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TUM Science Hack 2021

Challenge: Enabling citizen participation in transportation infrastructure decisions

TUM School of Engineering and Design – Chair of Traffic Engineering and Control





About us

Website: https://www.mos.ed.tum.de/en/vt/home/

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Motivation

The decision process behind the implementation of transportation infrastructure measures lacks of transparency towards citizens. Besides that, local authorities do have few detailed information on which parts of the transportation infrastructure are perceived as especially unsafe or inefficient. Crowdsourcing approaches bringing both parties together increase the data basis for infrastructure decisions and lead to higher public acceptance.



Challenge

We invite you to implement a smartphone application that enables citizens to actively report experienced weaknesses and issues in the transportation infrastructure as well as concrete improvement suggestions to local authorities. Citizens are able to upload pictures and videos of the issues/suggestions including a description and GPS position or GPS trajectory of the affected route. The locations/trajectories are visualized on a map. Each app user can access the details of all reported issues/suggestions and can vote for these. This results in a prioritized list for local authorities.

Based on this input, local authorities define concrete transportation infrastructure measures including estimated costs and upload these to the app in a separate section. Citizens receive a virtual total budget for infrastructure measures and have the possibility to vote for the suggested measures based on this budget. Local authorities use the results of this voting for investing budget into the transportation infrastructure based on citizen participation. Within the challenge, a mock-up (visual prototype) for the app should be implemented in a first step based on the user stories provided. In a second step, the smartphone application should be implemented.

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Your profile

- User Experience Design
- App Programming
- Creativity
- Teamwork

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