set of questions of the focus group interview is focused on the participants' mobility perception in Waiblingen. The asked questions are about (1) how their overall satisfaction with their everyday travels, (2) whether sharing concepts are necessary and important for the city and (3) the renunciation of a personal car.

5.2.2.1 Environmental attitude and participation.

In the discussion about the FFF movement, the participants' opinions were contradicting. The group demonstrated a large approval towards the aim of the movement, it is considered the right goal. They all identify with the intention to protect the planet to have a (positive) future perspective at the first place. Consequently, they belief there should even be more efforts of demonstration and political side. However, the group revealed a critical view on members of their own generation: Criticism is directed at the "fellow travelers", who do not deal with the core matter of the FFF movement and are mainly participating at the Friday's demonstrations to have a reason to skip school. Female, 17 stated:

"Yes, [FFF] is fighting for a good cause, but there's this black and white issue. Some people go for it, some people don't go for it at all."

Male, 17 shared his opinion as well:

"It describes the generation very well because very few people actually engage with it."

Yet, the most common belief demonstrated during the interview is, that the movement has raised a broad awareness in society based on the public discourse that it initiated, which is considered as a very important and positive development.

When asked if this movement represents their generation, not all members agreed. Some even feel excluded by the movement based on its structure. One female participant e.g. feels too old to be joining these Friday's demonstrations, although she fully agrees to the matter. Others feel the movement to be elitist as most participants can afford to skip school. They are convinced that there are even more students, who can hardly afford to be absent from school but who stand behind the aims of the movement and are (often) missing the demonstrations. Overall the group agrees that the problem on political issues is that they feel confronted by too many issues, which need active support:

"That's the problem with political issues in general. Our generation has many issues it can stand for, it doesn't stand for just one. There is a huge political spectrum, an overabundance of issues [to be addressed] that this generation faces. So, I don't think that FFF [itself] can stand for our generation."

When the group is asked to consider whether this movement shows that the generation is dealing more strongly with *green* issues the agreement is predominant in the belief that FFF represents a future perspective that affects everyone. A strong discussion arose when a male member stated that other movements would have experienced similar situations if they had been organized in the same way – meaning skipping classes on Fridays. Others strongly disagreed and are convinced that FFF has a broad agenda based on its existential character (saving the planet as the ground for life), which cannot be applied to other topics (right-wing extremism, demonstration against right-wing).

5.2.2.2 Communication of political topics in social media

The group demonstrated to be very experienced in the use of social media and the purpose to be used. When asked if *YouTube* could be suitable to initiate a local debate the group denied. All members are convinced that certain social media channels can also be used for local (political) issues to be communicated or to initiate a debate. Quickly, the suggestion came up that *Instagram* would work easily for local topics to be communicated and made public on local (to regional) level because it is not only based on the automated function of suggestion such as given on *YouTube*. Plus, it can be published on short notice. They promptly discussed the account called *Waiblingen memes* which already accounts about 2.900 followers[1]. However, the group also sees the challenge for Waiblingen (and the use of *Instagram*) that most of the themes that work in other (possibly larger) cities might be supported through the proposal function, which is missing on this channel. They belief that Waiblingen is too small to ensure a broad dissemination. *YouTube* is considered a national to international applicable channel, meaning for issues that affect a very big number of people.

5.2.2.3 Engagement

Most members of the group argue that political engagement of their generation should happen because they would want to be able to shape Waiblingen more to their needs. Male, 17 explained:

> *"Because according to my needs, I want to do things in the city, have a drink, go shopping."*

If they are not more involved, future generation would want to move away. They see themselves as the citizens who will have to be taking care of community issues in the future. Thus, involvement is necessary to already educate youth today. Male, 20 states:

[1] Last checked on March 1st, 2020.

“Because we are the next generation. [...] when today's politicians are out, we just step in and have to get it done, so they should involve us now, to ensure that we have a better contact and reference to the issues than to devalue us before.”

On the other hand, a female participant specifically pointed out to be satisfied with the state of mobility offer in Waiblingen. She explicitly mentioned that the change in schedule for PT improved their use of PT. The participants were especially satisfied with the night schedule of PT and buses due to the change in the timetables (VVS 2019). Despite the improvement, backlogs were pointed out: Smaller city districts such as Klein-Heppach, Hohenacker or Korb are observed as being cut off in the evenings. For example, Klein-Heppach is not being served by bus between 8 p.m. and 12 a.m. during weekdays. Similar situation is discussed with Korb.

The group was asked to suggest what to change if they were in the position to be the mayor and make changes in mobility. Following suggestions were brought up:

- *Build more cycle paths*, and significantly improve existing services, explicitly on Bahnhofstrasse. It was suggested to make Bahnhofstrasse smaller/narrower for cars to increase road safety for cyclists.
- *Introduce car-free Sundays* while increasing PT service on these days.
- *Implement free public transport*.
- *A 365 € year ticket* with special allowance for socially disadvantaged groups of people.
- *Theft-proof storage facilities for bicycles*, especially for the city centre.

5.2.2.4 Perception of Mobility

First, the group was congruent about their personal perception of mobility and the factors to be considered to fulfil their mobility needs. Overall the main terms were short waiting times while switching modes of transport, comfort during the ride itself and its adjusting safety. Female, 22 shared her opinion:

"For me, being mobile means having short waiting periods. That I can get there anytime I want without having to wait half an hour."

Male, 20 stated in addition to Female, 22's statement concerning the comfort of travels on the bus:

> *"For me, comfort would also be an important factor. The seats in the bus are just plastic with a fabric cover. Yesterday I rode with a bus that only had plastic seats. So, I asked myself, 'What's the point?'. You can't increase the joy of riding a bus that way."*

Especially, regarding information the entire group seems to be on the same page. One issue that triggers a lot of discussion is the linkage of the regional trains, S-Bahn and buses.

It appears that buses in Waiblingen are on time most of the time, but the connection to the regional trains and S-Bahn is not very pleasant. The group agrees on the following statement, but is generally pleased with the public transport situation in Waiblingen:

> *"One should generally avoid the combination of the S-Bahn from Schorndorf and the bus to Waiblingen. The connection is simply bad: The bus would probably only have to wait a few minutes, but it always leaves when the S-Bahn arrives". [Male, 20]*

Secondly, the group agrees to the use of multimodal transportation for everyday traveling. Concerning trips within Waiblingen itself, most of the participants use their personal bike or walk, also to major transport hubs in Waiblingen, such as the train station.

The entire group mentions the running frequencies of public transport and the (dis-)comfort of biking in general, such as not feeling comfortable in the bus or safe riding and parking their bikes.

> *"I once had my bike parked overnight at the main station. Afterwards, it was not in one piece anymore." [Male, 20]*

Male, 17 and Male, 18 mentioned the *Radhaus* at the main station as well, which provides a safer environment for bike parking:

> *Male, 17: "The Radhaus that is now available at the station [is good]. But the train station in Waiblingen is really far out. Something like that is missing in the city centre.*

Male, 18: "This a good point. Because if I take the public transport somewhere and want to go on by bike, I want to be able to cycle back later."

Contrarily, their modal choices show that environmental and financial aspects are important when using their modes of transport.

Lastly, the group was asked to imagine how their mobility could look like in 5-10 years. The interviewers here provided a framework on how the future could look like, for example rising fuel prices which makes driving a car more of a luxury than necessity, sharing concepts in operations due to a progressive digitalisation. The discussion shows, that the participants still have an affection for the car, also that MIT will play a role in their mobility as well. From the discussion, it can be seen the wish for less cars and overall more sustainable modes of transport.

As the discussion went on, the participants were asked about their thoughts on the use of autonomous shuttles and their perception of autonomous driving. Five out of six participants are sceptical towards autonomous driving technology and expressed their doubts of feasibility especially addressing cybersecurity issues, protection of traffic participants and legal aspects in cases of accidents. They expressed the following:

Female, 22: "Well, I think it's a little scary, too."

Male, 17: "I think even if all cars are autonomous, it knows that in principle. If there are more AIs on the road, it will be better. I also believe that the problem with AI is the people, not the technology."

If these issues were solved and the technology is marketable, the group would use it. The group discussed these risks and argued for a framework which needs governmental regulations and must be developed to a degree in which no one is harmed or damaged by autonomous vehicles. The idea arose, that cyclists will have to be separated from autonomous vehicle traffic (or vice versa) by setting up fully protected bike lanes in order to reduce accident risk on both sides. As mentioned before, the group expressed doubts on business models where private parties (only) own (and might even be the operators of) autonomous fleets and could be able to dictate prices or even decrease transparency. Here as well, the government should have more power to regulate and enable mobility for all.

Some interviewees mentioned the expansion of the rail system or, more specific on the Waiblingen case, building a new elevated railway in the city itself, connecting the surrounding quarters with each other.

> *Male, 17: "I want to finally take the cable car from the city centre up to the railway station. The concept already exists."*
>
> *Male, 20: "But the concept is not green either."*
>
> *Male, 17: "As long as there are more people driving at shorter intervals, it is still worth it. If you have fewer cars."*
>
> *Male, 20: "Yes, but is it really worth it, a cable car? If the price of gasoline rises anyway, more people might switch to hydrogen or other technologies. Then it would be ok [to drive a car] again..."*

The group cannot decide whether alternative concepts of transport are suitable for Waiblingen. Especially autonomous driving appears as dreams of the future and cannot be imagined right now.

5.2.2.5 Mobility in Waiblingen

The participants perceive the general traffic situation in Waiblingen to be good, despite existing traffic issues (i.e. congestion) in some areas of the city and flaky announcements regarding the public transport. It appears that the participants know certain danger and unsafe points in the city of Waiblingen, but still got comfortable using their favourite mode of transport in certain areas. For example, riding the bike in the inner city, depending on the participant, is the most used alternative mode of transport.

> *"I'm actually satisfied too. I have the advantage that I live very centrally. In theory, I could walk anywhere I want. For me it wouldn't take so long. Or I could ride my bike. I often must go to Fellbach. There is a pretty good cycle path over there. Even though the traffic situation in Fellbach itself is very frightening. But for example, if you go by car, someone turns and you have parking lots left and right on the cycle path, I wonder who has thought of something like that. But otherwise, if I want to go somewhere else or go somewhere by public transport, then the connections are ok for me. It just costs me something." [Male, 18]*

Prices of public transport were discussed heavily and appear unfair from the point of view of the participants:

> *Male, 18: [...]. How the prices are put together I think it's crazy: If I have to take the bus within Waiblingen, which is only 5-10 minutes, it costs me 2,50 € for one ride, which is two zones. If I want to take the X20 to Esslingen, it costs me 2,50 €. I find that somehow strange from the ratio. To Esslingen ok, but within Waiblingen?*

Concluding, the participants have the perception that choosing their own mode of transport makes them more independent.

The interviewers asked each participant successively in order to get an answer from everyone on the last two questions of the interview guide, which caused also some smaller discussion amongst the interviewees.

Therefore, sharing schemes for Waiblingen were discussed next. It appears that sharing concepts rather are seen for fun than as an addition towards the mobility portfolio. The interviewers prompted the examples of *Lime* and *Tier* e-scooters as an addition towards the Waiblingen mobility portfolio.

> *Male, 17: "You don't need them here. They are quite bad for the environment. They're just there for fun and have a way too short lifespan and always [need] new batteries."*
>
> *Male, 18: "They should be abolished."*

Sharing is considered as a second or third option in order to be mobile in Waiblingen, e.g. for visiting friends and family. Contrarily, the group shifts towards the belief that more sharing vehicles, especially car sharing offers, might worsen the traffic situation in the city.

> *Male, 17: "If these were too good, it would make more pedestrians and cyclists change. The [current] car drivers would continue to drive their cars. That would cause even more traffic jams."*
>
> *Male, 20: "I don't believe that people would give up their car because of such offers"*

Using sharing concepts from the point of view of the participants really depends on where they live. One participant lives in Korb, which is a district of Waiblingen

in a hillier landscape and has to make more physical efforts to use the bike in order to get to the desired destination.

> *"But if [a sharing offer] was good, I would use it. [...] I'm not riding my bike to school right now, because I'm going down the hill first and then I'm going up on the other side. But when I'm going by bus, which in return is stuck in a traffic jam! If I had an e-bike station at Korber Höhe, I would just [...] ride down and ride back up again. I would really use that." [Female, 17]*

The last discussed question was regarding the renunciation of a personal car. Answers here were different since the participants had different perceptions on the car. Some said they would renounce completely, depending on their personal situation. Two of the participants said they wanted to own a car yet were conscious of the costs and its impacts.

> *“For me, this would be a good future for mobility: no more private cars, and yet one would always be available when you need one. There is currently no good offer in Waiblingen.” [Female, 22]*

Especially car sharing offers are seen by the participants as non-valid concepts as the shared cars might be dirty or unsafe due to accidents previous holders might have caused. Also, the accessibility and availability of the shared cars is an important issue, especially when it is needed urgently.

