Intermodal Urban Mobility: Users, Uses and Use Cases

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CONTEXT: URBAN MOBILITY IS CHANGING

- Growing cities and growing demand for mobility…
- Changing mobility services, including bicycle rental or carsharing…
- Increased use of ICT for trip planning and undertaking…

… facilitate the flexible combination of different transport modes in cities, known as intermodality.

Intermodality: The use of more than one mode of transport on a single trip

INTERMODAL USERS: RESEARCH QUESTIONS

- How many persons are intermodal?
- How can intermodal persons be characterized?
- How do trip purposes of monomodal and intermodal trips differ?

THE URBAN MOBILITY PROJECT (DURATION: 2015 – 2018)

- What might an intermodal mobility system for the "city of tomorrow" look like? How far can it contribute to user-oriented and environmentally efficient mobility in cities?
- Understanding the relation between intermodal mobility behavior, new concepts of mobility and urban spatial structures
- The project is composed of six fields of research:

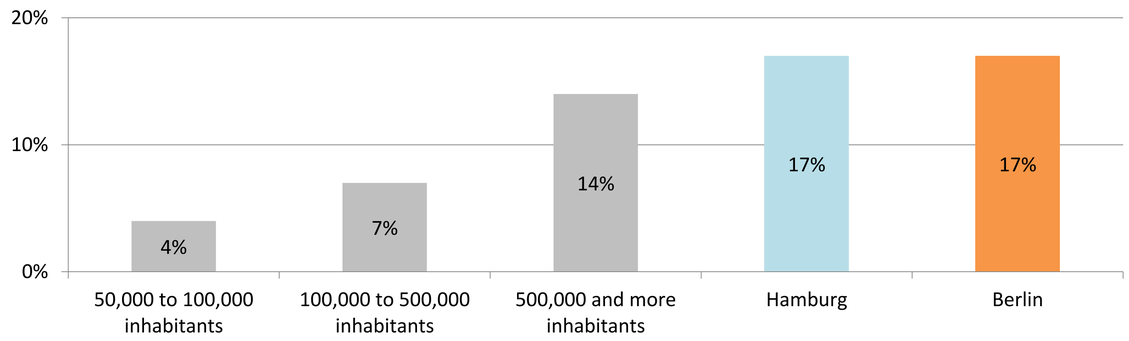
Urban Spatial Structures	Modeling Intermodal Mobility
Intermodal Users	International Trends
Vehicle and Mobility Concepts	Dialog with Praxis

METHODS

- Spatial statistical analyses
- Quantitative survey, qualitative interviews and focus groups
- Agent-based modeling and simulation of intermodality, including demand modeling, traffic flow, and the effects of intermodality on location choice

CITY SIZES (Example: Germany)

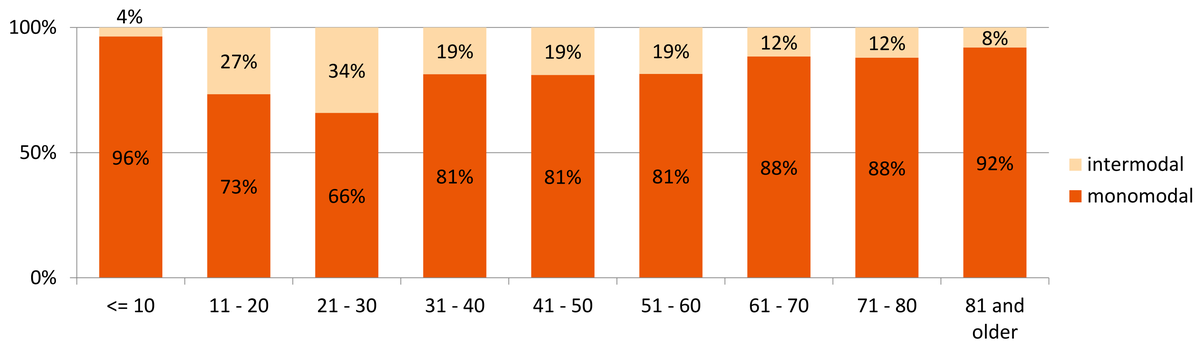
In bigger cities more persons are intermodal.



Sources: Authors' own analyses based on "Mobility in Cities – SrV 2008", sample Berlin, Senatsverwaltung für Stadtentwicklung und Umwelt Berlin, Abteilung Verkehr and „Mobility in Germany – MiD 2008", Increase Hamburg Region, Amt für Verkehr und Straßenwesen der Behörde für Wirtschaft, Verkehr und Innovation (BWVI) Hamburg.

AGE GROUPS (Example: Berlin)

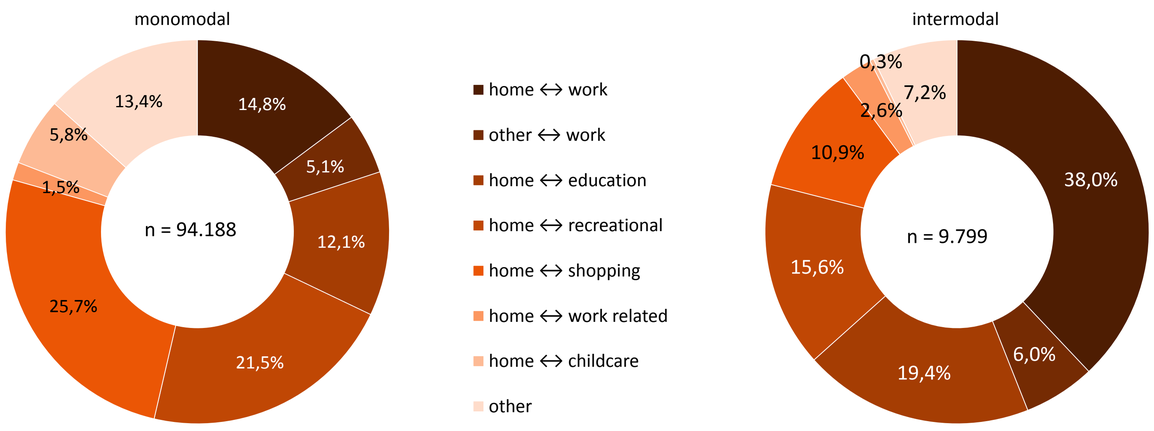
The share of intermodal users is higher in young age groups.



Source: Authors' own analyses based on "Mobility in Cities – SrV 2008", sample Berlin, Senatsverwaltung für Stadtentwicklung und Umwelt Berlin, Abteilung Verkehr.

TRIP PURPOSES (Example: Berlin)

A great amount of intermodal trips are trips to work or school.



Source: Authors' own analyses based on "Mobility in Cities – SrV 2008", sample Berlin, Senatsverwaltung für Stadtentwicklung und Umwelt Berlin, Abteilung Verkehr.

INTERMODAL USERS TEND TO

(in comparison to monomodal users) (Example: Berlin)

- be more likely female
- have a higher education more often
- be more likely to work or be in education
- have no kids more often
- have less access to a car and more public transit passes
- be relatively young

OUTLOOK

- Various statistical analyses with survey data
- Developing a user-typology
- Extending mobility and traffic models by intermodal behavior
- Designing new vehicle concepts and public transport operation services
- Explore more case cities: Tokyo, Paris, Copenhagen

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