

Bio





Private funding

A little bit more about 10-frame beehive (AS hive)

The case study represents an example of an active, creative and social collaboration process between a family start-up company (the producer) and end-users (beekeepers). Within this process, the end-users became active participants in the innovative activities of the company and took part in the development of an innovative beehive. The initial idea for the beehive was first developed as part of a project application under the Operational Programme "Innovation and Competitiveness" 2014-2020 (OPIC); however, after being rejected, the family who had no prior experience in beekeeping, funded the development of the hive through their newly-established private start-up.

"We wouldn't have succeeded without the beekeepers because without them, we would not have any idea about their requirements.... the fact is that for every product you have to communicate with the prospective consumers, in this case both the bees and the beekeepers." (Co-owner of the start-up)

The private start-up's 'end-users-centric management' strategy, based on the integration of end-users into the value-creation process, was the driver of the interactive innovation process. This process empowered end-users (beekeepers) to participate in the creation of the beehive modifying it in accordance with their practice-related needs. This partnership went beyond conventional contractual arrangements of organising collaborative value creation and included other forms of such creation based on informal, non-contractual relationships. The informal partnership did not end with the development of the beehive; rather, it became sustainable as it continues to be a source for development of new products by the private start-up in cooperation with beekeepers.

"...He thinks of this product as follows, 'Would it be useful for this person?' He thinks, 'Let's help the beekeepers, not just make one type of hive like other companies do' - they just make beehives without having an idea of how to make beehives... eh... their idea is to profit." (A beekeeper describing one of the co-owners of the start-up)

"In every field, it is important to get the mentality... to have a successful business, you have to know what people want, what they are looking for and how they make decisions..." (Co-owner of the start-up)

Innovation and co-creation in 10-frame beehive (AS hive)

Innovation in 10-frame beehive

The aim of the informal partnership was to find a practical solution to a problem facing beekeeping in some regions of Bulgaria – thefts of beehives, especially in remote areas. Although in recent years was a boom in beekeeping, a lot of the hives were located outside populated areas, and very often they were far from bee pastures. As a result of interactions between the start-up and the end-users, an innovative beehive (AS hive) was developed. The beehive reduced the beekeeping workload by 2 to 3 times, allowing a beekeeper to handle a much larger number of hives. It also included an innovative pollen catcher that reduced the cleaning work of the beekeepers and an innovative feeder adapted to all types of feed. A security system could be added to prevent the risk of hive theft, especially in apiaries that were remote from towns and therefore theft-prone. The AS hive was aimed at making apiaries cost-effective in remote, difficult-toguard places, close to bee pastures.

Co-creation in 10-frame beehive

The interactions of the start-up with beekeepers were driven by and subjected to two pathways of generating and applying endusers' information in the development of the beehive: 1) 'ask beekeepers' and 2) 'build with beekeepers'. The 'ask' interactive pathway included the initial identification of end-users' needs an problems, development of pilot design solutions to problems and using individual beekeepers' and beekeeping organisations' experiences and ideas for improvement of the already designed solution. The 'build with' interactive pathway represented the active involvement of one individual beekeeper in the design, the trial and the further development of the beehive. Each of these pathways led to different types of integration of the beekeepers into the interactive innovation process. Each of them led to changes in different constructive elements or functionalities of



elinga, E., Zaalmink, W., Bergevoet, R., Geerling-Eiff, F., Holster, H., Hoogerwerf, L. and 008). Networks with Free Actors. Wageningen UR, Wageningen.

"In practice, it cannot be created only by an engineer after making some research on beekeeping on his own, he cannot study it on his own, right... he can only study it on the basis of the experience of certain people and... in practice, it is most accurate to say that the hive was the result of the interaction between someone who has an engineering mindset, such as R1., and various beekeepers, the beekeeping community." (Co-owner of the start-up)

"Our communication was based on real dialogue

10-frame beehive (AS hive)



National: Bulgaria



6 individuals and 20 beekeeping societies Lead Partner: BioInn Company

Highlights!



and end-users

Empowerment of end-users to participate in the development of innovative solutions to problems that they experience in practice



Newcomers to agriculture may foster innovation in the िर्नि हे sector as they bring resources gained outside of farming



Interaction with the funding mechanism



Interaction between the case study partners



Interaction with external stakeholders Some of the OPIC 2014-2020 instruments have selection and evaluation criteria that are horizontally linked to a number of national priorities; however, they do not allow a clear focus to be placed on the support for innovation that this Programme offers. Most OPIC procedures support only a specific group of beneficiaries who hold patents and utility models, thereby limiting the access of those who do not fit those criteria.

The process of knowledge sharing and learning was not set as a formal agenda with strict objectives, deadlines, tools and methods. It evolved rather organically as a result of the attempt to combine engineering and beekeepers' practical (tacit) experience.

Although the interactions between the start-up and beekeeping societies was not originally foreseen by the company, the feedback received led to changes in some of the hive's constructive elements based on shared knowledge, experience and needs. These organisations played the role of 'arbiters', judging the effectiveness of the beehive and the extent to which they could use it in their practices.



The beehive brings changes to beekeeping practices





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ित्ति Informal interactive partnerships become sustainable over time, creating value both for a private company



Good Practices & Lessons Learned

Lack of clear political goals in support of innovation and cooperation in The beekeeping community in Bulgaria represents a mixture of those

Private or self-funding provides much autonomy for the administrative deadlines for projects.

The private start-up's 'end-users-centric management' empowered beekeepers to get actively involved in the decision-making process of finding solutions for their practice-related problems.

After the beehive was released on the market, the beekeeping societies continued to be used by the start-up as valuable sources of information for the generation of new ideas as well as platforms where innovative solutions could be tested.

Empowerment of beekeepers to create solutions to problems and needs



200,000 EUR

Interesting links/videos/reports



https://bioin-bg.com/za-nas/

https://bioin-bg.com/wpcontent/uploads/2019/02/BioIn_Brosh A4-web-ENG_Feb2019.pdf



Beekeeper demonstrating the hive:

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development and the implementation of innovative solutions and flexibility in the decision-making process, whereas the creation of new products in agriculture does not fit well within strictly regulated

