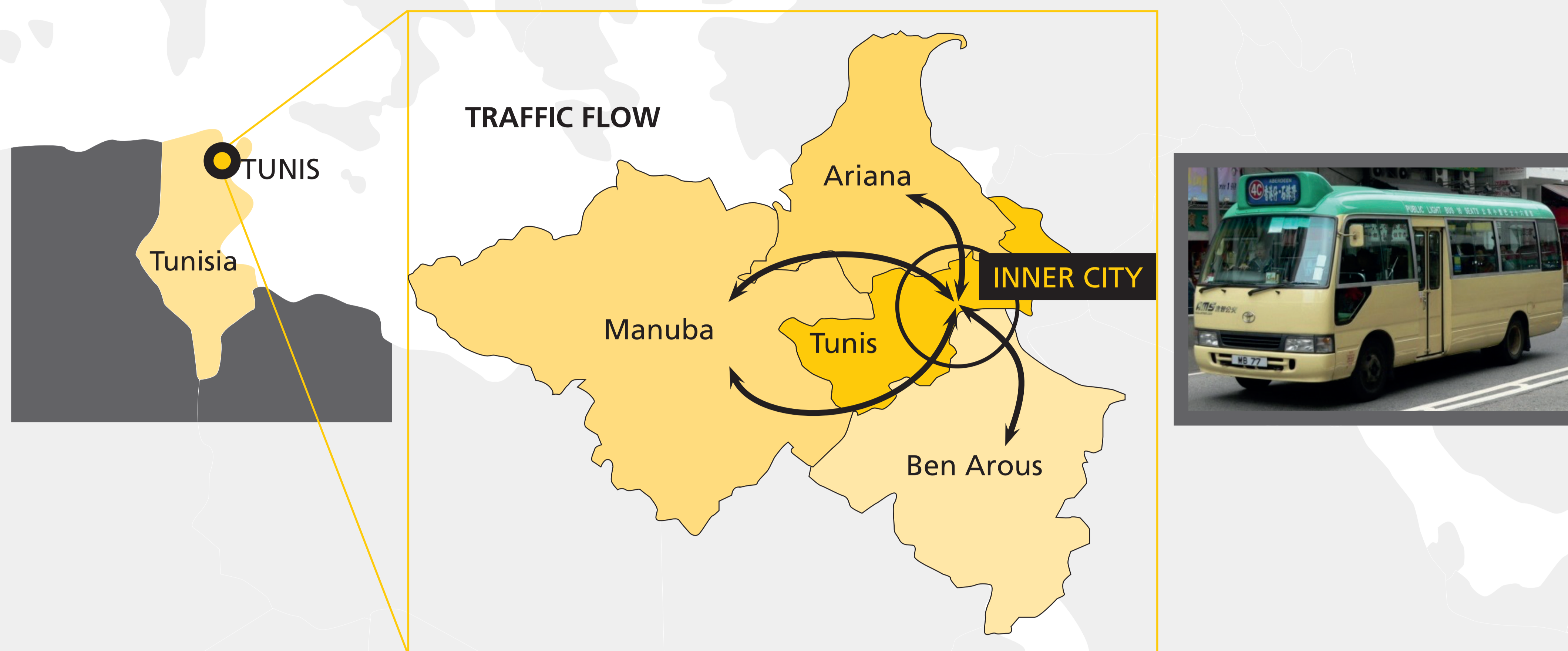


# SOCIAL ACCEPTANCE OF ALTERNATIVE MOBILITY SYSTEMS IN TUNIS, TUNISIA

Exploring social acceptance based on an innovative mobility system called »E-Minibus«



## ASSESSMENT: TRAFFIC SITUATION IN GREATER TUNIS<sup>1</sup>

- Tunis was planned in a centralized structure.
- Today its suburbs are becoming new centers for working and living.
- Traffic infrastructure does not fit to mobility needs of the population.
- Traffic flows through inner city.
- Missing connections between suburbs.
- Public transportation cannot meet people's mobility demands.

## RESEARCH QUESTIONS AND ANSWERS

### Research questions

**RQ1:** *What could be a good mobility solution for the suburban areas of Greater Tunis?*

**RQ2:** *How does an alternative mobility system have to look like in order to be socially accepted?*

### Answering RQ1 & 2

- The inter-suburb E-Minibus is considered a real mobility solution between the suburban areas of Greater Tunis.
- The main must-have requirements of acceptance are *speed, comfort, safety* and *availability*. As one-dimensional requirements, the attributes *flexibility, reliability, timetable* with departing and arrival times, and *a map* with zones were identified.<sup>2</sup>

## HYPOTHESES AND ANSWERS

### Hypotheses on acceptance of the E-Minibus

**H1:** *A visible formal examination certificate and identification of the driver increases social acceptance.*

**H2:** *Safety has a stronger influence on social acceptance than availability.*

**H3:** *An electrically driven alternative mobility system increases social acceptance more than a conventionally driven mobility system.*

**H4:** *An electrically driven alternative mobility system increases social acceptance more than a compressed natural gas (CNG) driven mobility system.*

**H5:** *A female driver increases social acceptance among the female Tunisian users more than a male driver.*

### Answering the hypotheses

- It was confirmed that a visible formal examination certificate and the identification of the driver enhance social acceptance.
- Safety has a stronger influence on social acceptance than availability.
- It appears that an electrically driven engine is valued as positive for an alternative mobility system. However, it does presently not have significant influence on social acceptance yet.
- The acceptance of an electrically driven engine appears to be higher than a natural gas driven vehicle.
- It appears that gender of the E-Minibus driver has no influence on the social acceptance.

