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The app for Munich's Living Lab

(Luftlotse - Der saubere Weg durch die Stadt*)

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- An App for a quick check on air quality in your immediate surroundings
- Access real-time information on mobility options
- Showing the best route around areas of bad air quality in the city

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Location: Munich, Germany

Organisations involved:
Green City e.V.
www.greencity.de/verein

Netzinkubator GmbH
www.netzinkubator.de

Hawa Dawa GmbH
www.hawadawa.com

*** loose translation of the German title into English: Your mobility guide through clean air**

CiViTAS
Cleaner and better transport in cities
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What is the solution?

Air pollution is a growing problem for public health in city centres. To allow people to get around the city in a healthy and sustainable way, this measure is about the development of an app called ***Luftlotse - Der saubere Weg durch die Stadt*** (the clean way through the city, in English). The ***Luftlotse*** app is based on the concept of a conventional mobility management tool for private users, but with an extended focus on sustainable local offers, such as the option of booking vehicles from different mobility stations, public transport, car pooling, etc. It also includes an important function related to public health. Via a grid of monitors for air quality, users can check air pollution in their immediate surroundings. This information is also integrated into the app's routing functions, so users can avoid areas with high degrees of pollution while cycling or walking.

How does it work?

The ***Luftlotse*** app has two main functions:

1. It enables users to plan their own trips via different means of transport and mobility. Among these are the newly established transport/mobility options on offer in the City of Munich's 'living lab' (the Domagkpark district) like the Concierge Service (Neighbourhood Oriented Concierge Service - a service for parcel delivery and pick up) or booking shared vehicles at different mobility stations. It also offers mobility planning and routing in general throughout the whole city area of Munich. The app contains a number of interfaces to different providers, for example, for public transport, car sharing, etc.

2. A grid of air quality monitors is installed in the living lab. Measuring indicators for air quality like particulate matter (PM2.5, PM10), nitrogen dioxide, sulphur dioxide, carbon monoxide and ozone are analysed.

App users can check the quality of the air around them with a glance at the app. Furthermore, information about air quality is integrated into the routing function. This means that users are then offered alternative routes, for walking and cycling, to areas where air pollution may be higher. Tracking functions make it possible to depict personal carbon footprints. The latter presents a gamification approach to raise awareness about the link between the user's own mobility behaviour and environmental pollution.

Expected results

The use of this app for mobility planning is expected to result in:

- Simplified access to (local) offers for sustainable mobility, and as a result, reduced environmental impact due to sustainable mobility behaviour.
- Awareness amongst users about the link between the user's own mobility behaviour and environmental pollution.
- An answer to the following question: Does knowledge about local air pollution and the own modal split/carbon footprint influence mobility behaviour?

Business model

There is not yet an elaborated business model established. However, there are already different interested parties from both the municipal and business side. There is an idea to expand the concept of ***Luftlotse*** to the whole municipal area of Munich. In this case, both software and hardware (measure grid) will need to be extended significantly, and funding through a public/private partnership would be necessary.

The grid of air quality monitors is subcontracted to a start-up company, with financial resources provided by CIVITAS ECCENTRIC.

For different providers of online maps, it could be of interest to offer an additional layer showing air quality. There are different approaches possible to implement this. The concept could simply be sold to service providers. But a service contract work, fulfilled by Green City and its subcontractors is also conceivable.

When expanding the measure grid to the whole city area, a higher six-digit price is to be expected. Appropriate adjustments in the software imply additional costs in a lower six-digit range. All in all, the expansion from the living lab to the whole of the municipal area would take at least one year.

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