> *"I would love to own a car just because it's ... I don't have a driver's license because at some point I didn't feel like doing it anymore. ... With car-sharing, you always must ask yourself 'Is it there right now?' 'Where can I get it?'. With your own car, it's mainly parked outside your own door and you can adapt more quickly within the family. You don't have to look where the next car is, and it's still your own. You know what happens in your own car. You don't know that with car-sharing.” [Male, 20]*

The group overall plans to avoid owning personal cars as long as possible but does not show a complete renunciation to the concept of an automobile.

6 Analysis and Findings

The following chapter analyses the transcribed findings of the focus groups interviews. Scientific literature will also be considered for a comparison and endorsement of the findings.

6.1 Political Values, On- and Offline Participation

Several aspects regarding values and participation, e.g. through political activism and social media, are analysed in the following subchapters.

6.1.1 Environmentally Consciousness

The focus group interviewees demonstrated to be environmental conscious. Although being critical about the structure of the FFF organization and doubting the motivation of a part of the participating demonstrators. The FFF discussion revealed the least common denominator, which is the consciousness of the planet as being grounds for life and thus worthy to put more effort to protect it. Beyond the FFF movement, they considered environmental aspects e.g. in their choice of mobility for the future. Independently whether the car is still considered in their future vision of mobility or not, all members named that mobility needs to be or will be environmentally friendly. Furthermore, they neglect e-scooter sharing in Waiblingen among other reasons because of their short (battery) life duration and perceive these vehicles as being unsafe and thus incompatible for daily travel purposes.

6.1.2 Social Equality

A strong sense of social justice could be detected among most of the members when expressing their opinions on different topics: the suggestion to implement car-free Sundays and an increased PT service on these days immediately resulted in the discussion about the increase of workers and PT drivers. Affordability of mobility – indicated by the wish for a free PT service or a one-year ticket at a price of 365 Euros – further supports the finding of Waiblingen's youth to be well aware of economic mechanisms and existing social problems. When it comes to a concrete description of future mobility visions, the fear of an upcoming two-class society – the ones who can afford and the ones who can't – could be

detected. This was expressed when it came to the idea of privately owned fleets of autonomous vehicles, which could make owning a car obsolete. In general, most of the members' orientation is heading towards social equality and critical towards capitalism. For their future, the group sees the government to be regulating the mobility market better than it has been doing so far – derived from their experience with pricing and train network of the *Deutsche Bahn*. The vision of future mobility to most of the members of this group draws a picture towards a sustainable development driven by a government that regulates and ensures social justice.

6.1.3 Social media

The focus group pointed out a specific Instagram account called *Waiblingen. memes*. Posts of the account have a sarcastic to humorous character on local topics and express some form of critique. Figure 18 and 19 shows two recent posts, which thematize mobility related issues. The two figures display a *meme*, which can be defined as "an amusing or interesting item (such as a captioned picture or video) or genre of items that is spread widely online especially through social media" (Gruger 2020). At first, this is contradicting to the overall satisfaction of the focus group members with PT. Yet, the situation of the school bus was not explicitly discussed. Contrarily figure 18, is congruent with the focus group's belief that changing modes of transport, especially from S-train to bus is giving the students a very hard time. They often miss out their connections, most of them are forced to wait much longer than necessary.

Figure 18: @waiblingen.memes, “Every f***** morning the same...”, Instagram, 16th of January, https://www.instagram.com/p/B7XoOr-IoM6/

Figure 19: @waiblingen.memes, no title, 16th of February 2020, Instagram, https://www.instagram.com/p/B8n4lh0IZ53/

When looking at the two figures, research envisions memes as an expression of political criticism through satirical elements (Dean 2019; Plevriti 2014). For example, figure 18 demonstrates such satirical element. It shows an overloaded bus with people, yet the people using the bus rely on the public transportation to get to their desired destination. As Kulkarni (2017) shows in the study about the influential impact of memes on Indian political parties, memes might influence the decisions of voters, but overall shape the voters' opinions on certain topics. Female, 17 states that "*people must show humor*", whereas Female, 18 added to the statement:

> *"If memes are sent to others, they might start a discourse with other people." [Female, 18]*

The statements show that social media can be used for political activism, at best through a humoristic way, as the example of memes shows.

The interviewees did not mention any other social media outlets for political activism apart from Instagram. In political sciences, it is nowadays well known to use social media, such as Twitter and Facebook, for political discourse and during electoral campaigns (Masters, Macintosh & Smith 2004; Augustin & Schubert 2019; Ohme 2019).

6.1.4 Participation

Non-participation in community development is indirectly noted by the focus group interviewees. They interpret it as depreciation of the generation. Two of the interviewees indicated a current perception of adults about youth that makes them belief to be less valuable. This fact supports theory of the developmental and legal view about youth and proofs the social view as a possible existing barrier in Waiblingen. Several planning projects support this interpretation:

STEP 2030 shows younger citizens (or their parents) to be involved in planning in form of being informants e.g. for the demand of projects of children and youth specific sites such as playgrounds in neighbourhoods or sporting activities. Participation is also conducted in transport planning: public events are held to inform the population e.g. of the bypass road. Within this context, people get the possibility to exchange opinions and bring up own ideas or observations. Among other events the discourse in media represents the voices of these participants. As

these formats obviously fails to attract or raise attention to Generation Y, the Gen Y members miss out on the opportunity to raise their voices in these regards, and are consequently not involved in public discourse on (local) media.

The authors see indicators of extended participation practices: The *Quartier 2020* project shows Waiblingen to be experiencing further developed approaches of participation which could bear possibilities for younger generations to get involved. However, as it tackles mainly challenges for the elderly, this might be a reason for youths not to participate.

Looking closer through articles and the project paper about the autonomous shuttle bus, the authors detected a classical quantitative approach of planning for a visionary technology. This might miss out on the technology's complete potential to be a sustainable transport mode for Waiblingen. Participation exists in the form of the academic support of the University of Applied Science of Esslingen and its students who elaborated a mobility concept. Evolved from a dialogue between the project group and Daimler, the city might be more aware of the needs for the mobility of Daimler employees than for needs of other stakeholders of its community. The authors see a risk of the success of the project if the lack of acceptance, which could also be detected among younger citizens of the community is not actively being addressed. No documentation could be found, which indicates the city to be aware of possible special needs e.g. of the students and employees from the vocational training center, which might be different compared to the people working at Daimler. However, an autonomous people mover might significantly improve these people's daily mobility to and from school.

The discussion about the interviewees' suggestions for changes in Waiblingen's mobility shows how well the participants are informed. Besides the fact that they demonstrated to be experts in the field of PT service, some of them have already taken a critical and closer look at the concept of free public transport.

When talking about non-participation, Gen Y often gets the accusation of non-political engagement. The focus group interviewees did not seem to have disenchantment with politics. Most of the participant have attended an FFF event, as stated in the focus group subchapter. From the statements by the participants, research about the movement is still very early. Maier (2019) concludes that the online and offline discussion formed a movement which is represented by simple

and sometimes humorous messages during the demonstrations. The FFF movement has the potential for Gen Y to collect group identity through one specific topic (Brünker, Deitelhoff & Mirbabaie 2019). As Female,17 states during the interview regarding the question if Gen Y can stand for the FFF movement:

> *"[...] Besides, this is rather elitist. Most of those who take part in the demos can afford to be absent from school. But it shows [with pride] how cool our generation can be."*

FFF in this sense stands for the push of a generation towards the worldwide politics to act and change, building moral for themselves and standing up for their future needs (Reinhardt 2019).

6.2 Sharing Concepts and Autonomous Driving Technology

The sceptical attitude towards feasibility and sustainability of possible future car sharing concepts in Waiblingen demonstrated a rather negative connotation with the current car sharing concept of the city. However, the motivation to prolong the time frame of living without a car while considering car sharing among friends and families indicates ground for new but non-commercial car sharing concepts within the city such as peer-2-peer car sharing. New solutions will get even more important in the future, e.g. if the city might aim on a reduction of number of cars per inhabitants. Research and the focus group findings show that this generation opts for the use and/or buy a personal car once they settle down and have kids (Oakil, Manting & Nijland 2016b).

Five out of six participants are sceptical towards autonomous driving technology and future business models. This might be a first indicator for a questionable degree of acceptance among the citizens – also in regards to the upcoming people mover project – which might be an obstacle for the success and the use of an autonomous shuttle service in the city. The more people use the service the better the city would profit and raise acceptance. The example of the Bavarian city Bad Birnbach complements these findings. Riener et al. (2020) conclude that if all stakeholders take part in the process, the acceptance and technological improvements will be consistent. Participation on the development of a community-suitable operating/business model (by Generation Y members) has the potential to

raise not only the acceptance of this technology but meet so far undetected demands and thus result in a more feasible concept. This in return, could have positive economic impact for the city as an increase in users would increase turnover. Besides technology acceptance, the authors see another obstacle for success of the project in the calculated ticket prices per trip: The focus group discovered that part of its citizens are price sensitive, especially the ones that depend on PT services such as younger generations – this might also apply for the students and employees directly located at *Ameisenbühl* (Schulzentrum and Berufsbildungswerk), which in best case should be using the service.

6.3 Daily Mobility and Living Situation

The participants' everyday mobility is characterized by the multimodality of their trips. All of them use active modes of transport in combination with PT service. Differences could be detected in their motivation to use individual transport options. Female, 17 finds cycling exhausting and the last option of her choice. She prefers to take the bus or train and walking over cycling. Male, 20 on the other hand, prefers cycling and regards it as a comfortable variant of his mobility, which enables him to reach his destination on time. His view on the comfort of buses suggests that he expects more comfort from buses and trains than from cycling - if one pays, the person must be better off. For Female, 17 on the other hand, timing plays a more important role.

Figure 19 displays the everyday ways of the participants in Waiblingen. Each colour represents the way of one participant. Square points show their homes, the drop shapes show changes of mode of transport (e.g. walking to bus), pin points show their destination[2]:

[2] In order to protect the participants' privacy, the addresses on the map only show roughly their actual starting point.

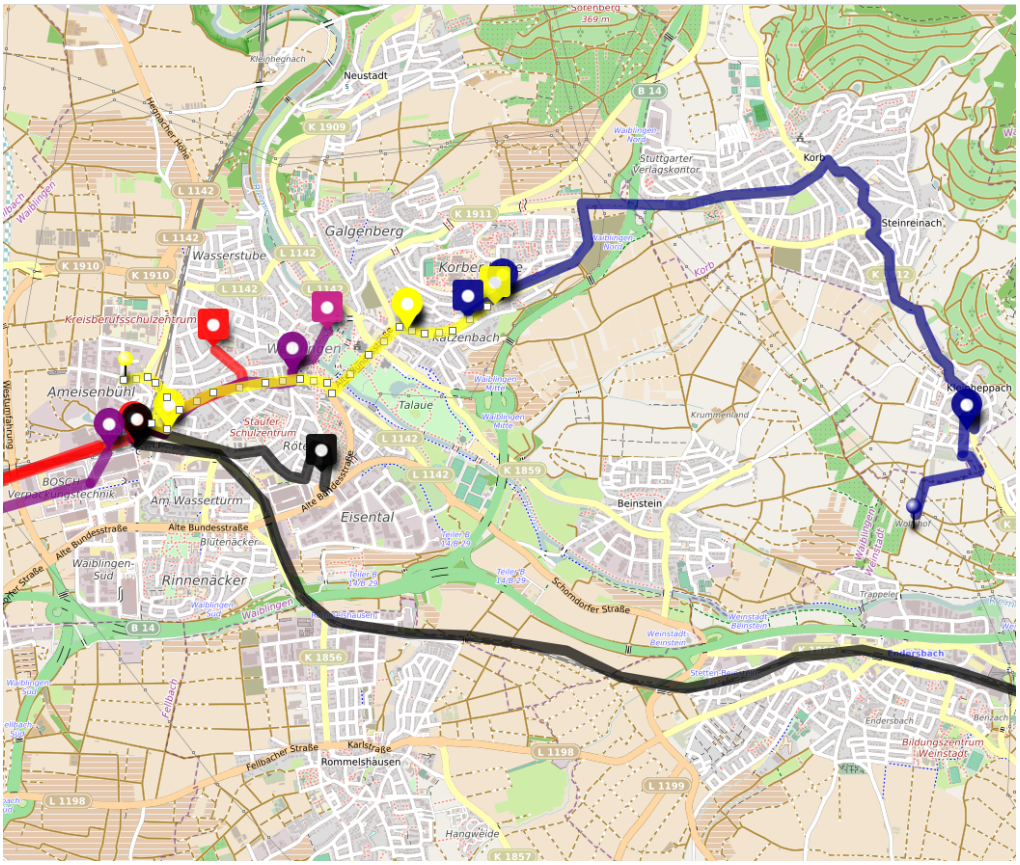


Figure 20: Commuting ways of the focus group participants within Waiblingen, created via umap.openstreetmaps.fr

The ways within Waiblingen are estimated to take about 15 minutes from house door to the main station and the city centre. It is estimated that in German metropolitan and rural regions, up to 15 percent of all students attending a secondary school, have a way longer than 45 minutes to get to school from door to door (Fokken 2018). This condition applies for half of the focus group participants, as seen in Figure 20 which shows the complete door-to-door travels of the focus group participants in order to get to their educational institutions.

