Chatting up an Automated Vehicle:

DOES A TEXT-BASED CHATBOT BRING BACK THE HUMAN ELEMENT INTO THE TRAVEL EXPERIENCE?

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Goals

- Enable **Human-like Interaction** in automated public transport
- Chat-like interface acts as a substitute for the human component
- Find influences on ***productivity, entertainment*** and ***sociability*** of a text-based chatbot compared to a traditional booking interface

Method

- Conducted a Laboratory Study with different Booking Scenarios
- Comparison of **two different applications** with and without text-based chatbot [Fig.1]
- Evaluated Quantitative and Qualitative Data

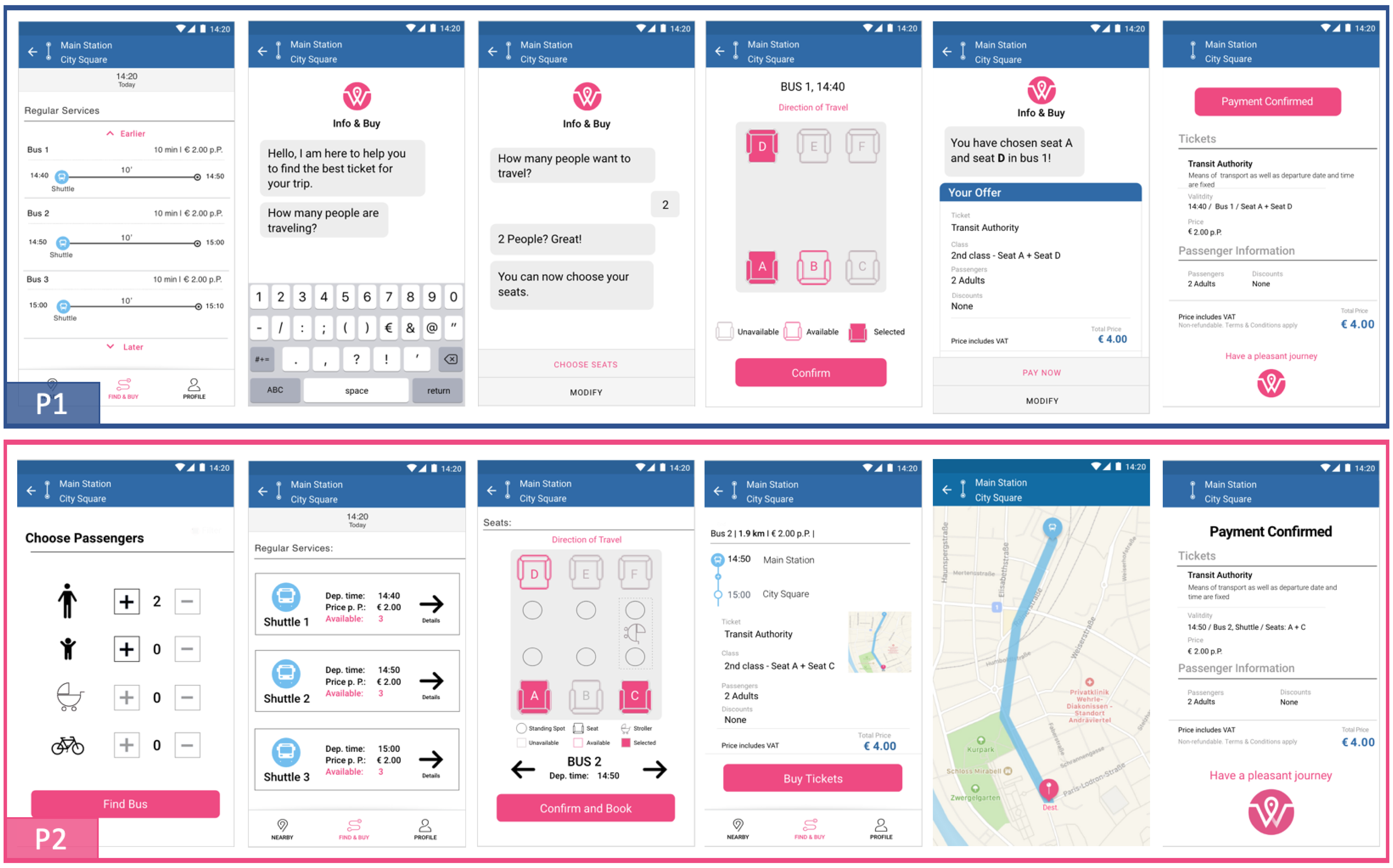

Fig. 1: Booking Prototypes P1 (text-based chatbot) and P2 (without chatbot)

Results

- **No difference** between the two applications regarding **usability** and **productivity**.
- The Chat-like interface had a **negative effect** on **entertainment** and **sociability**.

