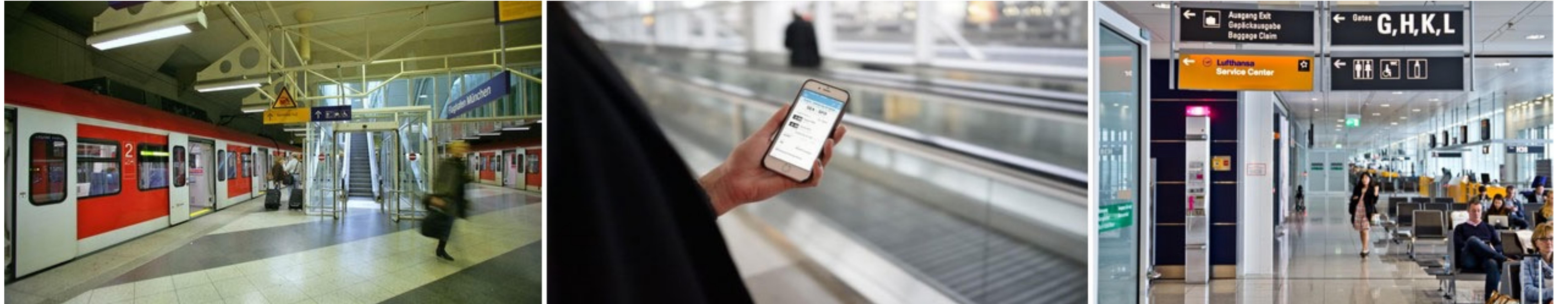


AIRBOT: USING A WORK FLOW MODEL FOR PROACTIVE ASSISTANCE IN PUBLIC SPACES

– Markus Kattenbeck, Melanie Kilian, Matthias Ferstl, Florian Alt and Bernd Ludwig –



We investigate how a task-sensitive personal assistant on smartphones can support users in public space. We designed, implemented, and evaluated AIRBOT, a mobile chatbot providing air travelers with proactive information during flight relevant tasks. We tested the application on passengers at a major airport ($N = 101$). The results of our evaluation study suggest, firstly, that AIRBOT's utility is acknowledged by its users and, secondly, that its use affects the perception of passengers' airport service experience, both positively and negatively.

Step 1: Understand the way travelers solve their needs

Semi-structured interviews with airport information agents were conducted to understand the "airport workflow" and the information needs arising therein.

- ▶ Wayfinding and Procedure as most important challenges at the airport.

Step 2: Build a prototype application (Facebook Messenger)

We based our prototype system, called AIRBOT, on Facebook Messenger. Thus we aimed to enhance the ecological validity of the experimental results, as leveraging Messenger is expected to increase the likeliness of use in the real-world.

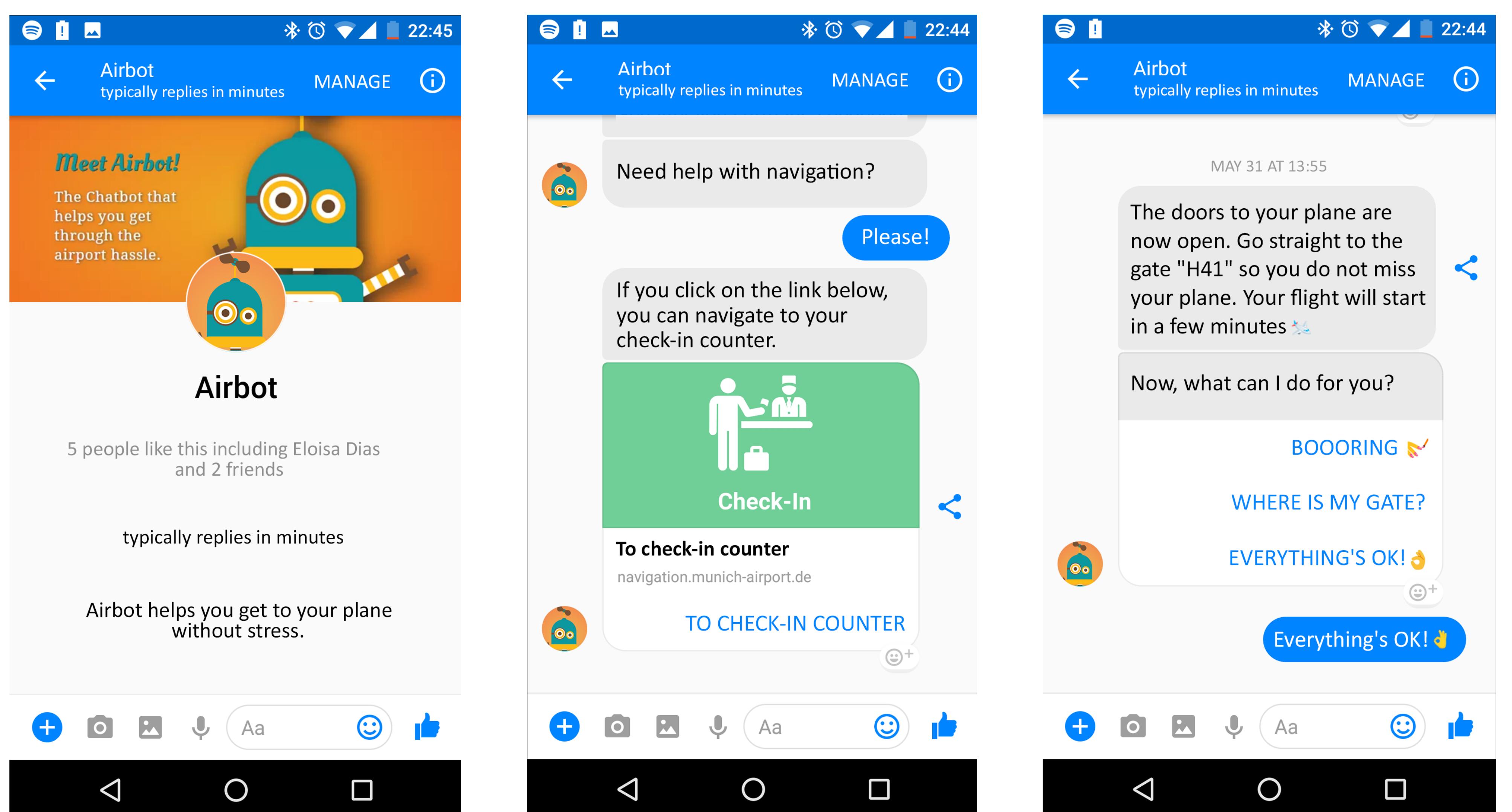
Step 3: Assess whether the system fulfills its goal