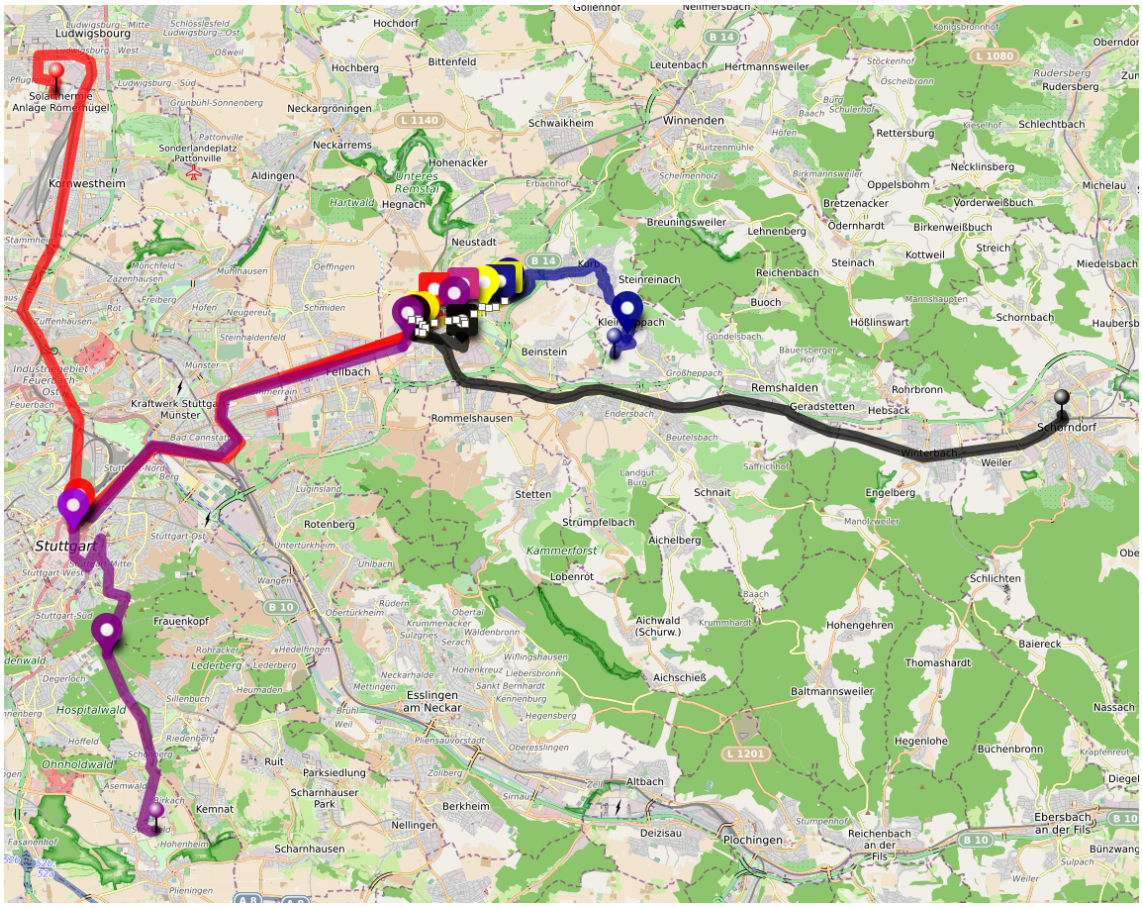


Figure 21: Whole commuting way of focus group participants, created via umap.openstreetmaps.fr

For example, the red line indicates the commuting distance from Waiblingen to Ludwigsburg located north from Stuttgart. The student has two options to get to school each morning: by bus and train or with an express bus from Waiblingen to Ludwigsburg, although more walking is needed. Overall, the ways take one-way from door-to-door up to an hour.

The participants mentioned that through their central living situation in the inner city of Waiblingen, their ways get shorter overall due to the closeness to the city. Female, 18 concluded this during the interview for all participants:

> *"I am completely satisfied. From home to Ludwigsburg to school, for example, I take the bus, if I miss it in the morning, I can walk to the train station and take a train or the Regio or another bus. Lately I even take the bus more often, because there are not so many traffic jams in Hegnach lately. But the possibility to choose freely with what you feel like, I think is great."*

Due to their experience of traveling and commuting in Waiblingen, the participants know which problems may occur in the morning and try to avoid them. Furthermore, it seems that the organisation of their own everyday travels is very important to them since they want to be independent from their parents and to arrive at the destination on time with the least amount of waiting times when switching modes.

Depending on their own situation, the participants would appreciate certain sharing offers in Waiblingen, as Female, 22 mentioned during the focus group interview:

> *"Yes, I would use such a concept if there was good car sharing offer. But I would not use a bike-sharing concept, because I have a bike myself. I find scooter-sharing unnecessary. […]"*

Research is, depending on the future behaviour of urban inhabitants also not agreeing on the future of sharing concepts in cities (Halfar 2018). As Ahrens et al. (2011) show in their study about future German mobility focusing on the youth, depending on the scenario, sharing schemes might be adapted by the whole population if the framework applies to their everyday needs. Therefore, it is difficult to generalise the acceptance of sharing schemes, which is when referring to the focus group depending on the living situation. For example, Female, 17 would use e-bike sharing since her place of living is rather suburban, Female, 22 on the other hand does not see the point as the concepts could congest the city even more.

Regarding renouncing a personal car, the group is sceptic about the feasibility for themselves. Despite the scepticism towards sharing schemes, the group sees potential in carsharing, rather than owning an own car. One participant stated that she only would get a personal car, if she got family in future:

> *"I find it relatively difficult to travel with prams in a bus. As a bus passenger I find that very exhausting [myself]." [Female, 17]*

The whole group agrees on this concept, making it situationally dependent. This development is underpinned by research as well, as McCarthy et al. (2018) and Oakil, Manting & Nijland (2016b) show in their studies. Public transport in younger ages is seen as a part of freedom which therefore is influenced by other factors,

such as a newborn own children and a potential new living situation with worse access to public transport.

6.4 Comparative Analysis Overview

The following table sums up the above elaborated findings of the analysis, comparing focus group against results from the literature review, followed by a short concluding remark.

	Focus Group	Literature Review	Conclusion
Values	The participants seem conscious about their environment and reveal a sense for social impacts on mobility considerations.	Frank (2006): youth are very much concerned about their environment, and thus feel very connected to their community. Banister (2008): sustainable mobility approach must take account of environmental and social concerns.	The viewpoints of the focus group participants seem to support the assertions of Frank (2006) and Bannister (2008).
Mobility Perception	Females avoid riding with the bike, prefer public transportation (PT). Males on the other hand see riding a bike as a comfortable alternative to PT or walking.	Banister (2008): walking, cycling and public transport are active transport, which are healthier than using the car. Jaffe (2013): In Germany, for example, the cycling gender gap does not really exist – the split is around fifty-fifty (50% male bike riders and 50% female bike riders).	In terms of mobility preferences, the focus group reveals that male participants feel more comfortable biking than female participants. Evidence in the literature claims a 50-50 split in terms of cycling and gender in Germany.
	No strong support for sharing services due to the following reasons: • The state (i.e. cleanliness) of the shared car could be upsetting. • Little availability in Waiblingen.	Geels, Kemp, Dudley, and Lyons (2012): "broader visions of 'sustainable transport' therefore exist, with people advocating transitions towards multi-modal transport, car sharing, automated people movers, or even suggesting that future systems may be characterized as 'after the car'" (p. 11).	We conclude that the impediments, such as those identified by the focus group participant, might hinder the acceptance of car sharing.

	Only one out of six shows progressive ideas of usage of autonomous vehicles. The participants seem: • Sceptical about the technology of autonomous vehicles. • Insecure due to cybersecurity challenges.	Garakani, Moshiri, and Safavi-Naeini (2018): "some potential consumers and corporate risk managers have expressed serious concerns over the cybersecurity of the so-called fleet of the future". Security challenges, such as unauthorised remote control or car hijacking could threating the acceptance of autonomous vehicle.	The opinions of the participants strongly support the evidence from literature. Without addressing security challenges, we assume a rather high non-acceptance of autonomous in the future.
	Future vision of mobility: • Electric cars. • Cars with alternative fuels. The car plays a role for their future. The necessity for a car is seen when settling down.	Geels, Kemp, Dudley, and Lyons (2012): the shift towards sustainable mobility includes use of electric and hybrid cars, and other clean-fuel vehicles such as biofuel, hydrogen, etc. Yet, issues, such as spatial and geographical problems still exist.	Following Geels et. al (2008), it is very unlikely that the introduction of clean-fuel vehicles would address spatial and geographical problems such as the place and role of the car in the natural and built environment.
Mobility in Waiblingen	Participants claim to be satisfied with the PT service. They seemed dissatisfied with: • Bike lanes. • Bus connections to smaller districts. • Price of PT service (within Waiblingen). • Switching modes (S-train and bus).	Banister (2008): the sustainable mobility approach for cities should focus on factors such as modal shift (walk and cycle), accessible and affordable public transport, greater efficiency in the transport system, etc.	In line with sustainable mobility approaches, the opinions of the focus group participants support that of researchers such as Bannister (2008).
	Changes if they were the mayor: • Make *Bahnhofstraße* narrow for cars and wider for cyclists. • Second *Radhaus* in the inner city. • Car-free Sundays.	Banister (2008): planners of sustainable mobility put people in the centre of the planning – pedestrians and cyclists are placed at the very top of transport modes hierarchy, while car users are placed at the bottom.	The implementation of 'people-focused' urban projects such as cycling lanes, the use of street as a space, follows the tactical urbanism approach (see appendix 5). Moreover, the viewpoints of the participants support the assertion of Banister (2008).

7 Discussion

This chapter first discusses the limitations of this research, followed by some recommendations for future actions towards the engagement of Generation Y inhabitants in Waiblingen. Lastly, recommendations for future research are presented.

7.1 Limitations of Research

During the process of conducting this research, some limitations occurred and are presented as follows.

First, only one focus group interview was considered for this research work: our first intention was to conduct two different focus group interviews with the age groups of one group having participants from 14-17 years and another group from 18-25 years. Due to time constraints, this was not possible. This would have allowed for a comparison of two groups to know whether the mobility and participations of the groups differ, since the younger group is rather more dependent on their parents yet starting to be more mobile on their own. Therefore, other participants, especially ones belonging to the younger Millennials category (14-17), are excluded in this research. When looking at the definition of Millennials by Dimock (2019), more of the actual participants fall into this category. Yet, for simplification purposes they are all categorised as members of Generation Y.

Secondly, gaining participants for the focus group interview was rather difficult, on one hand due to the Christmas breaks in schools and the lack of feedback in the public newspaper. The Youth Council was contacted twice – first directly and second approach over Iris Förster – but did not respond to the enquiry to either participate on the focus group interviews nor to support the search of participants by finding interested persons within their circle of friends. The researchers in the end needed to rely on contacts by Iris Förster. From the researchers' perspective, they could have tried to gain participants themselves which is very difficult since no incentives could have been offered (Puchta & Potter 2004).

Thirdly, the focus group itself was rather biased as 4 of the participants knew each other before and are friends with each other. This circumstance did not matter during the interview, from the view of the researchers, since the discussion went on smoothly and lots of data was collected. Additionally, all focus group members live approx. 10 minutes by bike to the city. Most of the participants even

live in the inner city of Waiblingen, where walking as a mode of transport often is considered. Due to the small group size, other districts of Waiblingen, such as Hegnach, Korb or Bittenfeld, which are parts of the City of Waiblingen are not taken into consideration in this research. The distances from the mentioned districts is by public transport at least 20 minutes into Waiblingen. Therefore, this circumstance needs to be taken into consideration as Generation Y inhabitants of these districts might be more dependent on their parents or have their own car when holding a driver's licence and being over 18 years old.

Lastly, the focus group lacked diversity regarding the participants occupations. Most of the participants are currently finishing their secondary education, one is studying at a major university. The focus group findings could have gained more diversity of opinions from participants which do other occupation such as vocational training and need to commute by car in order to get to their workplace.

7.2 Recommendations for Actions

The results of the analysis in chapter 6 show different fields of actions where Generation Y might be included in the participation process for developing sustainable mobility.

7.2.1 Youth participation needs improvement

The focus group interviews have demonstrated that the ideas of sustainable mobility is clearly existing. However, the city of Waiblingen misses out on a platform for these voices and ideas to be heard. The classical planning procedure seems to clash the target group's mind set and strengthens the generation gap in city planning within this realm.

