

# With public participation to a stopless and timetableless urban quarter bus in the Real-world lab Schorndorf

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The German Aerospace Center (DLR), the University Esslingen, the University Stuttgart, the Verkehrs- und Tarifverbund Stuttgart (VVS), Knauss Linienbusse, Daimler AG and the City of Schorndorf have been engaged in a project ("Reallabor Schorndorf – Reality Lab Schorndorf") to develop an innovative, demand-oriented operational system as well as a vehicle concept for public busses in the city of Schorndorf in Baden-Württemberg. A crucial aspect of the project is the integration and participation of users of Schorndorf's transport system into the development process against a transdisciplinary background.

## Reality Lab Schorndorf



In the "Reality Lab Schorndorf," a bus concept for the inner city area is currently being developed. On call – and by means of digital solutions, the bus shall pick up passengers at a desired stop and drop them off at their destination. Thus, the bus system complements the main transport connections in times of lower demand. In addition, smaller vehicles will be implemented. The project shall contribute to a resource-efficient, flexible and user-friendly transport system.

- **Sponsor:** Ministerium für Wissenschaft, Forschung und Kunst, Baden-Württemberg
- **Funding volume:** 1.2 Mio. €
- **Project duration:** 01.02.2016-31.01.2019

## Project Structure

Crucial within the project is the integration of knowledge in a transdisciplinary manner that is reflected in the project's structure:

	Participation	Operation Concept	Vehicle Concept
1	Initial position	Specification analysis	Specification management
2	User perspective	Architecture	Drafts/sketches
3	Expert perspective	Implementation	Concepts
4	Monitoring pilot phase	Testing/ Pilot phase	Construction
5	Public dialogue	Evaluation	Installation of demonstrator
<b>Knowledge Management</b>			
<b>Project Coordination</b>			

## Research questions

1. What are the requirements for innovative concepts that allow for flexible, comfortable mobility?
2. What could a public transport concept look like that is based on user requirements and developed from their perspective?
3. What would an innovative vehicle look like?
4. How can the users be integrated into the development process?

## Innovative Mobility Concepts for Urban Areas

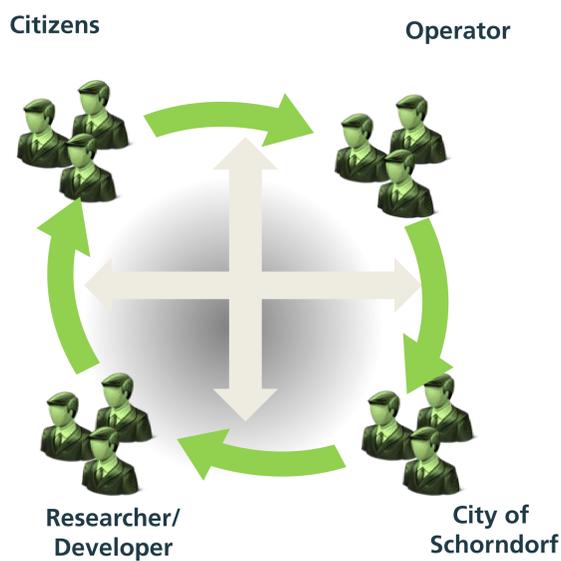


Source: DLR 2014

First evidence of transformations in urban mobility systems demand for new solutions<sup>1,2,3,4</sup>:

- Increase in the use of public transport as well as active modes
- Increase in the flexible use of different modes (multimodality, intermodality)
- Decrease of car usage (in particular among young transport users)
- Increase in digital (information) services within the mobility sector

## Public participation approach



Source: Own illustration

In the project, various methods (qualitative social research, creativity methods, citizen participation procedures) are used to generate benefits in the development and planning process:

- Enhancement of acceptance and transparency from user perspectives
- Practical findings, based on everyday mobility practices and knowledge of crucial actors

## Design Thinking Process

**Sabine Berger**  
"Am schnellsten & flexibelsten bin ich einfach mit dem Auto"

**Über Sabine**  
Sabine arbeitet halbtags in einer Werbeagentur in Winnenden und lebt mit ihrem Mann in einem Einfamilienhaus am Schornbacher Weg. Ihre Tochter wohnt und studiert in Stuttgart. Sabine pendelt mit dem Auto zur Arbeit und fährt an den Wochenenden gerne zum Bummeln in die Altstadt. Jeden Dienstag trifft sie sich mit alten Schulfreundinnen in der Skybar.

**Hobbies/Interessen**  
Garten, Lesen, Reisen, Kochen

**Freut sich über:**  
• Besuche ihrer Tochter  
• Ausflüge mit der Familie

**Ärgert sich über:**  
• Stau in der Innenstadt  
• Parkplatzsuche  
• Den unflexiblen ÖPNV

**Wünscht sich:**  
• Flexibilität & Ruhe beim Unterwegssein  
• Zum Ausgehen das Auto stehenzulassen

Alter: 51 Jahre, Beruf: Controllerin, Wohnort: [Map], Haushaltsgröße: [Icon], Verkehrsverhalten: [Icon], Verkehrsmittel: 4 (Auto, Bus, Zu Fuß), Kommunikationsmittel: Smartphone, Tablet, Computer

Source: Own illustration

A group of Schorndorfer volunteers will act as "co-designers" in the development process. In joint "Design Thinking Workshops", they will contribute to the requirements analysis, develop solutions and evaluate pilot concepts.

Fictional characters (Personas) thereby help to focus on specific needs and desires instead of dealing with abstract requirements. The Personas represent four user groups of Schorndorf's transport users: seniors (1), mobility-impaired (2), car users (3) and bus users (4). The input for the Personas is based on demographics, expert interviews, participatory observation and the workshop participants.

## Project Consortia



## References

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- [3] Kuhnshof, Tobias (2012): Mobilitätstrends junger Erwachsener. In: Internationales Verkehrswesen 64 (2), S.53-54.
- [4] Institut für Mobilitätsforschung (2011): Mobilität junger Menschen im Wandel –multimodaler und weiblicher. In: Ifmo-Bericht der BMW Group.

[www.reallabor-schorndorf.de](http://www.reallabor-schorndorf.de)

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