Conclusion

- Concluding that a Chat-like interface is **not suitable** for re-introducing a **human component** for capacity management.
- Future work should concentrate on a **larger scale** of quantitative extension and focus on the entire **user journey**.

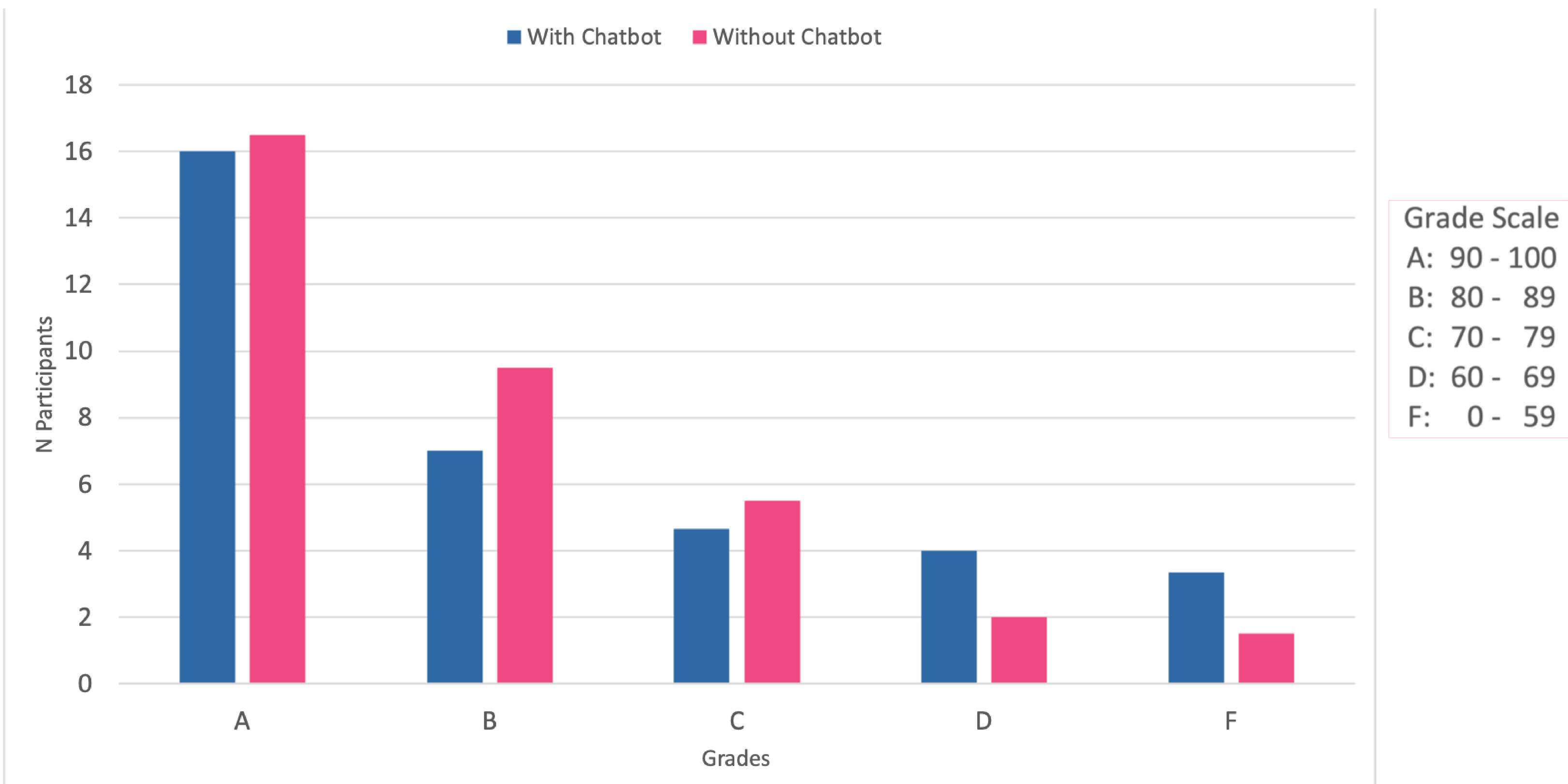

Fig. 2: System Usability Score Grades

REFERENCES

V. Wallner, A. G. Mirnig, M. Gärtner, and A. Meschtscherjakov, "Chatting up an Automated Vehicle: Does a Text-based Chatbot Bring Back the Human Element into the Travel Experience?" in AutomotiveUI '22 Adjunct: 14th International Conference on Automotive User Interfaces and Interactive Vehicular Applications Proceedings. Seoul, South Korea: ACM 2022

ACKNOWLEDGMENTS

The financial support by the Austrian Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) and the Austrian Research Promotion Agency (FFG) under grant number 865110 (Project Digibus®) within the program "Mobility of the Future" is gratefully acknowledged.

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