

SMiLES Interdisciplinary Group Assignment





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Research Questions

Main research question: How can shared mobility services be designed to cater to the distinctive needs of rural communities in the Province of Groningen, ensuring equal opportunities for all?

Spatial perspective

How do residents from rural villages use transport, and how do they benefit from shared mobility?
How can the lessons learned be used in other villages?

Behavioural & psychological perspective

What are motivators and hurdles for people living in rural communities to use shared mobility?
What can be done to overcome barriers and increase motivators?

Business Perspective

What can we learn from regional and international cases, and how can they be adapted to Groningen rural communities?
How do private companies determine the location of the installed base, and would they be interested in expanding to more rural areas?

Legal perspective

To what extent does the current legal framework of a municipality meet the requirements and challenges of multidisciplinary shared mobility initiatives, specifically related to privacy, and accessibility, for both the municipality and private mobility providers?

Research Approach

- Interdisciplinary Approach
- Mixed methods Approach
 - Combination of qualitative approaches
 - 12 interviews with companies (anonymized)
 - Interview with residents



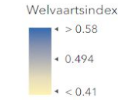


General Background

- Rural Groningen
 - Relatively poor
 - Gray pressure
 - Low population density
- Challenges
 - Larger distances
 - Poorer infrastructure
 - Centralisation of services
 - Pressure on public transport

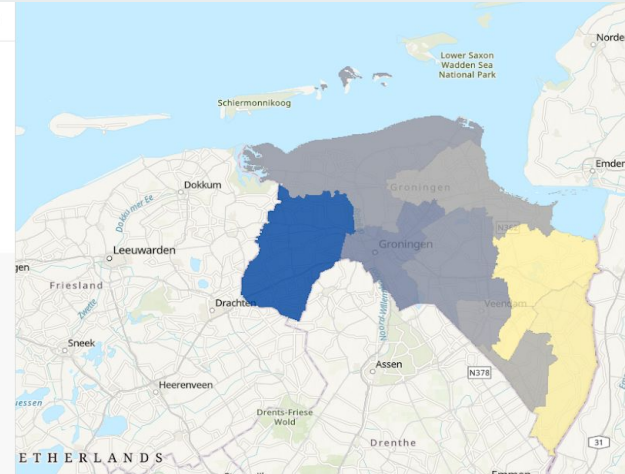
Legend

Welvaartsindex Nederlandse gemeenten
[feature layer]



Legend

Gemeenten leeftijdsopbouw



Focus Area

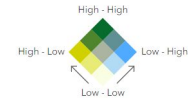
- East Groningen
 - Relatively poor
 - Gray pressure
 - (Relatively) high car ownership
- Wedde
 - 1270 residents
 - 25,5 thousand euros average income
 - About 30% older than 65
 - Enthusiastic to participate

Legend

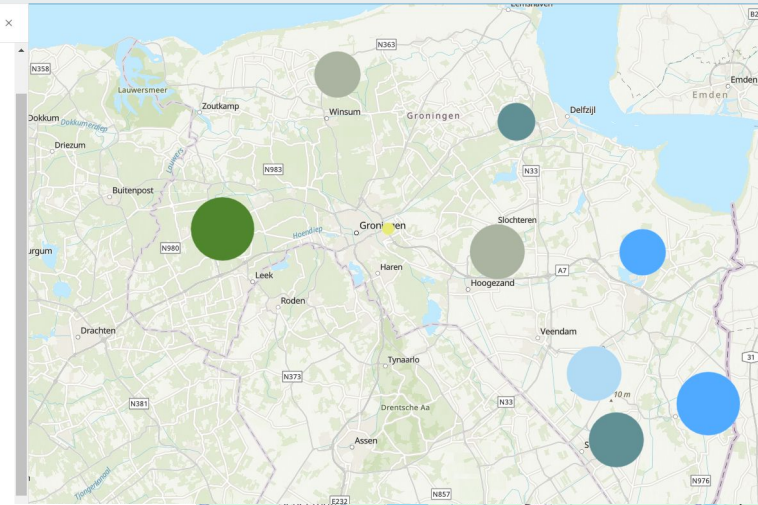
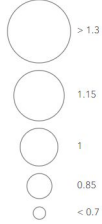
Relationship

