**Business analysis: Citizen Science verge inventory and management in urbanized Flanders**

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Abstract

Verges form an important part of the green-blue veins of urbanized Flanders, which can be considered as one large city. They play an important role in relation to climate change, numerous ecosystem services, and genetic diversity to combat pests. Green-blue permeation, including road verges, forms the foundation of resilient cities.

There is a need for a uniform inventory of Flemish verges and their quality for all of Flanders. Through this overview, we know which verge location needs to be actively addressed, for example through adapted verge management. Currently, there are numerous verge inventories, which however all were conducted in very different methods. This research builds on a previous study on Flemish verges that developed a scoring system for the verges and carried out an initial integration of existing verge inventories. With this current research, carried out on behalf of the Department of Environment, we want to get a more detailed view of the quality of the Flemish verges using a scoring system. We want to do this through Citizen Science and at the same time raise awareness about the importance of biodiverse verges. In this study, we carried out a business analysis, in preparation for an app that will be developed in the context of the Citizen Science project. All stakeholders were surveyed using different research techniques, and a communication strategy for the end users was defined. To confirm the viability of this approach, we developed a proof-of-concept in the validation phase, containing a solution for technical issues. The analysis found that the app ideally targets two audiences: nature lovers without and with species knowledge. The proof-of-concept showed that essential functionalities include location determination, registration of flora and fauna, photographic documentation, date and time registration, and space for user notes. For the communication strategy, we recommend a broad approach, aimed at nature lovers and various groups who often seek out nature. The communication should share facts about biodiversity in Flemish verges and the launch of the app is best supported by both traditional media and digital marketing.

The results and recommendations of this research allow us to continue with the development of the app for the Citizen Science project for verge inventory. This will ultimately not only lead to a uniform verge inventory, where data exchange is possible, but also to more support in relation to the importance of verges, as part of the green-blue veins in urbanized Flanders. And in this way, this research contributes to a more resilient Flanders.

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