We conducted an in-situ survey-based user study at a major European airport to assess the usefulness of our approach.

People used the application as they navigated from their point of arrival to their gate.

AIRBOT APPLICATION

- ▶ Connected to the airport's real time information and flight management system.
- ▶ Can proactively send reminders and notifications to passengers.

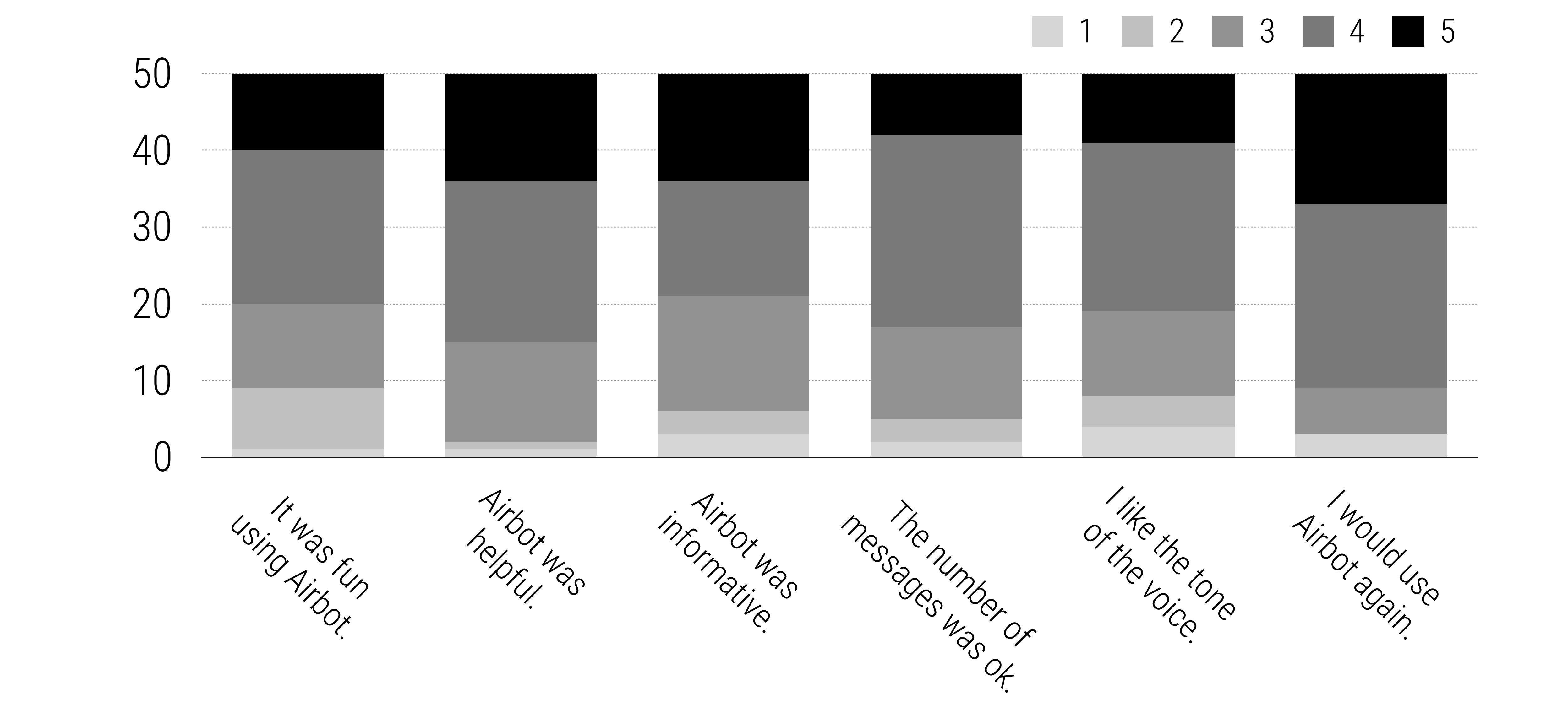


EVALUATION (N=101)

- ▶ Passengers recruited at train station of airport.
- ▶ Airbot was setup on participants' personal smartphones.
- ▶ Short introduction to functionality of the app.
- ▶ Survey to be taken just before take-off or after landing.

RESULTS

- ▶ Participants are willing to use the application again; they like the number of provided messages and the chatbot's tone.
- ▶ Airbot users feel less time pressure and experience waiting times and walking distances as shorter.
- ▶ Airbot users are less satisfied with signage and other orientation opportunities at the airport.



DISCUSSION

- ▶ Personalized services perceived beneficial by users.
- ▶ At the same time negative influence on perception of non-personalized information.
- ▶ Providing the right information at the right point in time is more important than the variety of features and information.