↖ Welvaartsindex

↗ P_65_EO_IR



AUTO_HH



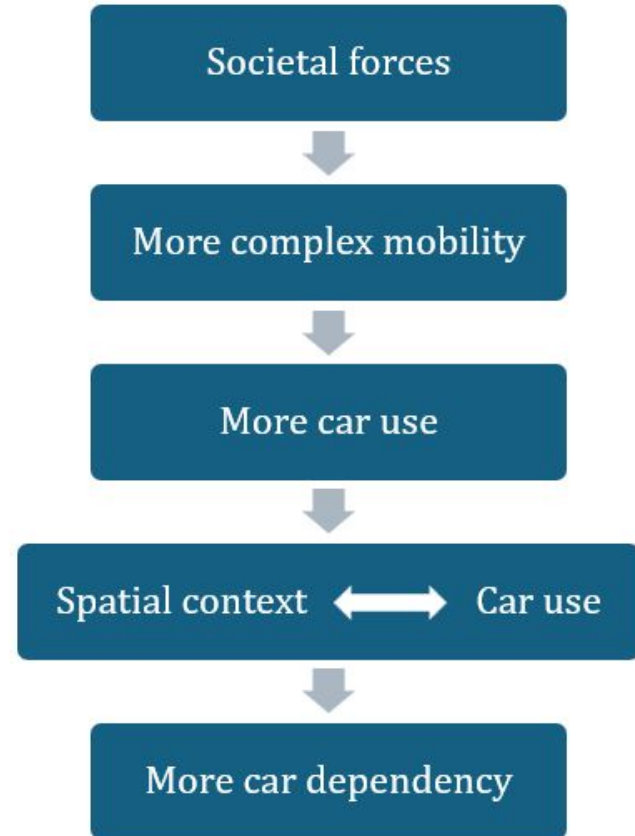
Spatial Perspective





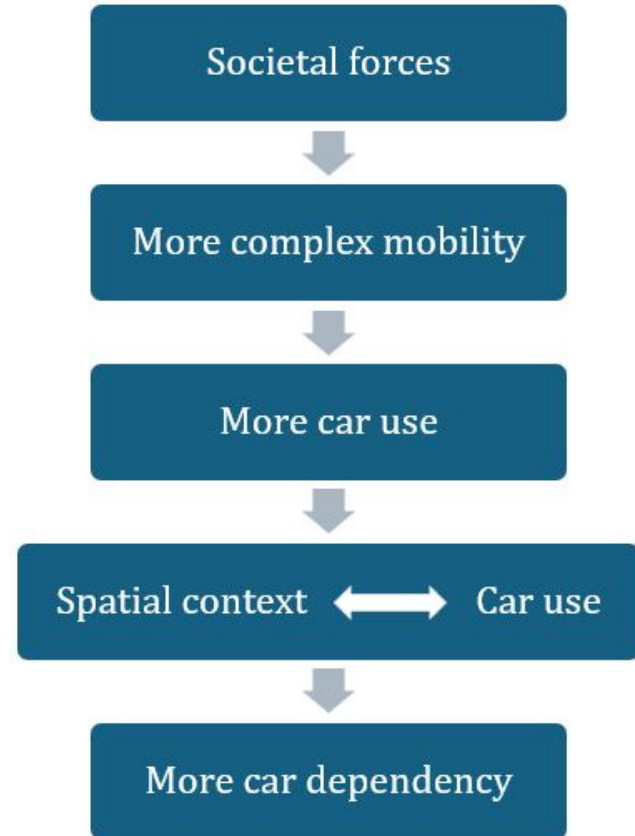
Mobility Patterns

- Mobility encompasses both the action and ease of moving around, and the capacity to travel in different directions to engage in activities.
- Activities:
 - Either to work / school:
 - Travel time: 30 mins
 - Or to amenities / daily tasks:
 - Geographically proximate
- User groups