Generally speaking, the authors allocate participatory practice with younger citizens in Waiblingen in accordance with Hart's ladder to rung 5 (consultation and information) and 6 (adult-initiated and shared decisions with young people) – based on the fact that a Youth Community Council already exist. Although it could (theoretically) represent a high degree of involvement, also in mobility issues, it misses out on making use of its influence in regards to mobility development. If local infrastructure, PT offers and other services aims to meet the needs of the

citizens, the degree of involvement needs improvement. Consequently, if participation of youth is given possibility in mobility planning in the future it either needs to be given a different priority within the Youth Community Council agenda or measures for direct involvement of planners and citizens. In any case, if the degree of youth participation is to be raised the authors recommend to aim on practices that allow younger citizens to:

1) be consulted and informed (which would be the minimum level),
2) be encouraged to share decisions with adults or even
3) let them lead and initiate action for change.

The following subchapters will give some examples.

7.2.2 Mobility shift and sharing economy

To some extent, the authors see Waiblingen to be car dependent. As we are calling for alternative modes of transportation to be implemented, the question remains: 'what good use could we put the already existing cars in Waiblingen to?' According to Kopp, Gerike, and Axhausen (2015), car sharing could significantly contribute to a sustainable urban mobility system. It was found that "a user-friendly car-sharing supply can lead to complete elimination of car-ownership in private households as well as satisfying and compensating the need to own a second or third car" (Kopp, Gerike & Axhausen 2015; Harms 2003; Steding, Herrmann & Lange 2004). We recommend the implementation of the peer-to-peer (P2P) carsharing in Waiblingen. Through P2P, existing car owners can rent out their vehicles to others for a short period of time. If such opportunities are created, people who do not own a car but really desire one could easily rent from car owners instead of buying. Another alternative is carpooling with friends or interested passengers instead of driving alone. Traffic congestions and emissions could be reduced through carpool, which means using fewer cars to carry more people.

7.2.3 Autonomous shuttle bus service

One of the most feasible projects to make use of a participatory approach is the (supposedly) upcoming implementation of the autonomous shuttle bus in Waiblingen. So far, mainly classical transport planning approaches have been con-

ducted in order to ensure robust operation in the first place. At this point the authors see several uncertainties, which have an impact on the success and sustainable implementation of the project:

1) The citizen's acceptance of the technology and its integration in their (daily) mobility choices.
2) The target groups' acceptance of ticket prices as they are already considering prices of today's PT as excessive (for service within Waiblingen). The city might need to sharpen the target group (and their demands) which is supposed to use the people mover within Ameisenbühl and the inner city. Visitors, employees and residents e.g. might be incentivized when leaving their car at a public parking garage and taking the people mover to the inner city. One possibility could be to turn the parking ticket into a people mover pass.
3) Measures (complementary to the above mentioned) to reduce private cars within the city and *Ameisenbühl* such as e.g. significantly raise the resident parking within the inner city and reduce parking space are – as for now – to be expected to be unpopular for car drivers and will have to be tackled by awareness campaigns.

Therefore, the authors suggest the city to involve its citizens – especially the digital natives who are supposedly more technology affine – and give them the chance to participate on the operating/business model as well as corresponding awareness campaigns for the people mover. The authors are convinced that common acceptance will be raised if the business/operating model meets the locals' demand. Thus, two fields are considered as feasible for a higher degree of participation of Generation Y in the development of the shuttle service:

1) Elaborate on perceptions, expected demand and barriers of the people mover for possible target groups around the suggested routes such as e.g. inhabitants and visitors of the inner city, students and employees of the schools at Ameisenbühl.
2) Given the fact that people at Korber Höhe have already engaged in the project *Quartier 2020* and are seeking for new solutions in the realm of supply and mobility for the elderly, especially members of Generation Y could be engaged to define demand and derive suggestions for further

operation models for the people mover. Experiences from this pilot could encourage considerations for a long-term-solutions for smaller districts of Waiblingen, that experience decreasing PT service especially at night during the weekdays.

In both cases the degree of participation can be allocated to rung 6 and above assumed that the decision on how to organize and gain the information etc. is left to the participants themselves. The responsible planners working with the young citizens should at best assist when being asked and give a comprehensive understanding of the general problem/the initial situation, to ensure a certain degree of orientation for and empowerment of the participants. Based on their findings the city planners and deciders could be encouraged to co-create new operation and/or a business models, which would even raise the degree of participation.

7.2.4 The growth of information technology, current trends in digital transformation and new communication channels as enablers for youth participation

As more generations of young people continue to embrace new media (i.e. social networking services or social media), issues regarding community transport could be discussed on those platforms, and subsequent approaches could be debated. Through social media platforms, youths can discuss ways of channelling their ideas into action and seek for an opportunity to be involved or participate in the transport planning process. Understanding how young people use social media (such as Facebook, Instagram, etc.) as communication tools plays a central role for authorities seeking to effectively communicate, inform, and engage with them. Thus, the authors see that the city of Waiblingen can incorporate the knowledge and capability with digital communication into their mobility measures in several degrees of participation:

1) *Informant and consultation:* When the aim is e.g. to gain mobility demands from digital affine target groups over digital channels, Waiblingen could opt for testing its survey design by members of the local Generation Y and incorporate their feedback.
2) *Adult-initiated, but shared decisions:* Targeting digital affine citizens of Waiblingen when e.g. raising awareness to certain (mobility) issues, makes the use of new channels necessary. A participatory approach could

be conducted in the form of co-creating campaigns with young citizens especially for environmental issues (see also next subchapter) and might in the best-case end in a very targeted communication. The youth should be considered to be given a framework in which they can decide in cooperation with planners/decision makers and be guided/empowered by the adults who advocate for their ideas in the corresponding departments.

7.2.5 Building a bridge between local and global challenges could help facilitate youth participation

To fast raise awareness about a local issue such traffic congestion in a community or city, it is important for people, youths in particular, to also see the problem from the perspective of the popular global challenges like climate change. In the case of Waiblingen for example, it is important for youths to understand how sustainable mobility initiatives for local environment could help address global issues like climate change. When youths understand this, it will be easier to raise awareness and call for their participation to address those issues. The authors can see this circumstance in the case of FFF, a movement which is rapidly gaining global support.

7.3 Recommendations for Further Research

This research paper covered a very narrow field of research which, during the process itself, showed several questions to remain unanswered. The following research design could have been suitable as well and might be considered in future research.

First, the direct observations of areas around schools, sporting activities and youth centers or the main station in Waiblingen in order to gain quantitative data and a detailed description of the direct environment of mobility. Since pupils have a different living places, each everyday mobility is engaged differently by them, for example one mainly drives by bike, whereas another one usually walks or takes public transport. Therefore, to get hold of more variety in the data, future research could exemplarily do such research in cooperation with schools or sport clubs.

Secondly, asking young people at Bahnhofstraße and/or the city's train station about their degree of satisfaction of bus and train service, asking for a prompt idea of improvement and problems. Such method is called *Vox pops* and provides quick access to information (Kleemans, Schaap & Hermans 2017). This approach might have elaborated on data about the perception of Gen Y of Waiblingen's PT offer which could be quantified more than the information gained through the given approach of this paper. Additionally, this method could achieve a more diverse sample of interviewees, such as heritage, personal background or current occupation, which this research did not cover.

Instead of doing a focus group interview, as a third approach, semi-structured interviews with students could have been conducted. This method would have given another direction in the research as the interviewee would have gotten more into a narrative mood rather than discussing with others. Semi-structured interviews could also provide a deeper and more reflected view of certain personal perceptions and views regarding mobility and values.

Lastly, this research could have profited of expert interviews with planners since they might be able to give insights to their current state of participatory planning and gaining information on the hurdles. For the case of Waiblingen, several questions might raise to experts:

- Why has youth not yet been more actively involved?
- Why are these projects not as visible to the public?
- Are there only few / a small group of young people being involved such as the local youth council?

8 Conclusions

How can Waiblingen build on the data set derived from questionnaires and a focus group, which is this work's heart piece, to engage local Generation Y members in the development of sustainable mobility? And why is Generation Y relevant when it comes to increasing a city's livability?

According to Frank (2006), certain barriers, such as the developmental, vulnerable, legal, and romantic views appear as stumbling blocks for planners to involve youths in the planning process. Despite those societal barriers, literature review has demonstrated by evidence and arguments that youths are capable to participate in the community planning practices beyond taking on the role of an informant for the demand and design of playgrounds or sporting activity sites. Cases of youth participation have proven that involving youths in the community planning process could help with, but not limited to the following: generate more information on issues about the community or environment; raise awareness for planners on how a planning process could be optimised; successfully implement projects through talent building.

The case of youth participation for building German municipalities develops a tool, which shows when and how the participation of children and young people should take place in German city planning (Million 2017). The case study shows mobility issues to be a subject of interest when youths were given the opportunity to be involved in the planning process. More important, numerous European cases detect a strong sense of younger citizens for social integration, freedom of movement, safety, and a varied environment. Preferences expressed by younger generations are conditions, which could make cities more livable for *all* ages and have the potential to lead towards sustainable development, also/or especially in the aspect of future mobility.

A first research of articles in local and regional media shows Waiblingen's younger citizens to be missing out on the public discourse. Although, the city seems to be actively engaging its younger generations in other ways – mainly established in the form of the Youth Community Council. As for mobility issues, which the public discourse has shown to be a predominant aspect of urban development, the Youth Community Council doesn't seem to be involved, which

leads to the assumption that Waiblingen misses a platform where younger generations are given a voice or the possibility to engage.

The analysis of the questionnaire and the focus group findings proof Waiblingen's Generation Y members (1) to have a strong sense of the environmental impacts of certain mobility choices such as e-scooters, (2) to have a solid understanding of social justice, which appeared when suggesting future changes in mobility such as pricing or business models of autonomous vehicle fleets, (3) and demonstrate a critical view on capitalism. They wish for the government to regulate the future system of mobility better than it does today. Local members of Generation Y appear to be experts in the field of organizing everyday mobility around public transport and other active modes of transport, while short waiting times, information flow and multimodal offers are key factors to influence their degree of satisfaction. They are predominantly satisfied with public transportation service in Waiblingen and could address pain points very specifically: reliability of information on train station and VVS App, switching from S-train to bus (or vice versa).

This research uses theoretical knowledge – we refer to articles by Frank (2006); Banister (2008); Geels, Kemp, Dudley, and Lyons (2012); to name but a few– to complement the results of the focus group. The authors of this research study chose to use those theoretical concepts as a tool to open up what we found out from the focus group interview. The results of the focus group reveal the values, mobility perception (in terms of sharing services, autonomous vehicles, future vision of mobility), as well as the mobility desires of Waiblingen's Generation Y members. The focus group also reveals that the promotion of sustainable mobility is key and could be done through establishment of improved cycling lanes, ensuring accessibility and affordability of public transport, to mention but a few. The works of researchers such as Banister (2008) further complements those viewpoints by claiming that sustainable mobility should be always put people in the center of their planning and be visioning on cities.

Finally, to further answer the question on how Waiblingen can build on the data set derived from the questionnaires and a focus group, which is this work's heart piece, to engage local Generation Y members in the development of sustainable mobility, we would like to point out that the results of both the questionnaires and

a focus group led us to propose recommendations, such as: how youth participation could be improved; how the growth of information technology, current trends in digital transformation and new communication channels could serve as enablers for youth participation; feasible projects that matters within Waiblingen, for example, autonomous shuttle bus service, and sharing services (peer to peer carsharing and carpooling). Most importantly, this research study provides fresh knowledge on Generation Y's capabilities when involved in the planning process of urban mobility.

