MaForêt Mobile - An Application for Small Forest Owners

Today, many of the small forest owners are living in cities and do not care about their forests, which often were inherited. To protect the forest overgrowth and to ensure their conservation the Federal Office of the Environment FEON wants to get in contact with the small forest owners. To support this effort we created a smartphone app.

Introduction

The Bern University of Applied Sciences Engineering and Information Technology BFH TI and a team from the School of Agricultural, Forest and Food Sciences HAFL have joined their efforts and knowledge to set up a project to solve a problem of FEON. The team has developed the MaForêt platform desktop web platform that every small forest owner can use, to search their plot of forest and learn more about the condition and the development of their forest.

To reach even more forest owners, the desire was expressed to create a mobile application along with the MaForêt platform. This was the work that was implemented in this bachelor thesis.

Goals

The main goal of this Bachelor Thesis was to develop, test and evaluate a mobile application for smartphones, so that small forest owners can easily be onboard to the MaForêt Platform.
The forest owner, can search their plot of forest on the map. We can show a clickable map with the plots of forest, the forest owner can navigate to their plot easily and can select it. In a detail view the owner can see the information about their plot.

Result

The application was implemented using the Ionic framework, so that the application is platform independent. The application can be easily built with Capacitor and installed on both android an iOS mobile devices. The technologies were chosen so that they can be used in further development and are up to date.
The forest owner or forester can search and select their plot on the map. Subsections were created so that the data about the forest plot is more accurate. The forest owner keeps data about the mixture level of the plot, the altitude and texture.

Conclusion

The project was started based on the agreement document. The SCRUM-board maintained in GitLab served as a guideline. Through weekly meetings and feedback from the customer, the application was continuously improved, and challenges were quickly identified and solved. The application now already provides a service that the customer can use to attract new small forest owner to onboard for the project and the platform MaForêt.
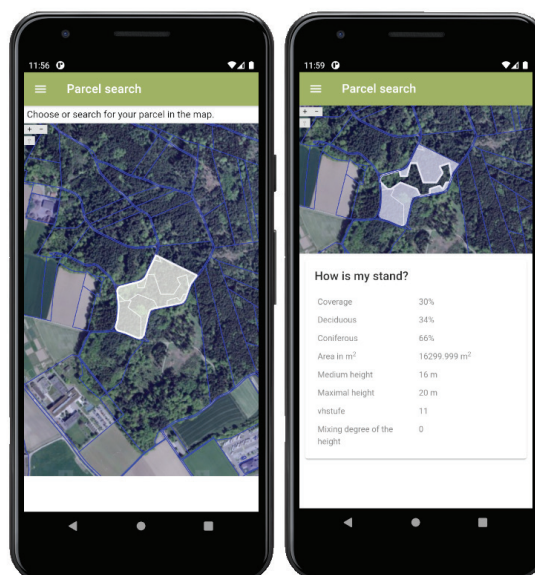
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Figure 1: MaForêt mobile application (map on the left, choosen plot on the right)