## CONCLUSIONS AND RECOMMENDATIONS

- Tunisian citizens are generally open for alternative innovative mobility systems.
- The E-Minibus was ranked as the most preferred alternative mobility system among others between the suburbs of Greater Tunis.
- A concrete business model needs to be developed, including calculations for the economic feasibility of implementation, evaluation of routes, pricing strategies and a marketing concept.
- There is a tremendous need and demand to make a change in the mobility systems of Greater Tunis.

## RESEARCH METHODOLOGY

A mixed methods approach was conducted in order to answer the research questions and test the hypotheses (quantitative and qualitative).<sup>3,4</sup>

### ASSESSMENT METHODS FOR SOCIAL ACCEPTANCE OF INNOVATIVE MOBILITY SYSTEMS IN GREATER TUNIS

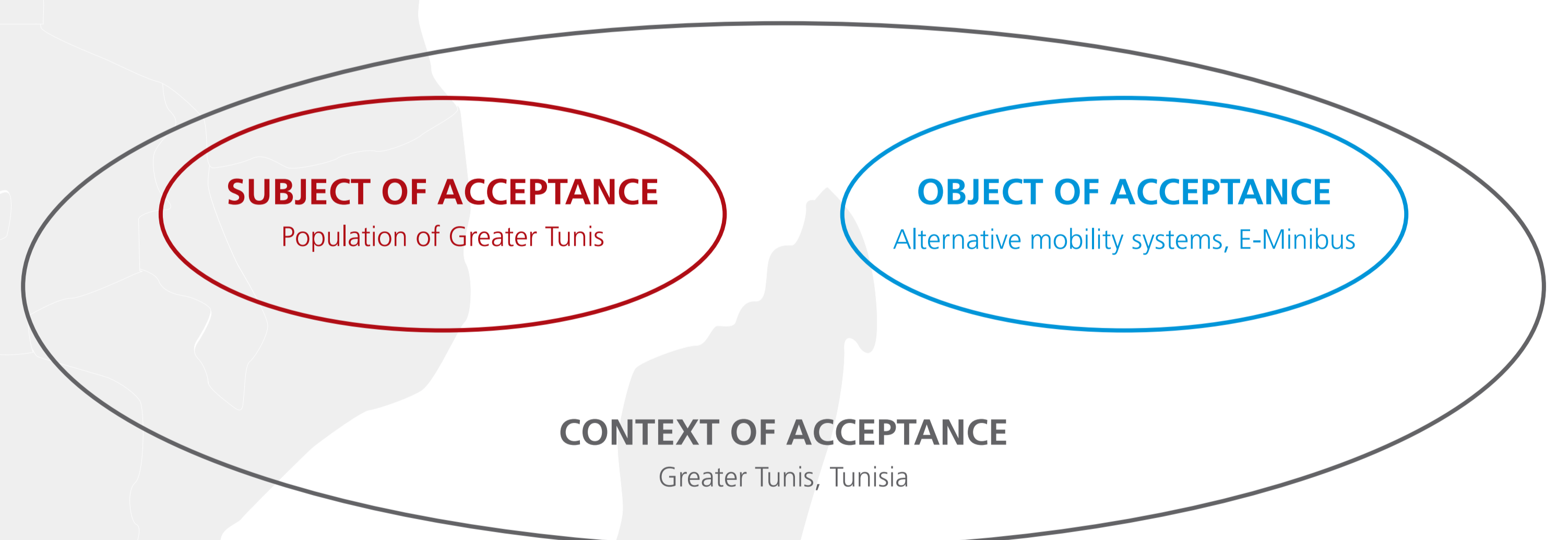
| RESEARCH FOCUS   | RESEARCH METHOD   |
|--|---|
| Tunisia / Greater Tunis  | Desk research, expert interviews, participant observation   |
| Greater Tunis infrastructure, topography, traffic flows, public transport networks | Desk research, expert interviews, participant observation, exploration (riding collective taxi lines to explore routes, stopping points, schedules)   |
| Individuals' social acceptance:<br>General tendencies, specific motivations        | Broad-scale overview of social acceptance tendencies:<br>- Quantitative questionnaire survey<br>In-depth insight into motivations and concerns:<br>- Semi-structured qualitative expert and user interviews |

The survey was conducted in the period from 27th November 2015 till 6th January 2016.

155 respondents took part in the questionnaire. Seven expert and user interviews were conducted in 2015.

## THE CONCEPT OF SOCIAL ACCEPTANCE BY D. LUCKE

Source: Adapted from Lucke, 1995, p. 891<sup>5</sup>



The social acceptance of the following alternative mobility systems was analysed:

- Carpooling    ▪ Scooter    ▪ Public bicycle rental
- E-Minibus: As one exemplary model, an *inter-suburb E-Minibus* system was conceptualised and proposed in the survey and interviews.

## THE INTER-SUBURB E-MINIBUS SYSTEM

- Electric engine driven vehicle with eight to sixteen passenger seats.
- Only circulates between the suburbs of Greater Tunis and is not authorised to drive in the inner city.
- Fixed routes with the flexibility to get on and off anywhere and anytime on these routes.
- Defined timetable and affordable fares.
- Examination and identification of the E-Minibus driver.

### Authors

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