AuRa – Autonomes Rad

Flexibler Einsatz autonomer Fahrradsysteme für Logistik- und Beförderungsaufgaben

E-Bike Memory Seat

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Background

Shared E-bikes are used by numerous people on a daily basis. Everyone has their own anthropometric characteristics and preferred riding position. Therefore, E-bike sharing platforms should provide a convenient way of adjusting the saddle height of their bicycles.

The goal of this project is to **attract more users** to the AuRa platform by enabling them to **automatically adjust their saddle height** effortlessly from their smartphone, without any tools or manual labor.

Method

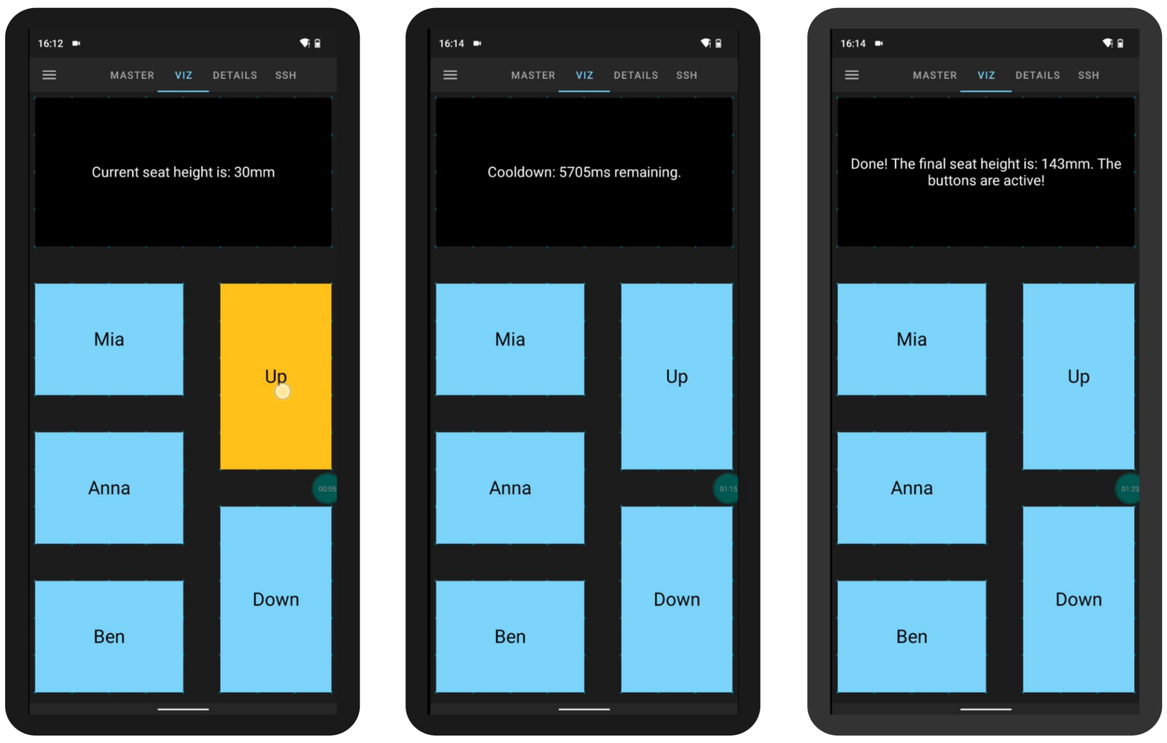

Fig.1 - User Interface and workflow.

Fig.2 - Overview of the components.

The smartphone is connected wirelessly to the control mechanism of the saddle. The Up/Down buttons adjusts the seat height accordingly, while the memory buttons move it automatically to the pre-saved positions. A **focus group study** was conducted to evaluate how potential users perceive this novel idea.

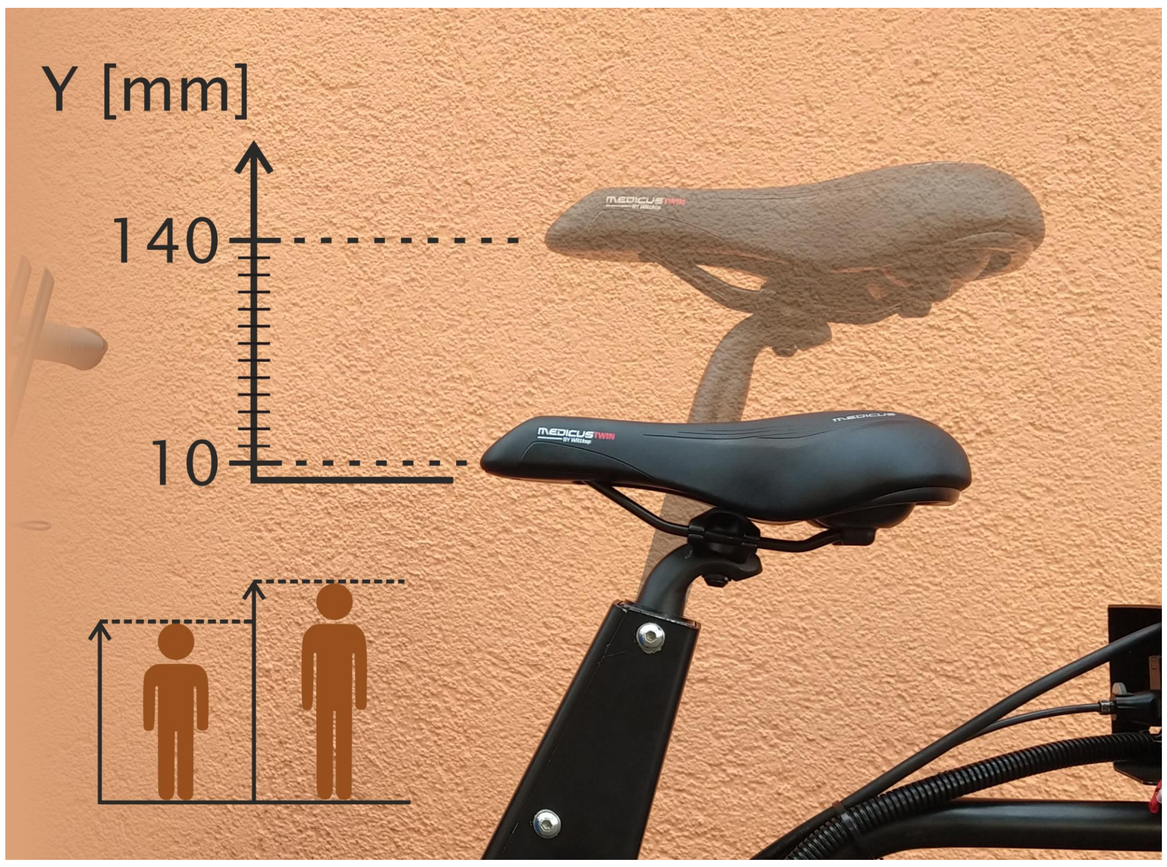

Fig.3 - Saddle movement range.

Results

The conducted focus group study revealed the following user opinions about the concept: comfortable, practical, no tool kit needed, cannot be stolen, heavy, slow, expensive. These valuable opinions helped design the first E-Bike Memory Seat prototype (Fig.3).

Conclusion

The conducted focus group study demonstrated the benefits of user research in the design process of novel technical concepts. Further usability tests will accompany the user-centered design and development of this project.

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