Appendix

Appendix no. 1

Overview of traffic and mobility measures in Waiblingen (Stadt Waiblingen 2019b)

A Städtebau und Verkehr		Fachbereiche
A 1	Ortsentwicklungsplanung	90-94
A 2	Wohngebietsentwicklung-Innenentwicklung vor Außenentwicklung	61-1
A 2.1	Beinstein 4000 – Wohngebietsentwicklung	90
A 2.2	Bittenfeld – Wohngebietsentwicklung: Schließung von Baulücken- Entwicklung FNP	91
A 2.3	Hegnach – Wohngebietsentwicklung	92
A 2.4	Hohenacker- Wohngebietsentwicklung: Bauland für junge Familien – Schließung von Baulücken	93
A 2.5	Neustadt- Wohngebietsentwicklung: Kompakte Ortschaft- Nutzungskonzepte Leerstand u. Baulücken- Entwicklung FNP	94
A 3	Quartiersentwicklung Waiblingen-Süd	61-1
A 4	Entlastung OD Hohenacker -Neustadt / Ostanbindung Hohenacker/Neustadt	61-1
A 4.4	Entlastung OD Hohenacker -Neustadt / Ostanbindung Hohenacker/Neustadt	61-1 und 93
A 4.5	Entlastung OD Hohenacker -Neustadt / Ostanbindung Hohenacker/Neustadt	61-1, 66-7 und 94
A 5	Entlastung Ortsdurchfahrt Hegnach	61-1
A 5.3.1	Verlängerung Westumfahrung Waiblingen	61-1
A 5.3.2	Errichtung von Schallschutz an der Neckarstraße	61-1
A 6	Förderung des ÖPNV	61-1
A 7	Stadtbahnlinie Ludwigsburg-Waiblingen	61-1
A 7.3	Stadtbahnlinie Ludwigsburg-Waiblingen	61-1
A 8	Gewerbegebietsentwicklung	61-1 und WTM
A 8.2	Umstrukturierung Gewerbegebiet Horgenbach	91
A 8.3	Entwicklung von Gewerbegebieten Hegnach	92
A 8.4	Stärkung des Gewerbestandorts Hohenacker	93
A 8.5	Kompakte Entwicklung des Gewerbegebiets Neustadt Entwicklung Dienstleistungszentrum „Bahnhof“	94
A 9	Förderung neuer Wohnformen und Einsatz regenerativer Energieformen im Wohnungsbau	61-1
A 9.3	Förderung neuer Wohnformen und Einsatz regenerativer Energieformen im Wohnungsbau Hegnach	60-2
A 10	Verbesserung der Verkehrssituation	61-1
A 10.1.1	Verkehrsberuhigung Beinstein	90
A 10.1.2	Parkierungsuntersuchung Ortskern	90
A 10.2	Verbesserung der Verkehrssituation Bittenfeld: Schillerstraße -Parkierungskonzept – Gestaltung Ortsdurchfahrt	91 und 61-1
A 10.3.1	Verkehrsberuhigung Hohenacker Straße Hegnach	61-1
A 10.3.2	Gestaltung der Ortsdurchfahrtsstraße Hegnach	61-1
A 10.4	Verbesserung der Verkehrssituation Hohenacker: Ortsdurchfahrt- Verkehrsberuhigung -südl. Ortseingang	93 und 61-1
A 10.5	Verbesserung der Verkehrssituation Neustadt: beruhigte Ortsdurchfahrt- Ortseingänge	94 und 61-1
A 11	Umgestaltung der Ortsmitten in den Ortschaften	
A 11.1	Attraktivierung Rathausplatz Beinstein	90 und 61-1
A 11.2.1	Umgestaltung Ortsmitte Bittenfeld: Kleewiesenbach Dorfplatz – Umnutzung Scheunen	91 und 61-1

Januar 2019

Appendix no. 2

Questionnaire

Angaben zur Person			
Geschlecht			
Alter			
Beruf			
Name der Arbeitsstelle/Schule/ Hochschule			
Mobilität			
Du besitzt ein …	☐ Auto ☐ Fahrrad ☐ (E-)Roller ☐ ..... (eigene Angaben)		
Welches ist das Verkehrsmittel, das Du am meisten nutzt?	An einem Wochentag: ☐ Auto ☐ Fahrrad ☐ Öffentliches Verkehrsmittel	Am Wochenende: ☐ Auto ☐ Fahrrad ☐ Öffentliches Verkehrsmittel	
Welches alternative Verkehrsmittel nutzt Du?	Für welchen Zweck?	Wie oft am Tag?	Wie oft in der Woche?
Nutzt Du digitale Plattformen, wenn Du mit den öffentlichen bzw. alternativen Verkehrsmitteln unterwegs bist?	☐ Nein	☐ Ja	
	Grund:	Bitte benenne:	
Ist Dir bekannt, dass Waiblingen ÖPNV Tickets bezuschusst?	☐ Nein ☐ Ja, es ist mir bekannt. ☐ Ja, ich nutze das Angebot.		
Das Bike Sharing Programm „RegioRad"…	… ist Dir bekannt.		Du hast es selbst schon genutzt.
	☐ Ja	☐ Nein	☐ Ja ☐ Nein

Kommunikation

Ich nutze täglich	☐ WhatsApp ☐ Instagram ☐ Facebook ☐ SnapChat ☐ Twitter ☐ Youtube ☐ Andere:			
News über Waiblingen erfahre ich …	Aus der Zeitung		Im Internet oder Social Media	Über Aushänge	Persönlich
	☐ Print	☐ Online	Bitte benenne:	Bitte benenne:	Bitte benenne:
Ideen präsentiere ich am liebsten …	☐ Online/Social Media Bitte benenne:		☐ Persönlich Bitte benenne:	☐ Auf Papier	In Kombination:
Über Themen, die mich interessieren diskutiere ich in der Regel …	☐ Online/Social Media Bitte benenne:		☐ Persönlich Bitte benenne:	☐ Auf Papier	In Kombination:

Feedback

Vielen Dank fürs Ausfüllen des Fragebogens!

Die Daten werden ausschließlich für dieses Forschungsprojekt verarbeitet. Während des Fokus Gruppen Interviews sind sie ein Teil der Grundlage für mögliche Fragen und/oder Diskussionen. Namen werden nicht genannt.

Bitte sende das Dokument sobald wie möglich zurück an bernerp@stud.hfwu.de. Danke!

Appendix no. 3

Interview guideline

LEITFADEN FOKUS GRUPPEN INTERVIEWS

Zeit (in Minuten)	Thema und Fragen	Methode
	VORSTELLUNGSRUNDE	
5	Studenten und Projekt(-ziel)	Power Point
5	Teilnehmer (Name, Alter, Beruf)	

Zeit in Minuten	Thema und Fragen	Methode
15-20	**WERTEVORSTELLUNGEN, ENGAGEMENT & KOMMUNIKATION**	**Explorativ**
	Steht die „Fridays for Future" Bewegung für Generation Y/Millenials?	
	Prompts: - Ist es ein Hype? - Ist es eine repräsentative Bewegung, die zeigt, dass Umwelt/Klima immer bedeutender werden für diese Generation (und nachkommende)? - Die Bewegung hat keinen Bestand, weil…	
	Zur Wahl des EU-Parlaments ging ein Video eines Youtubers viral, der dazu aufrief die CDU nicht zu wählen. Es schienen insbesondere junge (künftige) Wähler angesprochen zu werden. Diskussion fand auch „offline" (altersübergreifend) statt.	
	- Eignet sich Youtube, um seine Ideen und (politische) Meinung kundzutun und Gen Y/Millenials für Waiblingen einzubinden? - Welche weiteren Kanäle würden sich Eurer Meinung nach dafür eignen? - Wo diskutiert ihr Themen in/aus/über Waiblingen? - Würdet ihr (Eure) Ideen z.B. für Waiblingen ausschließlich online	
	Generation Y/Millenials machen in WN „nur" 13 % der Bevölkerung aus. Warum sollte Waiblingen junge Bürger trotzdem aktiv in der Gestaltung der Stadt einbinden?	
	Prompts: - Warum nicht? - Wie sollte das aussehen? - Reichen Euch Infoveranstaltungen aus, ?	
	Wäre ich Bürgermeister, würde ich an der Verkehrssituation in Waiblingen folgendes anders machen…	
	Prompts: - Was würden GenY/Millenials verändern? - Straßen beruhigen. - Fahrverbote aussprechen. - Mehr Straßen bauen.	

Zeit in Minuten	Thema und Fragen	Methode
15	**VERSTÄNDNIS VON MOBILITÄT**	- Sätze ergänzen lassen ggf. kurze Diskussion durch Rückfragen des Moderators - Stichwortartige Dokumentation auf Flip Chart
	Mobil sein heißt für mich …	
	Prompts: - Stichworte: Bewegen, Reisen, Vernetzen, … - Bewegung/sich physisch bewegen - Hat „mobil sein" ausschließlich etwas mit physischer Bewegung zu tun? - Vernetzung / sich digital mit anderen austauschen/sich organisieren	
	Mobilität im Alltag bedeutet für mich / ich verstehe unter Mobilität im Alltag…	
	Prompts: - schnell mit dem Auto von A nach B zu kommen - im Stau zu stehen - zu Fuß/mit dem Rad/mit dem Bus in die Schule/zum Arbeitsplatz zu kommen - meinen Weg mit unterschiedlichen Transportmitteln zu gehen - ich nutze digitale Plattformen, um meinen Weg zu planen	
	Eine ideale Mobilität in 5 Jahren / 10 Jahren, sieht für mich so aus…	
	Prompts: Was macht eine ideale Mobilität aus? (Faktoren: shared, digital, electric) - Das Auto wird immer noch eine/keine wichtige Rolle spielen, weil… - Mobil sein wird nicht/umweltfreundlicher sein, weil… - Es wird keine/weiterhin Staus geben, weil…	

Zeit in Minuten	Thema und Fragen	Methode
10	**MOBILITÄT IN WAIBLINGEN**	**Explorativ** - Stichwortartige Dokumentation auf Flip Chart
	Mit der Verkehrssituation (meinen alltäglichen Wegen) in Waiblingen bin ich zufrieden/unzufrieden, weil…	
	Prompts: - Was stört am meisten? (Was sind die aktuellen Probleme der Zielgruppe?) - Wird das Problem optimiert bzw. adressiert?	
	Könnte durch autonom fahrende Busse die Mobilität in WN nachhaltig besser gemacht werden? (Staus & Durchgangsverkehr reduziert, Menschen mit weniger Autos an Ihre Ziele gebracht werden…)	
	Prompts: - Was haltet Ihr von autonomem Fahren? - Welche Schwierigkeit seht ihr in WN? (Vorausgesetzt, die Technologie funktioniert zuverlässig)	
	Ich halte „Sharing" (in WN) für …	
	Prompts: - … wichtig, weil sie die Verkehrssituation in Waiblingen verbessern. Worin genau liegt das Potenzial (in WN)? - … nice to have, leider ohne große Wirksamkeit, weil… - … unnütz, weil…	
	Ich könnte mir vorstellen künftig auf ein eigenes Auto …	
	- zu verzichten, weil… - nicht verzichten zu können, weil…	
	Wenn es entsprechende Services/Lösungen für Mobilität gäbe, würdet ihr dann immer noch ein eigenes Auto fahren?	

Appendix no. 4

Waiblingen's engagement in regional traffic and mobility management

Waiblingen is part of the *Regionale Mobilitätsplattform*: the *Verband Region Stuttgart* signs responsible for this project, which aims to optimize traffic – including public transport (PT) – in a radius of 15 km around the city of Stuttgart with the help of real time data. Goal of the project is to achieve an efficient regional traffic management as anchored in the "ÖPNV-Pakt 2025" (Verband Region Stuttgart 2019). PT improvements are one part of the projects measure package. As such, Waiblingen is determined as an important point of mobility offers, a transfer point, with special offer standards that are supposed to be uniform throughout the region. The aim of creating a network of mobility points to improve mobility without building new transport routes (Verband Region Stuttgart 2019).

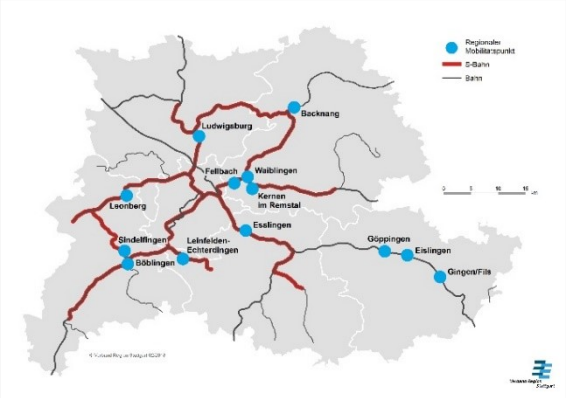


Figure 22 Mobility points in the region of Stuttgart (Source: Region Stuttgart, 2019)

Appendix no. 5

Tactical Urbanism

Tactical urbanism is defined as “an approach to neighbourhood building that uses short-term, low-cost, and scalable interventions and policies to catalyse long term change” (The Street Plans Collaborative 2016, p. 11). It is also known as urban prototyping, planning-by-doing approach, a DIY urbanism (ibid.). It is a flexible approach. The following characterizes tactical urbanism approach:

a) Encourage people to work together and strengthening relationships;

b) Deepen understanding of the needs of local community or users;

c) Widen public engagement, for example, enables feedback to be expressed using demonstrated preferences instead of stated preferences alone;

d) Inspire action and devise project implementation strategies;

e) Draw attention to the perceived limitations of a project in order to explore alternative approaches (The Street Plans Collaborative 2016).

Appendix no. 6

Transcription focus group interview from 11th February 2020

Interviewees: Lasse, Anna, Jan, Jule, Charlotte, Mathis

Interviewers: Niklas Schöllhorn, Pamela Berner

Observer: Ayotunde Stephen Shittu

WERTEVORSTELLUNGEN, ENGAGEMENT & KOMMUNIKATION

FRAGE 1

Steht die „Fridays for Future" Bewegung für Generation Y/Millenials? [Min. 18:00]

Jan: „Ja, sie steht für uns."

