Link of survey: https://survey.recht.dev
Code Repository: https://github.com/mibressler/dce_mdg

Choice sets are hosted as static assets by a NuxtJS webserver
(List of full choice sets: github.com/mibressler/dce_mdg/dce_mdg/public/)
and embedded in qualtrics as externally hosted images

Part I: Informed Consent

Part I: Consent

Thank you for your interest!

You are invited to take part in a discrete choice experiment focused on mobility policy. The goal of this survey is to better our understanding of travel preferences and behavior to inform mobility legislation.

This survey **will take around 5 minutes** and begin with demographic questions, followed by two blocks of discrete choice experiments and conclude with general questions about mobility patterns.

The information you provide will be **used solely for research purposes as part of a course assignment** at the Technical University of Munich. By proceeding, you consent to participate voluntarily and agree to the collection of your data for the purpose of this research.

Thank you for your valuable contribution.

- Yes, I consent to the collection of my data and want to participate
- No, I do not consent and do not want to participate

Part II: Preliminary questions

Part II: Preliminary Questions

What is your age?

- 15-25
- 25-35
- 35-45
- 45-55
- 55-65
- 65-75
- 75 and above
- Prefer not to anwser

What is your gender?

- Male
- Female
- Non-Binary/Diverse
- Other

- Prefer not to anwser

What is your average annual income?

- Under €25,000
- €25,000 - €50,000
- €50,000 - €75,00
- €75,000 - 120,000
- €120,000 and above

Prefer not to anwser

Where do you live?

Small city
Large city
Suburb
Countryside

How would you rate your skills regarding information technology?

Rather good
Okay
Rather poor

Part III: Discrete Choice Experiment

Part III: Discrete Choice Experiment

In this section of the survey, you will participate in a discrete choice experiment centered on a new mobility policy proposal in Germany.

The German Government is planning the introduction of a **federal mobility data bill ("Mobilitätsdatengesetz")**. The intent is to force processors of mobility data such as route planning services to share mobility data among each other.

While this aims to unify data on mobility and transport in order to make multi-modal transport route planning more efficient and easy to use for citizens, it also leaves open questions around the use of personal data.

To better understand this issue, **you will be given 12 choice sets** (8 for the first scenario and 4 for the second) and asked to **choose between your preferred way of route planning for a predetermined route.**

Your choice will always be between a single **data-integrated route planner** and using **multiple different route planners** for reaching your destination. The purpose of your trip will change between scenarios and the attributes connected with the specific route planning alternatives will change in each case.

Scenario 1: Intro

First Scenario: Commute/Leisure Trip

You are traveling a fixed door to door distance from your home to a specific location in the city.
The **purpose of your trip** is either **commuting** to work/school or **leisure**.

To get to your destination, you **will have to use multiple modes of transport**. Depending on the time of day, this could include cycling, driving, regional trains, subways, ridesharing (e.g. Uber), Busses (e.g. Flixbus), rented e-Scooters, Citybikes and more.

To guide you to your destination, **you can choose** to either use a **integrated route planner** that combines the data from all the different modes or **multiple route planners** for every mode of transport:

- Integrated route planner: Relies on data sharing from other providers to combine all your mobility data in a single place to give you up to date information about fastest connections, delays and estimated arrival (e.g. could be Google Maps).
- Multiple route planners: You will need to use different route planners for different

sections of your trip since the data is not shared between providers (e.g. could be a selection of DB Navigator, Google Maps, MVGO, Lime Scooters, Uber over the duration of your trip).

For each choice set, make your decision based on:

Total Travel Time: Includes the entire duration of your trip including unexpected delays (door to door).

Route Planning Experience: Reflects the ease of use of the route planning process, including assistance with transfers, delays and overall user experience.

Personal Data Shared Between Providers: Indicates which of your personal data is shared between mobility providers (such as DB, Google, Flixbus). Can range from none to anonymized occupancy data to realtime location data for the duration of your trip.