Car Dependency

- Car dependency:
 - Objective: car only travel option
 - Financial factors
 - Travel time
 - Subjective: emotional factor, car use is a habit/attitude
 - Lack of **information**
 - Public transport lacking
 - Rural vs urban
 - Larger distances
 - Different mobility patterns
- Objective car dependency can become subjective car dependency





Mobility in Wedde



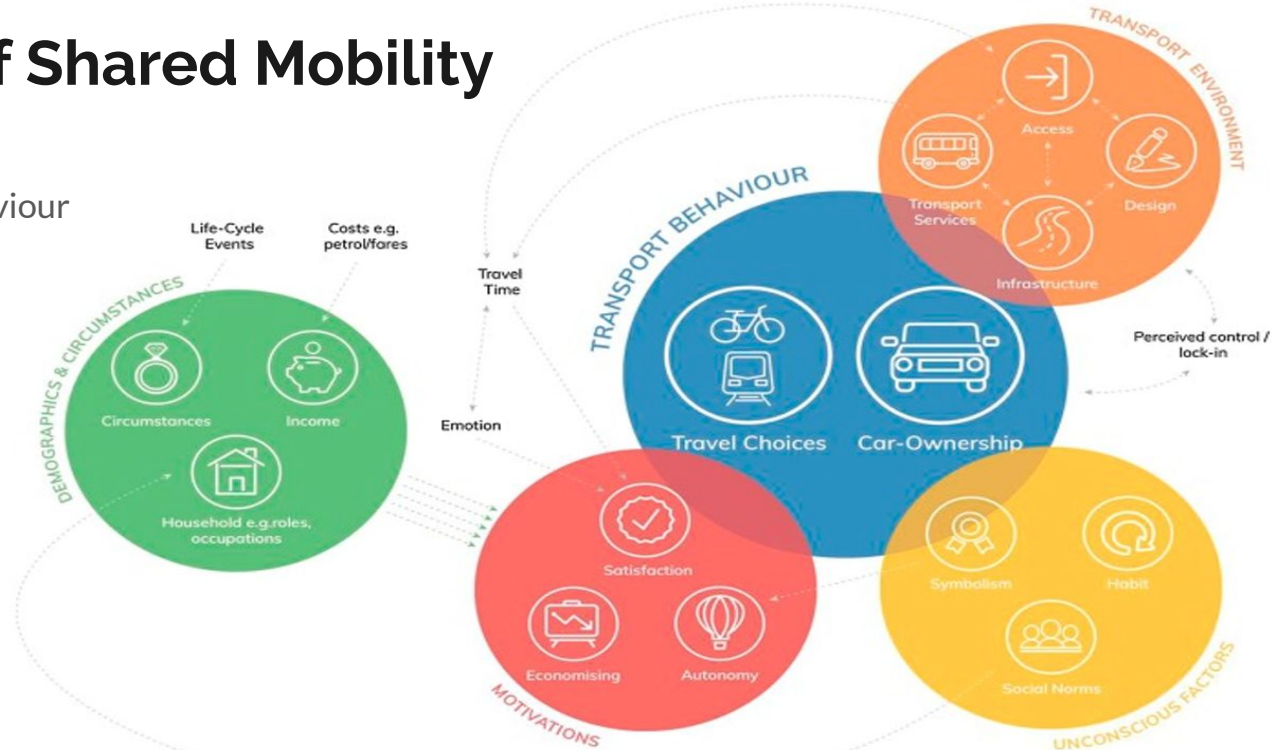
- Primarily to Winschoten (~10km), Vlagtwedde, Bellingwolde
 - (Grocery) stores
 - ~40 min by bicycle
 - Public transport connection
- Necessary trips and voluntary trips
 - Car more used for necessary trips, bus sometimes (objective)
 - Needs to be reliable and easy
 - Bike and others for voluntary trips (subjective)
 - Needs to be easy and available

Psychology Perspective



Acceptance of Shared Mobility

- Need to change behaviour
- Urban-rural gap
- Not generalizable





Theoretical Background

- Theory of Planned Behaviour (TPB)
 - Behaviour depends on the intention to engage in the behaviour
 - Attitude, subjective norms, perceived behavioural control
- Unified Theory of Acceptance and Use of Technology (UTAUT2)
 - Factors influencing the acceptance of innovations and new technologies:
 - Attitude
 - Effort expectancy
 - Social influence
 - Performance expectancy
 - Motivation
 - Value of money
 - Habits



