

LATVIA

Digital futures

Location

Teili

Programming period

2014 – 2020

Priority

P6 – Social inclusion & local development

Measure

M19 – LEADER/CLLD

Funding (EUR)

Total budget 20 700

RDP contr. 14 490

Private 6 210

Project duration

2019 – 2020

Project promoter

SIA 'BeeTech Services'

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To enhance the well-being of honeybee colonies, the project developed a digital tool for beekeepers to enable them to keep and share colony records and to plan management tasks efficiently.

Summary

The project developed a digital tool for beekeepers to enable them to keep efficient records of bee colonies, organise reminders and to plan management tasks. The improved management resulting from record keeping and planning will help ensure the enhanced well-being of bee colonies. The digital tool also assists inventory management and enables knowledge sharing between beekeepers.



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The small-scale innovative technology has been developed through a practical and user-centred approach. The project involved multiple stakeholders and the resulting tool stimulates digital collaboration between beekeepers and is readily scalable.

Results

Currently more than 500 beekeepers are using the BeeKing app (<https://beeking.eu/en/>) and are able to plan and track bee-colony health, queen bee status, sufficiency of food, harvest, varroa mite treatment, and many other important aspects of beekeeping management.

For organic beekeepers in particular it is a valuable support tool, because within the organic certification process, they have to be able to demonstrate apiary record keeping. BeeKing allows users to present a transparent review of apiary management during the season. Beekeepers can easily compare results across seasons and select the best colonies for future breeding, for example.

To promote the well-being of bees, a free Starter Plan for beekeepers with up to five colonies is available. It also allows beekeepers of all sizes to try digital beekeeping on a small scale, without any time limitations, before investing in the app.

Context

Honeybees play a huge role in preserving our ecosystem. The number of bee colonies in Latvia has increased in recent years thanks to new small-scale beekeeping.

The project owner, BeeTech Services in cooperation with the Latvian Beekeepers Association, carried out a survey to identify beekeepers' management challenges and needs with regard to record keeping and planning. The survey showed that most beekeepers record data during colony inspections on paper or by marks on hives, which can be inconvenient and time consuming to process later.

In addition to this, lack of access to a collective information base makes it difficult for beekeepers to benefit from others' knowledge and wider experience within the beekeeping community.

A challenge for the project was that while working in the apiary beekeepers usually have sticky fingers and use gloves that then makes manual data entry and navigation of digital tools difficult.

Objectives

The project's objective was to develop a set of digital tools to allow beekeepers to enter data and utilise records in their apiary, at the same speed or faster than it would take to use paper records. This meant being able to enter data and utilise hive records within 15 seconds.

To achieve this, new technologies were combined to develop a set of tools involving speech to text recognition, Near Field Communication (NFC) tags, and intelligent forms.

Early participating beekeepers, who each had different habits, knowledge, and number of colonies, shared their most important apiary management needs and knowledge sharing requirements.

Activities

In order to create a set of digital tools for beekeepers that will improve efficiency and knowledge exchange in the sector, the project was split in two phases, both of which were funded by LEADER under the RDP.

The first project phase developed the project's MVP (minimum viable product), and the second phase developed scalability and additional functionality. A mobile app with an easy to navigate interface, empowered with voice and NFC based hive tags for record keeping in combination with speech2text recognition, was

created to give beekeepers record keeping options to enhance their bee-colony management.

Also, a portal was created for convenient reviews and overall planning at home or on a bee farm with the help of a PC. Beekeepers can use the BeeKing app in families or teams, accessing the same information from multiple mobile phones. There is also a user forum component to share ideas and knowledge amongst beekeepers. The set of tools allows beekeeping records to be structured in a common way and enables collaboration between beekeepers using the same app. If a beekeeper were unwell and unable to attend to his or her apiary, for example, another beekeeper would still be able to access his or her management records.



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Main results

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Key lessons

The project was carried in collaboration with Latvian Beekeepers association, as industry partner and stakeholder, with more than 20 beekeepers representing different types of beekeepers with a diversity of needs. Two further stakeholders collaborated on the project, the LAG and the municipality of Sigulda district, who have a particular focus on supporting new entrepreneurship.

The BeeKing app started on a small and local scale but is now being used in other Nordic and central European countries and is enabling collaboration between territories. At the moment BeeKing is available for beekeepers in English, German, Swedish, and Latvian.

A reference from Latvian beekeepers association (text from press release May 2020): *“Beekeeping, like other industries, faces a variety of challenges, and BeeKing is one of initiatives that allow beekeeping to keep pace with the times. We can be proud of such an innovative solution has been made in Latvia. We have been cooperating with the BeeKing team for several years, both in education beekeepers in the field of apiary records, both representing Latvia internationally”,* says Juris Šteiselis, Chairman of the Council of the Beekeeping Association.

Additional sources of information

www.facebook.com/BeeKing.eu
www.instagram.com/beeking.eu

*This project has been categorised under ‘Digital futures’ by the nominating National Rural Network