DIGITAINABILITY: SUSTAINABLE SMART CITIES 2022

PROJECT: *Map To You*

BRIEF INTRO

As the climate crisis continues, the consequences can meanwhile be experienced in Bavaria as well: extreme weather events like pluvial flooding in Landshut and the ongoing drought and heat in Europe will be happening more regularly. Munich is especially vulnerable as it's Germany's city with the most sealed surfaces, which leads to heat islands in the city center and raises questions on flood prevention. Although this is quite well known, there is a lack of sufficient data on the city's surfaces to provide enough information for further development. Therefore, this challenge is about improving surface data to make Munich a more resilient and sustainable city.

THE CHALLENGE

How can we digitally provide information about the surfaces and their actual usage to support a city's sustainable development? - given by Fraunhofer IESE

YOUR IDEA

To improve currently available surface data, we chose a citizen participation approach. Current data is often not accurate enough and not up to date, so our idea was to give citizens the possibility to help to improve the data by taking pictures of surfaces on their own through an app. The surface in the pictures taken will be analyzed by AI and gathered data will be combined with available data and displayed on a website. This website should be made available to policy makers, city planners and the general public to allow discourse and planning on how to improve the current status of the city.

KEY LEARNINGS

What did you learn during your work on the challenge? What should be kept in mind?

- A lot of surface data is available, but it currently doesn't meet the requirements
- *Accessibility* is key to getting more users to use the app
- It is important to make sure that our cities do not only get smarter, but also more sustainable and resilient

WHAT'S NEXT?

As the challenge results are handed back to Fraunhofer, there could be further cooperation with the city of Munich on developing and running the necessary software. To reach citizens and offer incentives one might cooperate with the MVV.

FURTHER READING

- *MapToYou Prototype: pr.to/DKNWGI*
- CitySurfaces: City-Scale Semantic Segmentation of Sidewalk Materials (Maryam Hosseini, Fabio Miranda, Jianzhe Lin, Claudio Silva)
- Ramita M, Inakwu OA, Tiho A: Improving the accuracy of land-use and land-cover classification of landsat data using post-classification enhancement. Remote Sens 2009. ISSN 2072-4292. http://www.mdpi.com/journal/remotesensing

THE TEAM

Carolin von Bredow (M.Sc. Politics & Technology)
David-Peregrin Hain (M.Sc. Politics & Technology)
Nicolas Perron (M.Sc. Management & Technology)

Allina von Pflug (M.Sc. Management & Technology
Anis Sbihi (M.Sc. Management & Technology)