Jule: „Ja, [FFF] kämpft für eine gute Sache, aber da gibt es halt dieses Schwarz-weiß wieder. Es gibt Leute, die gehen darauf ein, die anderen gehen gar nicht darauf ein. Sie steht nicht für die Generation, sondern nur für einen Teil davon. Das ist das Problem an politischen Dingen im Allgemeinen. Unsere Generation hat viele Themen wofür sie stehen kann, sie steht nicht für nur eines. Es gibt eine politische Bandbreite/ein Überangebot an Themen [die anzugehen sind], mit der sich diese Generation konfrontiert sieht. Daher finde ich nicht, dass FFF [allein] für unsere Generation stehen kann. Außerdem ist das eher elitär. Die meisten, die an den Demos teilnehmen, können es sich leisten in der Schule zu fehlen. Es zeigt [mit Stolz] aber wie cool unsere Generation sein kann. Auch wenn viele immer sagen ‚wä'. " [ab Min. 19:28]

Jan: „An FFF sieht man, dass sich mehr Leute mit der Thematik auseinandersetzen und somit ein Diskurs entsteht." [20:27]

Lasse: „Es beschreibt die Generation sehr gut, weil sich die wenigsten, die sich an den Demos beteiligen, damit auseinandersetzen. Derselben Kritik [Ignoranz, Untätigkeit, etc.] standen aber auch frühere Generationen gegenüber."

Wart ihr denn schon mal auf einer FFF Demo?

Lasse: „Ja, mit der Schule."

Charlotte: „Nein. Ich fühle mich dadurch nicht unbedingt repräsentiert. Ich stelle mich da nicht hin, weil ich nicht mehr zur Schule gehe und damit eine der ältesten wäre. Ich fühle mich dafür echt zu alt.“

Zeigt die Bewegung, dass sich die Generation mit „grünen“ Themen stärker auseinandersetzt?

Es spaltet sich in zwei sehr gegensätzliche Richtungen. Es herrscht Uneinigkeit ob das Konzept so viel Erfolg gehabt hätte, würden die Demos samstags stattfinden. Zustimmung herrscht darüber, dass FFF eine Zukunftsperspektive darstellt, die alle betrifft. Daraus – und mobilisiert wegen des „Schulschwänz-Charakters“ – eine starke Zustimmung erfährt, die es für andere Themen (Rechtsextremismus, Demo gegen rechts) so nicht geben würde. Die Schule freitags zu schwänzen zeigt eine indirekte Kritik an der Politik, die Wichtigkeit und macht auf Gen Y und deren Belange aufmerksam.

FRAGE 2

Zur Wahl des EU-Parlaments ging ein Video eines Youtubers viral, der dazu aufrief die CDU nicht zu wählen. Es schienen insbesondere junge (künftige) Wähler angesprochen zu werden. Diskussion fand auch „offline“ (altersübergreifend) statt. [Min. 26]

(Eignet sich Youtube, um seine Ideen und (politische) Meinung kundzutun und Gen Y/Millenials für Waiblingen einzubinden? Welche weiteren Kanäle würden sich Eurer Meinung nach dafür eignen? Wo diskutiert ihr Themen in/aus/über Waiblingen?)

Lasse: „Nein, *YouTube* eignet sich nicht dafür. Eine Message über *YouTube* kann nur deshalb funktionieren, weil eine große Masse daran teilhat und sich damit identifizieren kann. Der Algorithmus schlägt das Video entsprechend vor und das wiederum erzeigt den viralen Effekt. Der Kreis in Waiblingen ist für *YouTube* einfach zu klein, um die automatische Vorschlagefunktion über sich arbeiten zu lassen. Man muss explizit danach suchen.“ [ab Min. 26:05]

Was würde sich denn eignen? [Min. 27:00]

Jule: „Wenn dann eher Insta, weil es schneller publiziert wird.“

Jan: „Ich denke, die meisten Themen auf Insta, die in anderen [möglicherweise größeren] Städten funktionieren, haben auch hauptsächlich wegen des Algorithmus Erfolg.“ [Min. 27:42]

Waiblingen sei zu klein, um eine Verbreitung sicherzustellen. Allerdings stimmt die Gruppe einheitlich zu, dass Instagram die einfachste Form wäre, um politische Themen in und von der Stadt zu kommunizieren und regional zu machen.

Jule: „Leute müssten Humor zeigen. Kennt ihr Waiblingen memes? [andere nicken] Das ist witzig und jeder kennt’s.“

Anna: „Wenn Memes an andere geschickt werden, dann könnten diese ja wiederum einen Diskurs bei anderen Leuten anfangen.“ [Min. 28:40]

FRAGE 3:

Generation Y/Millenials machen in WN „nur“ 13 % der Bevölkerung aus. Warum sollte Waiblingen junge Bürger trotzdem aktiv in der Gestaltung der Stadt einbinden? [Min. 29:00]

Lasse: „Weil wir sonst ausziehen.“

Mathis: “ Weil wir die nächste Generation sind. Weil wir später ihre … wenn die heutigen Politiker draußen sind kommen halt wir und müssen was hinbekommen, deshalb sollten sie uns jetzt einbeziehen, damit wir einen besseren kontakt und Bezug zu den Themen haben als uns vorher schon abzuwerten.“ [Min. 29:23]

Warum sollte die Generation im Bezug auf Mobilität involviert werden? [Min. 30]

Lasse: „Weil ich nach meinen Ansprüchen die Stadt nutzen kann, was trinken gehen, shoppen gehen kann.“ [Min. 30:18]

Jule: „Ich wüsste jetzt nicht, wo ich zu dem Thema mehr involviert werden möchte. Ich finde, der Öffi-Verkehr funktioniert eigentlich ganz gut.“

Jan: „Jetzt nach den Fahrplanänderungen fahren vor allem nachts deutlich mehr Busse.“

Grundsätzlich scheint eine Zufriedenheit unter den Jugendlichen bzgl. des ÖPNV Angebots (besonders nach der Fahrplanänderung) zu herrschen. Die deutliche Steigerung der Nachtbusse konnte besonders punkten. Allerdings weisen die Jugendlichen auf die schlechte Anbindung an die kleineren Stadtteile hin: Insbesondere Kleinheppach scheint am Wochenende zwischen 20-24 Uhr nicht angebunden zu sein. *[Eine Prüfung zeigte aber, dass der Fahrplan eine 30-Minuten Taktung zwischen Kleinheppach und Waiblingen bis Betriebsschluss vorsieht.]* Nach Korb fährt ab 20 Uhr nur noch die Buslinie 209 über die Korber Höhe.

Mathis: „Möchte man Sonntag früh nach Hohenacker fahren, kann man entweder um 8 Uhr oder um 10 Uhr fahren und ist entweder Stunden zu früh oder viel zu spät da."

FRAGE 5

Wäre ich Bürgermeister, würde ich an der Verkehrssituation in Waiblingen folgendes anders machen…

Charlotte: „Mehr Fahrradwege bauen, existierendes Angebot stark verbessern – explizit an der Bahnhofstraße. Die Straße müsste kleiner und enger für Autos gemacht werden, um die Verkehrssicherheit für Radfahrer zu erhöhen."

Mathis: „Ich würde autofreie Sonntage einführen. An diesen Tagen sollten die ÖPNV Verbindungen erhöht werden."

- ➔ *Die Gruppe bedenkt aber auch hier den Nachteil für die Menschen, die an solchen Tagen mehr arbeiten müssten.*
- ➔ *Finden einzelne radikal.*

Lasse: „Kostenlosen ÖPNV einführen."

Jule: „Wenn was kostenlos ist, wird es nicht wertgeschätzt."

- ➔ *es herrscht Uneinigkeit über die Wertschätzung des ÖPNV und folglich dem Effekt, allerdings gilt der kostenlose ÖPNV als würden sie sich das aber für die Zukunft wünschen.*

Lasse: „Dann lass es ein 365 Euro Jahresticket sein, das für sozial schlechter gestellte Personengruppen bezuschusst wird."

Jan: „Ich würde viel mehr diebstahlgesicherte Abstellanlagen für Fahrräder bauen– insbesondere für die Innenstadt.“

VERSTÄNDNIS VON MOBILITÄT

FRAGE 6

Mobil sein heißt für mich… [Min. 35:56]

Kurze Wartezeit

Charlotte: „Für mich heißt mobil sein, kurze Wartezeiten zu haben. Dass ich halt zu jederzeit hinkomme ohne eine halbe Stunde lang warten zu müssen.“ [Min. 37:03]

Zuverlässigkeit der Verbindungen

Die Teilnehmer sprechen mehrere Minuten über Zugausfälle und die Schwierigkeit sich darum organisieren zu können (siehe nächster Punkt). Sie wollen sich keine Gedanken machen wollen ob sie pünktlich ankommen oder überhaupt ankommen.

Informationsbereitstellung (am besten in Echtzeit)

Die Gruppe bemängelt einstimmig, dass die Ansagen und Informationsanzeigen nicht rechtzeitig oder gar nicht informieren.

Bequemlichkeit

- **Zustand der Busse** wird bemängelt.
  Mathis: „Für mich wäre Bequemlichkeit auch noch ein wichtiger Faktor. Die Sitze im Bus sind eigentlich nur noch Plastik mit dem Stoffüberzug. Gestern bin ich mit einem gefahren, der hatte dann nur noch Plastiksitze. Da hab ich mich dann auch gefragt ‚Geht’s noch?‘ dadurch kann man doch nicht die Lust am Busfahren steigern.“
- **Verbindungen von und nach Stuttgart** wird positiv hervorgehoben, insbesondere durch die Fahrplanumstellung, vor allem mit dem Bahnangebot sind die Teilnehmer zufrieden (Wege von und nach Stuttgart)

Sicherheit beim Parken: die Gruppe besprach den Zustand der Radabstellmöglichkeiten insbesondere in der Innenstadt. Die Teilnehmer empfinden die Anlagen aktuell als nicht sicher, was sie in der Entscheidung der Wege bzw. des Transportmittels beeinflusst. Die Teilnehmer sind gut informiert über das Abo-System und zum Teil schon angemeldet. Sie finden es toll, dass

man immer einen Stellplatz hat, der dann auch noch das Rad vor Witterung und Diebstahl schützt.

Mathis: „Ich hatte mal mein Fahrrad über Nacht am Bahnhof stehen. Das ist jetzt nicht mehr ganz.“ [Min. 39:00]

Lasse**: „**Das Radhaus, das es jetzt am Bahnhof gibt [ist gut]. Aber der Bahnhof ist in Waiblingen halt echt weit draußen. Sowas fehlt in der Innenstadt. […] Momentan ist es keine gute Idee von draußen runter zu fahren. … Grade kannst du dich kostenlos anmelden und hast bis Mitte des Jahres einen Stellplatz.“

Jan: „Das finde ich einen guten Punkt. Denn wenn ich den Öffis irgendwo hinfahre und mit dem Rad weiter möchte, dann will ich nachher wieder mit Rad zurückfahren können.“

FRAGE 7

Mobilität im Alltag bedeutet für mich …

Multimodal unterwegs sein: Bahn und Bus in Kombi mit Laufen oder Radfahren. Drei der sechs Teilnehmer benutzen täglich die Bahn für ihre Wege, zwei den Bus, ein Teilnehmer läuft (und besitzt kein VVS Abo). Dabei wird das Rad von den meisten als Alternative zum ÖPNV bzw. zum Haupt-Transportmittel gesehen – je nach Zeitdruck.

Aktiv mobil für kurze Wege.

Längere Wartezeiten wegen **unzulänglicher Informationsbereitstellung** sind an der Tagesordnung:

Lasse: „Dass ich morgens zur Schule komm‘ ohne, dass wenn ich da steh‘ die Hälfte der Züge ausfällt. Die VVS App ist halt schlecht. Die zeigt einem an, dass grundsätzlich alles fährt und dann kommt man an und die Hälfte fällt aus.“

Anna: „…, dass ich morgens zur Schule komme und sehe, dass der Zug ausfällt. Das stört mich.“

Mathis: „Auch am Bahnhof ist es heftig in letzter Zeit. Da steht halt dran, dass alles kommt. Aber der Zug kommt einfach nicht. Im Internet nicht. Es steht am Bahnhof nicht dran, dass er nicht kommt. Es wird nichts durchgesagt. Er kommt halt einfach nicht.“

Lasse: „Zuverlässigkeit wäre halt toll."

Ungeschickte Verbindungen zwischen S-Bahn und Bussen

Mathis: „Sobald mal einmal umsteigen muss, hat man ein richtiges Problem." [Min. 43:20]

➔ Busse sind relativ zuverlässig; die Gruppe scheint hier auch am zufriedensten zu sein; zurückzuführen auf die Fahrplanänderung, die die Taktung erhöhte, Fahrzeiten verlängerte.