Findings

- Positive attitude towards shared mobility
- Motivators for adopting shared mobility
 - Cost efficiency
 - Quality
 - Positive examples
- Obstacles for adopting shared mobility
 - Comfort & familiarity
 - Habits
 - Effort
- Community engagement
- Support by the municipality of Westerwolde

Business Perspective





Interview Outcomes

- Free floating versus station based
- Bottom up versus Top down approaches, success starts small
- Local ambassadors
- Clear installed base
- Communication is key
- KISS, but how?



General Framework

Phase 1: Understanding rural communities needs and identifying gaps

Phase 2 & 3: Identifying & selecting the most appropriate mobility option and approach

Phase 4: Development of shared mobility plan

Phase 5: Launch, monitor and evaluation

Phase 1: Opportunity Identification and Selection

Phase 2: Concept Generation

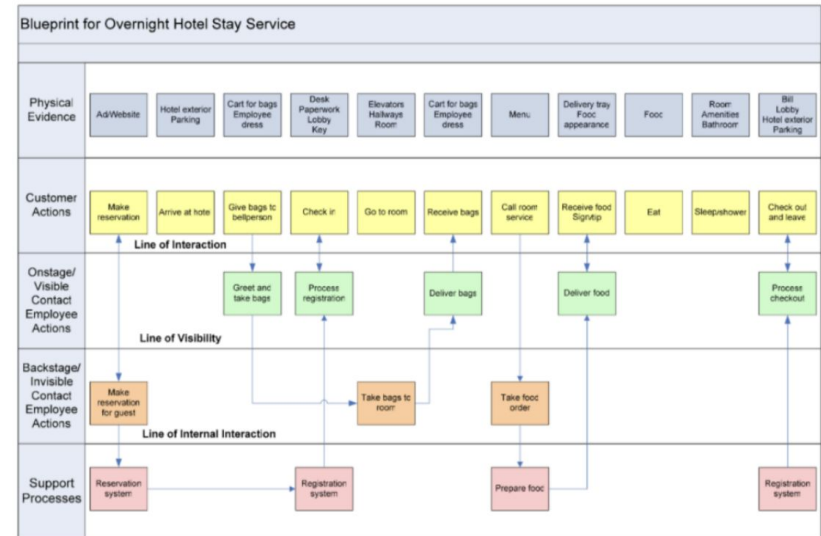
Phase 3: Concept/Project Evaluation

Phase 4: Development

Phase 5: Launch

Service Portfolio

- Strategic goals (defending current base of products versus extending the base)
- Project type
- Short-term versus long-term projects
- High-risk versus low-risk projects
- Market familiarity (existing markets, extensions of current ones, or totally new ones)
- Technology familiarity (existing platforms, extension of current ones, or totally new ones)
- Geographical market (e.g. the whole Province, only certain municipalities or only certain areas).



Legal Perspective



WP 2000

- Definition of MaaS
- Complicated legal framework
- But, it has its opportunities:
 - Subsidies
 - Control
 - Regulation





Accessibility

- Necessary for a legitimate purpose
- Awareness and usability of shared mobility
- Adapted vehicles or shared buses



CONVENTION on the RIGHTS of
PERSONS with DISABILITIES

Privacy



- Large amounts of personal data
 - ❑ Location data
 - ❑ Identification data
- CROW

Conclusion

- Importance of an interdisciplinary collaboration for a successful and sustainable implementation
- Holistic approach for the development of effective strategies
 - Include each discipline
- Communicate, involve, engage

Final Recommendations

- Results are not generalizable
 - Spatial context matters
- Communicate with the municipalities and the residents
 - Feedback, raise awareness, support engagement
- Create incentives to enhance the use of shared mobility services
- Is there a local need, are there local ambassadors and interest?
- Set up a service portfolio
- More research is needed. Collaborate with CROW and other data gathering platforms



**Thank You
Questions?**

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