Scenario 1: Experiments

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	35 Minutes
Route Planning Experience	😍 Very Easy	😒 Cumbersome
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	35 Minutes
Route Planning Experience	😍 Very Easy	😒 Cumbersome
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	35 Minutes
Route Planning Experience	😍 Very Easy	🙂 Manageable
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	35 Minutes
Route Planning Experience	😘 Very Easy	😳 Manageable
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	35 Minutes
Route Planning Experience	😳 Manageable	😳 Manageable
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	35 Minutes
Route Planning Experience	🙂 Manageable	🙂 Manageable
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	50 Minutes
Route Planning Experience	😍 Very Easy	😒 Cumbersome
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	50 Minutes
Route Planning Experience	😍 Very Easy	😣 Cumbersome
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	50 Minutes
Route Planning Experience	😍 Very Easy	😳 Manageable
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	50 Minutes
Route Planning Experience	😍 Very Easy	😳 Manageable
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	50 Minutes
Route Planning Experience	😳 Manageable	😳 Manageable
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	50 Minutes
Route Planning Experience	🙄 Manageable	🙄 Manageable
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	35 Minutes	35 Minutes
Route Planning Experience	😍 Very Easy	😣 Cumbersome
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	35 Minutes	35 Minutes
Route Planning Experience	😍 Very Easy	😒 Cumbersome
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	35 Minutes	35 Minutes
Route Planning Experience	😍 Very Easy	😳 Manageable
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	35 Minutes	35 Minutes
Route Planning Experience	😘 Very Easy	😳 Manageable
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Scenario 2: Intro

Second Scenario: Buisness Trip

You are traveling a fixed door to door distance from your home to a specific location in the city.
The **purpose of your trip** is to **conduct buisness in an official capacity**.

To get to your destination, you **will have to use multiple modes of transport**. Depending on the time of day, this could include cycling, driving, regional trains, subways, ridesharing (e.g. Uber), Busses (e.g. Flixbus), rented e-Scooters, Citybikes and more.

To guide you to your destination, **you can choose** to either use a **integrated route planner** that combines the data from all the different modes or **multiple route planners** for every mode of transport:

- Integrated route planner: Relies on data sharing from other providers to combine all your mobility data in a single place to give you up to date information about fastest connections, delays and estimated arrival (e.g. could be Google Maps).

- Multiple route planners: You will need to use different route planners for different sections of your trip since the data is not shared between providers (e.g. could be a selection of DB Navigator, Google Maps, MVGO, Lime Scooters, Uber over the duration of your trip).

For each choice set, make your decision based on:

Total Travel Time: Includes the entire duration of your trip including unexpected delays (door to door).

Route Planning Experience: Reflects the ease of use of the route planning process, including assistance with transfers, delays and overall user experience.

Personal Data Shared Between Providers: Indicates which of your personal data is shared between mobility providers (such as DB, Google, Flixbus). Can range from none to anonymized occupancy data to realtime location data for the duration of your trip.

Scenario 2: Experiments

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	35 Minutes
Route Planning Experience	😍 Very Easy	😩 Cumbersome
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	35 Minutes
Route Planning Experience	😍 Very Easy	😒 Cumbersome
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	35 Minutes
Route Planning Experience	😍 Very Easy	🙄 Manageable
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	35 Minutes
Route Planning Experience	😘 Very Easy	😳 Manageable
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	35 Minutes
Route Planning Experience	😳 Manageable	😳 Manageable
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	35 Minutes
Route Planning Experience	🙂 Manageable	🙂 Manageable
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	50 Minutes
Route Planning Experience	😍 Very Easy	😒 Cumbersome
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	50 Minutes
Route Planning Experience	😍 Very Easy	😣 Cumbersome
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	50 Minutes
Route Planning Experience	😍 Very Easy	😳 Manageable
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	50 Minutes
Route Planning Experience	😍 Very Easy	😳 Manageable
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	50 Minutes
Route Planning Experience	😳 Manageable	😳 Manageable
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	20 Minutes	50 Minutes
Route Planning Experience	🙄 Manageable	🙄 Manageable
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	35 Minutes	35 Minutes
Route Planning Experience	😍 Very Easy	😣 Cumbersome
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	35 Minutes	35 Minutes
Route Planning Experience	😍 Very Easy	😒 Cumbersome
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	35 Minutes	35 Minutes
Route Planning Experience	😍 Very Easy	😳 Manageable
Personal data shared	**Anonymized Occupancy Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Commute/Leisure Trip	Integrated Route Planning	Multiple Route Planners
Total Travel Time	35 Minutes	35 Minutes
Route Planning Experience	🥰 Very Easy	🙂 Manageable
Personal data shared	**Realtime Location Data**	**Nothing shared**

Integrated Route Planning ○ Multiple Route Planners ○

Part IV: Conclusion

Part IV: Concluding questions

How many different navigation and route planning tools do you use on a daily basis?

- 1-2
- 3-4
- 5 or more

Which modes of transport do you typically use for your commute or leisure trip? Please select all that apply.

- Walking
- Bicycle
- Car
- Bus
- Train network (e.g. InterCity, Regional, S-Bahn)

City train network (e.g. Subway, Tram)

Ridesharing Servies (Uber, Lyft or Taxi)

Rental Services (e.g. CityBike, rented e-Scooter)

Other

How long is your average commute?

Under 20 Minutes

20-40 Minutes

Over 40 Minutes

Is there anything else you want to tell us?

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