Mathis: „Man sollte grundsätzlich die **Kombination [das Umsteigen] S-Bahn** aus Schorndorf auf den **Bus** nach Waiblingen vermeiden. Die Verbindung ist einfach schlecht: Der Bus müsste vermutlich nur wenige Minuten warten, fährt aber immer dann ab wenn die S-Bahn einfährt."

Ihr benutzt gerade alle den ÖPNV für eure Wege?

Alle Teilnehmer: „Ja!"

Jan: „Ich wohne in Laufweite. Und wenn ich irgendwann mal besonders schnell in die Schule muss….was ab und zu schon vorkommt… dann benutze ich halt das Fahrrad. Und da wäre wieder die Sache mit den Fahrradwegen: es wäre schon nicht schlecht, wenn das intensiver ausgebaut werden würde, weil alles wo ich hin muss, kann ich eigentlich mit dem Fahrrad erreichen. Und wenn ich eben mobil sein will, dann möchte ich halt wo ich hin will, hinfahren können auch in relativ kurzer Zeit – ob es mit dem Rad oder den Öffis ist." [ca. Min. 37:30]

Keiner von euch nutzt Car-Sharing?

Lasse: „Car2go bräuchte ich nicht, solange Strecken fahre ich nicht. Selbst wenn ich dann 18 bin. Wenn ich zur Schule nach Schorndorf fahre, passt meine Anbindung super. Wenn ich zum Bahnhof fahre, nehme ich das Rad und in Schorndorf bin ich auch gleich da."

Jule: „Mein Alltag ist gerade zum Glück so strukturiert, dass ich nur mit einem Bus fahren muss. Die nächste Ausweichmöglichkeit ist dann das Fahrrad. Und das ist voll negativ. Ich fahre nämlich nicht, weil ich es möchte, sondern weil ich es muss. Und das ist doch dann auch nicht das Ziel vom Ganzen. Dass ich – wenn ich es eh nicht gerne mache – dann auch noch auf den Radwegen fahren muss, die k*** sind. […] Die Alternative wäre allerdings auch nicht gut, denn es hieße mehr Busse fahren zu lassen und mehr Fahrzeiten einzurichten, dann

werden die Busse immer leerer. Und dann lohnt es sich doch gar nicht mehr.“ [ca. Min. 41:00]

➔ *Umweltschonend ist ein wichtiger Aspekt der Mobilität für alle Teilnehmer. (Wirtschaftlich und effizient)*

FRAGE 8

Eine ideale Mobilität in 5-10 Jahren sieht für mich so aus…

(Hier wurde vorausgesetzt, dass technologisch alles möglich sei, die Preise für Benzin steigen, die Digitalisierung in der Mobilität weiter vorangeschritten ist und ein (Uber) Taxi günstig seine Dienste anbietet.) Zusammengefasst wurden folgende Vorschläge eingebracht:

- Seilbahn von Innenstadt an Bahnhof
- Wasserstoff-angetriebene Autos
- Autonomes Fahren / Sharing
- Echtzeitkommunikation mit Bussen.
  (Zur optimalen Abfahrtzeitkalkulation, kurzfristigen Belegung)
- Kostenloses ÖPNV / sehr viel günstigere Alltagsmobilität
- Kein Monopol der Bahn / Zulassung eines Preiswettbewerbs zulässt
- Diskussion um mehr Regulierung vom Staat

Diskussion um Seilbahn und Autos mit alternativen Kraftstoffen:

Lasse: „Ich möchte endlich die Seilbahn von der Innenstadt hoch zum Bahnhof. Das Konzept gibt es schon.“ [Min 45:50]

Mathis: „Aber das Konzept ist auch nicht grün.“

Lasse: „Solange da mehr Personen in kürzeren Abständen fahren, lohnt es sich doch. Wenn du dadurch sogar weniger Autos hast?!“

Mathis: „Ja, aber lohnt es sich wirklich, ne Seilbahn? Wenn die Preise vom Benzin eh steigen, werden mehr Menschen vielleicht auf Wasserstoff oder andere Technologien umsteigen. Dann wäre es doch wieder ok [Auto zu fahren] …“

Echtzeitkommunikation über App mit dem Busfahrer/Bus:

Anna: „Ich hab‘ nen ganz anderen Plan: Oft denke ich, wenn ich zum Bus renne … wie toll es wäre per App dem Busfahrer anzufragen ob er noch eine Minute warten kann.“

Lasse: „Kleinere Busse, die öfter fahren wären dazu notwendig!“

Autonom fahrende Micro-Shuttles:

Jan: „Das ist jetzt schon ziemlich futuristisch, aber das Konzept [aus dem Buch „Quality Land“], das man für eine autonom fahrende Flotte eine Flatrate zahlt, und dann Autos zu sich rufen kann und von dem Punkt an [am Zielort], kann wieder jemand anders das Auto nutzen und irgendwo damit hinfahren. Hätte ja auch einige Vorteile. Man bräuchte viel weniger Autos.“ [ca. Min. 48:00]

Mehrere: „Ja, genauso Uber-mäßig oder wie ein Taxi.“

Könnt ihr euch vorstellen das zu nutzen?

Jule: „Wenn es funktioniert. Ich finde den Gedanken eigentlich gruselig. Wenn das Ganze nämlich nicht mehr mein Auto wäre und dadurch entweder in irgendwelchen Händen von Unternehmen oder vom Staat liegen muss. Und dann hat man wieder das Problem: Die *Deutsche Bahn* ist ein Unternehmen – zum Teil in Staatshand. […] Man sieht, dass es aktuell nicht läuft [bezieht sich auf die Preise und die Monopolstellung]. Das heißt, dass es, wenn es in Zukunft ganz in den Händen der Wirtschaft liegt, es zu einer Zwei-Klassen-Gesellschaft führt.“ [Min. 48:30]

Deine Zukunftsvision von der Mobilität der Zukunft ist: nichtdiskriminierend, günstig und für alle zugänglich, es existiert kein Monopol, ….

Jule [leise]: „Ja, kommunistisch.“ [lacht]

Lasse: „… ja, dass es halt verstaatlicht ist. Dass der Staat eingreift. Und, dass entsprechend dem Einkommen einer Familie/einer Person unterschiedlich teuer ist.“

Mathis: „Ja, das sollte man bei Blitzern übrigens auch einführen. Das hasse ich. Grad die Preise sind teilweise nicht dem Einkommen entsprechend. Für einen Porsche Fahrer sind 15 Euro total egal. Aber 15 Euro sind für Großfamilien mit geringem Gehalt eine komplette Mahlzeit.“

Mehrere: „Ja.“

Lasse: „Es sollte halt grundsätzlich alles ans Gehalt angepasst werden.“

Jan: „Boah, das finde ich gefährlich.“

Zurück zum Autonomen Fahren. Wäre es unter idealen Zuständen für euch denkbar?

Drei Personen stimmen zu. Drei verneinen.

Mathis: „Ich find autonomes Fahren nicht so cool.“

Charlotte: „Also, ich finde es auch ein bisschen gruselig.“

Mathis: „Wer übernimmt die Verantwortung, wenn etwas passiert? Was ja schon wieder vorgekommen ist, zum Beispiel wenn irgendein Software Fehler ist. Da weiß man doch eher, wenn man selber fährt, wer schuld ist. Aber wenn da eine Technologie ist, die sich weiterentwickelt…“

Charlotte: „Insbesondere der Gedanke mit den Taxis ist gruselig: man setzt sich irgendwo rein und weiß nicht ob das Taxi einen auch dorthin fährt wo man hinmöchte. Aber wenn die Technologie besser wird und die Technologie besser wird als der Mensch, denke ich, wird der Straßenverkehr halt schon auch sicherer.“ [ab Min. 50:26]

Lasse: „Ich glaub auch wenn alle Autos autonom sind, weiß es das auch grundsätzlich. Wenn mehr KIs auf der Straße sind, wird es besser. Ich glaube auch, dass das Problem bei KI die Menschen sind, nicht die Technologie.“

Mathis: „Und was ist mit den Radfahrern?“

Lasse: „Ja, deswegen braucht man unbedingt bessere Fahrradwege. Am besten komplett getrennt vom Autoverkehr.“

Prompt: Tesla Unfall mit einem Dunkelhäutigem; Hinweis, dass Politik an der Definition der Regularien arbeitet und die Sicherheit des Straßenverkehres eine sehr hohe Priorität hat, man davon ausgehen darf, dass sämtliche Bedingungen geschaffen werden, die autonome Technologien auf den Straßen möglich macht.

Die Gruppe zeigt sich dennoch betroffen und erschrocken über Vorfälle wie diese.

Mathis: „Hacker werden sich auch wieder weiterentwickeln."

Jule: „Eine andere Idee zur Mobilität der Zukunft wäre ein dichteres Schienennetz oder sogar eine Hoch-Bahn/Schwebebahn. Wenn ich an die Zukunft denke, habe ich das vor Augen. Die Bahnen oben drüber, die ihre Kreise ziehen. Das wird künftig ja auch immer mehr. Künftig ist ja alles eine Region, also Stuttgart und Waiblingen werden noch viel stärker zusammengehören. Es wird nicht mehr nur in Stadt und Land getrennt sein können. Und Waiblingen ist einfach etwas dazwischen. Waiblingen ist ja wie ein Großteil der deutschen Städte [bezogen auf die Anwohnerzahl]. Und dann könnte eine Kombination aus autonomem Fahren und Schienen doch funktionieren: in Stuttgart autonomes Fahren, weiter draußen mehr Bahn. Müsste man nur noch den Rest anschließen. Allerdings braucht man auf den Weinbergen ja keine Bahn mehr. Ab einem gewissen Punkt wird das ja ineffizient [weil zu wenig Menschen auf dem Land wohnen]."

MOBILITÄT IN WAIBLINGEN

FRAGE 9

Mit der Verkehrssituation für meinen alltäglichen Wege in WN (im Alltag) bin ich zufrieden/unzufrieden… [ab ca. Min. 55:15]

Die meisten Teilnehmer signalisieren eine Zufriedenheit mit ihrer persönlichen Verkehrssituation. Besondere Zufriedenheit herrscht beispielsweise mit der Regio-Bahn.

Lasse: „Ich fahre täglich einmal am Tag zur Schule und da nehme ich den Regio und der fährt sehr zuverlässig. Und wenn nicht, nehme ich die S-Bahn. Und falls die nicht fahren sollte, gehe ich nach Hause [lacht]. Und sonst, am Tag, wohne ich ziemlich nah an der Innenstadt und hab es nicht weit. Zur Not fahre ich mit dem Fahrrad. Und nach Stuttgart nehme ich genauso den Regio oder die S-Bahn. Und nach Bittenfeld, tja, da passe ich mich halt dem Bus an. Der aber auch tagsüber nicht so schlecht kommt. [Notiz: Nach Bittenfeld fährt er gut, jede 15 Minuten] Für das, was ich brauche bin ich zufrieden. Ich muss aber auch nicht umsteigen oder sonstiges."

➔ *Ruftaxi wurde erwähnt. Man kann daraus schließen, dass diese Option auch genutzt wird.*

Jule: „Mein Bus kommt jede 15 Minuten. Da bin ich zufrieden."

➔ *Gute Busfrequenz. Die Taktung ist Jule sehr wichtig. Andernfalls müsste sie mit dem Rad fahren und das versucht sie zu vermeiden.*

Jan: „Ich bin eigentlich auch zufrieden. Ich habe den Vorteil, dass ich sehr zentral wohne. Ich könnte theoretisch eigentlich überall hinlaufen wo ich will. Bei mir würde es nicht so lange dauern. Oder ich fahre mit dem Fahrrad. Ich muss öfters nach Fellbach. Es gibt einen ziemlich guten Radweg da rüber. Auch wenn die Verkehrssituation in Fellbach selbst sehr beängstigend ist. Zum Bespiel aber wenn du mit dem Auto da lang fährst, es biegt jemand ab und du hast Parkplätze links und rechts den Radweg, da frag ich mich schon wer sich sowas ausgedacht hat. Aber sonst, wenn ich woanders hinwill oder mit den Öffis irgendwo hinwill, dann sind die Verbindungen für mich ok. Es kostet dann halt für mich was.“ [ca. ab Min. 57]

➔ *Zufriedenheit durch zentralen Wohnort und kurze Wege.*

➔ *Radinfrastruktur außerhalb der Stadt (hier: nach Fellbach) wird sehr positiv wahrgenommen. Dennoch wird insbesondere – explizit – die gefährdete Sicherheit für Radfahrer durch sehr undurchdachte (Parkplatz-)Planung am Straßenrand (hier: Bsp. Abbiege Situation) hervorgehoben. Ein anderer Teilnehmer widerspricht zunächst der Aussage, dass es in Fellbach beängstigend sei. Aber er stimmt dem Argument der undurchdachten Planung zu.*

➔ *Die Jugendlichen lassen sich durch gefährliche oder beängstigende Situationen/Gefühle scheinbar nicht abschrecken das Rad zu nutzen. Jan fährt immer noch mit dem Fahrrad und nennt es als alternatives Transportmittel zum Laufen gleich an zweiter Stelle. Obwohl er aus einer stark motorisierten Familie kommt, wird er nicht gefahren bzw. nutzt das Auto nicht als Alltags-Transportmittel. [ab ca. Min. 58]*

Jan: „Weil ich so zentral wohne und alles zu Fuß oder mit dem Rad mache, habe ich kein VVS Abo. Wie sich die Preise zusammensetzen finde ich richtig krass: Wenn ich innerhalb von Waiblingen mal mit dem Bus fahren muss, also nur 5-10 Minuten, kostet mich das für eine Fahrt 2,50 €, also zwei Zonen. Wenn ich mit dem X20 nach Esslingen fahren möchte, kostet mich das auch 2,50€. Das finde ich vom Verhältnis irgendwie komisch. Nach Esslingen ok, aber innerhalb von Waiblingen?!“

Mathis: „Ja, die Streckenpreise finde ich unfair."

