

Researchers of ecosystems, the food industry value chain, and NGOs are all puzzled about the decline of pollinators in Europe and worldwide. Despite much attention and serious interdisciplinary research in the field, in the last decade, we have become more aware of the gaps in our knowledge than of potential solutions. There is a complex interplay between pollinators and various anthropogenic and environmental factors and we are only starting to grasp an understanding of the inherent chain of causes and effects. In Europe, we also face a century of stagnation in the beekeeping industry, as well as the emergence of urban beekeeping as a hobby. Researching these complex phenomena requires not only sound research plans, but a complex, interdisciplinary, and interconnected data collection and integration infrastructure that supplies researchers with information from the last mile: the beekeeper's business and the beehive itself. This is where we can add significant value to research projects like consortia forming for the [Dependence of society and the economy on pollinators](#) HORIZON-CL6-2024-BIODIV-01-3 Horizon Europe research grant call.

As researchers in previous projects like [B-GOOD](#) realise, receiving high-quality data from multiple beehives in different locations remains a huge logistical and engineering challenge. Even if researchers get access to such precious data, they are unlikely to have at their disposal the data engineering know-how to integrate it with ecological, meteorological, pollutant, atmospheric, and hydrological data from the local environment. They typically also want to connect this information with socio-economic data from the beekeepers and field researchers, which requires credibility and organisation combined with data management.

Two [award winning](#) impact startups from The Hague want to join a Horizon Europe Research and Innovation Action consortium to help researchers with their data and deep tech innovations to solve these complex research infrastructure problems. They are inviting relevant stakeholders, from beekeepers associations to world-class researchers, to set up a data observatory, similar to about 60 EU-funded data coordination and collection programs, where knowledge collected from bees, beekeepers, the stakeholders of the food chain and environmental and ecological surveys can be professionally linked for B-GOOD and later research programs.



We are joining two important and impactful [innovations](#) via our Global Pollination Observatory. [BeeSage](#) is developing proprietary hardware and software for data-driven beekeeping, solving complex engineering and logistical challenges to bring their reliable

Smart Beehive Scales and other add-on sensors into leading-edge apiaries in Europe and beyond. [Reprex](#) is complementing this know-how with innovations in open-source data science and software to connect official data streams with public sector information while pursuing rigorous standards of open-science data management.

Through our Global Pollinator Observatory, you receive a direct, reliable data pipeline that reaches into beehives in diverse environments and regional climates via 2G/LTE-M at a competitive price and high reliability and sample surveying access to beekeepers, their apiaries, enterprises, and markets. In this way, your research can truly reach the last mile.

- ▶ Via advanced data pooling, data integration, and linking open data, you can integrate precious filed research data with real-time access into various environmental and socio-ecological data collection programs of the European Union, its member states, environmental agencies, and non-competing scientific projects that use open science.
- ▶ With the use of this network, your research can make a real impact: we are present in the beekeeper and agritech communities, conferences, and events, and can help connect your research to these important and hard-to-reach stakeholders.
- ▶ We participate in scientific and practical research to support the implementation of the new European Sustainability Reporting Standards (ESRS) that will be mandatory for large agri- and food businesses and require harmonised surveying of impacted communities, users, and their workforce, from suppliers all the way to beekeepers.

Reprex is a science-based startup with experience in various EU research and innovation programs, including in the Horizon Europe programme. We are reaching out to potential partners to organise a consortium to submit a grant proposal for this multi-million euro prestigious research grant.

We believe that we could add innovation and impact to your research consortium with our civil society and trade association partners in beekeeping and regenerative agriculture, and provide you with a state-of-the-art research infrastructure with excellent dissemination and exploitation opportunities.