➔ *Die Jugendlichen diskutieren über die Preise der ÖPNV. Sie seien besser geworden, sind aber insbesondere auf lokaler Ebene unverhältnismäßig teuer. (Vergleich ES mit WN)*

Lasse: „Da wer ein 365 € Jahresticket angebracht. Braucht man es nicht könnte man sich ein Tagesticket kaufen."

Charlotte: „Ich bin auch zufrieden. Denn ich kann alles zu Fuß erreichen. Zur Uni [Hohenheim] nehme ich Bus, Bahn, U-Bahn, Bus. Dafür brauche ich eine Stunde, mit Umsteigen. Aber das ist ok, weil die Verbindung gut ist. Mit dem Auto bist du nur schneller, wenn du schnell fährst und guter Verkehr ist. Aber durch Stuttgart kann man es eh vergessen. Deswegen fahre ich sowieso lieber mit der Bahn." [ca. ab Min. 59]

Mathis: „Ich bin eigentlich auch zufrieden. Nur manchmal halt nachts oder am WE da ist es halt schwierig irgendwo hinzukommen. Da finde ich es ätzend, dass ich kein Auto hab' und keinen Führerschein. Da würde ich halt schon lieber auf das zurückgreifen, wenn ich könnte. Aber sonst komm ich schon überall hin."

Anna: „Ich bin komplett zufrieden. Von zu Hause nach Ludwigsburg zur Schule z.B. nehme ich den Bus, wenn ich den mal morgens verpasse, kann ich zum Bahnhof latschen und nehme ne Bahn oder den Regio oder einen anderen Bus. In letzter Zeit nehme ich sogar öfter den Bus, weil in letzter Zeit nicht mehr so viel Stau in Hegnach ist. Aber die Möglichkeit frei wählen zu können mit was man Lust hat, finde ich super."

➔ *Ihre Zufriedenheit definiert sie über die Möglichkeit frei (nach Lust&Laune) entscheiden zu können mit welchem Transportmittel sie zur Schule fährt (den weg, der am meisten genommen wird). Multimodalität ist ihr wichtig und gegeben*.

FRAGE 10

Ich halte Sharing in WN für… [ca. ab 1:00:00]

Prompt: ist sowas wichtig für WN, würde es den Verkehr entlasten? Lime oder Tier Roller zum Beispiel.

Lasse: „Die braucht man hier nicht. Die sind ziemlich schlecht für die Umwelt. Sind nur da um Spaß zu haben und haben eine viel zu kurze Lebensdauer und immer neue Akkus."

Jan: „Die sollte man abschaffen."

➔ *Sind nicht für die Alltagsmobilität der Jugendlichen in WN geeignet. Bei ihrer Nutzung sehen die Jugendlichen den Spaß im Vordergrund, werden nicht als Ergänzung zur Alltags-Mobilität der Jugendlichen gesehen*.

Lasse: „Ich finde auch ein Car-Sharing wäre in WN schwierig umzusetzen. Da gibt es zu wenig leute die das gleiche wollen. Die anwohnerzahl ist zu gering."

Würdet ihr Sharing Angebote für euch nutzen? Egal ob Auto, Bbikes, Roller, „Motor"-Roller, etc.

Lasse: „Wenn das zu gut wäre, würde es mehr Fußgänger und Fahrradfahrer zum Umsteigen bringen. Die [jetzigen] Autofahrer würden weiterhin mit ihren Autos fahren. Das würde dann noch mehr Stau verursachen."

Mathis: „Ich glaube nicht, dass Leute wegen solchen Angeboten ihr Auto abgeben würden" [1:02:59]

➔ *Kritik, Sorge um die Nachhaltigkeit der Konzepte, die der aktiven Mobilität den Rang ablaufen und das Verkehrsaufkommen sogar erhöhen würden.*

Jule: „Aber wenn es gut wäre, würde ich es machen. Weil, ich fahre jetzt gerade nicht mit Fahrrad zur Schule, weil ich erst den Berg runterfahre, um dann auf der anderen Seite alles wieder hoch zu fahren. Aber dann fahre ich mit dem Bus, der wiederum im Stau steht! Wenn ich jetzt eine e-bike Station auf der Korber Höhe hätte, würde ich halt runterlaufen und wieder hochfahren. Das würde ich dann echt nutzen." [Min. 1:03:10]

➔ *eBike Angebot/Sharing angenehm für One-way Travel (lock and forget Prinzip)*

Charlotte: „Ja, ich würde ein solches Konzept nutzen, wenn es ein gutes Auto-Sharing gäbe. Ich würde aber kein Rad-Sharing Konzept nutzen, weil ich selbst ein Rad habe. Roller-Sharing finde ich unnötig. Grad wenn ich zum Beispiel zu meiner Freundin fahre: mit dem Auto brauche ich 15 Minuten, mit den Öffis eine

Stunde. In der aktuellen Lage würde ich ein Car-Sharing für genau solche Wege nutzen, die schlecht mit den Öffentlichen zu erreichen sind und außerhalb meines Alltags liegen.“

- ➔ *Sharing eher für Wege außerhalb des Alltags*
- ➔ *Zu viele Sharingangebote wären nicht gut → Platz in der Stadt*
- ➔ *ÖPNV Verbesserung*

FRAGE 11

Ich könnte mir vorstellen, auf ein eigenes Auto künftig zu verzichten/nicht zu verzichten, weil …

Charlotte: „Verzichten. Aber ich muss dazu sagen, dass ich ohne Auto aufgewachsen bin. Ich kenn’s nicht anders. Und es kommt natürlich auch darauf an wo man wohnt, aber ich würde mir meine Wohnlage auch so aussuchen, dass man kein eigenes Auto braucht.“ [1:04:30]

Mathis: „Ich würde schon gerne ein Auto besitzen, einfach weil’s …. Ich hab‘ zwar keinen Führerschein, weil ich irgendwann keine Lust mehr hatte. … Beim car-sharing muss man halt immer schauen ‚Ist es gerade da?‘ ‚Wo bekomme ich es her?‘ beim eigenen Auto steht es halt hauptsächlich vor der eigenen Tür und man kann sich innerhalb der Familie schneller anpassen. Man muss nicht kucken wo das nächste Auto steht., und es doch noch so das eigene. Man weiß halt doch was in seinem eigenen Auto so passiert. Das weiß man bei car-sharing halt nicht. [andere lachen]

Charlotte: „Für mich wäre das eine gute Zukunft der Mobilität: keine privaten Autos mehr und trotzdem würde immer eins zur Verfügung stehen, wenn man eins braucht. In WN gibt es aktuell kein gutes Angebot. Man muss schauen ob eins der beiden Autos, die es hier gibt, verfügbar ist, wenn man‘s braucht.“

Mathis: „Und man weiß nie ob es sauber ist.“ [andere lachen]

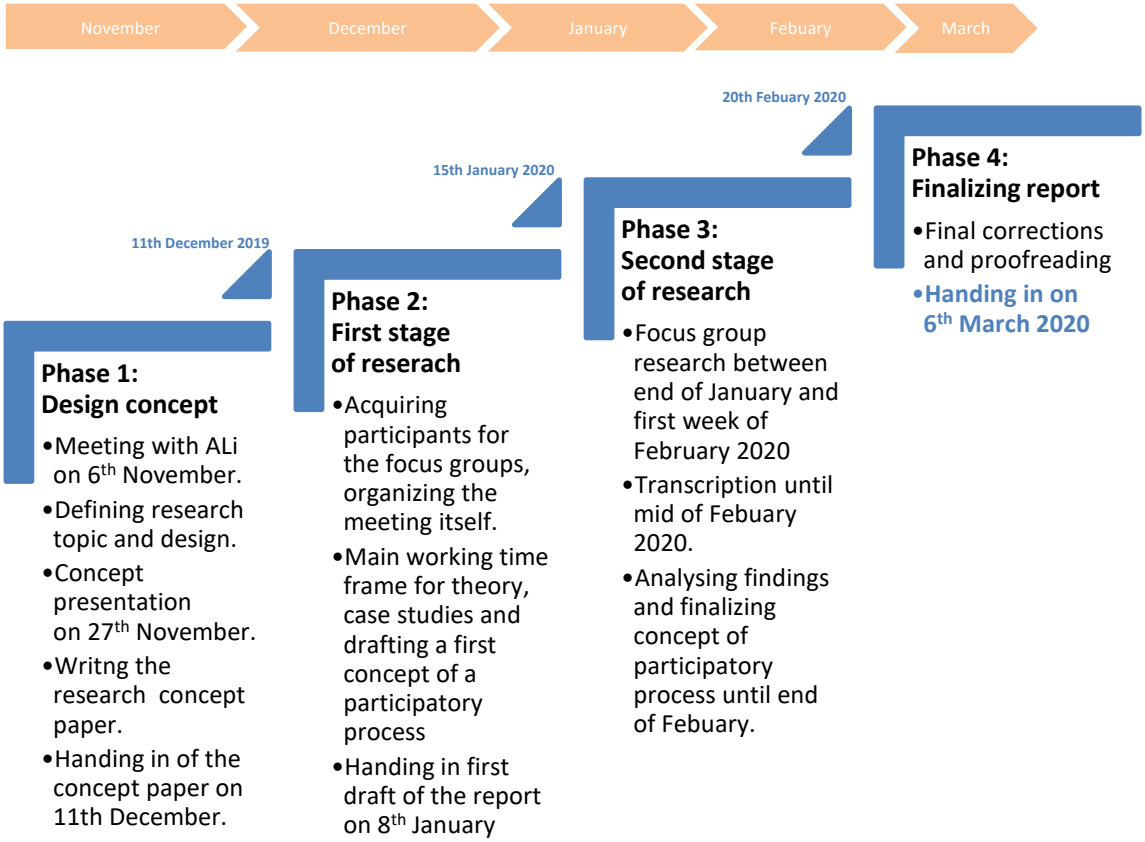
Anna nutzt das Auto nur noch am Wochenende mit der Familie, also im Kollektiv. Sie setzt in der Alltagsmobilität ganz auf die Unabhängigkeit und Wahlfreiheit, die ihr der ÖPNV bietet – die sie als solche auch empfindet.

Jule: „Ich glaube, dass ich mir ein eigenes Auto kaufen würde, wenn ich Familie habe. Da wird das mit dem Sharing zu kompliziert.“

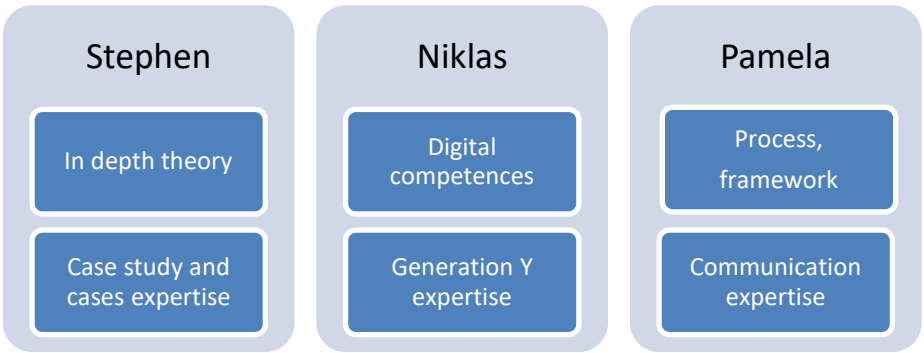
Appendix no. 7

Timeline and working packages

The research group has decided to split the process of research in three phases:



The research group decided to work with OneDrive as the platform where the documents can be stored and worked on. Meetings for the working progress and the necessary decisions such as the research design, the presentation or general reviews are being held on a regular basis, meaning every 7 to 10 days. Additionally, the group communicates via mails and a *WhatsApp* group. Tasks have been picked by competence, crystalized as follows:



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