

*Press release, 11 July 2023*

## **GUARDIANS - Smart solutions to empower small- and medium- sized farms as guardians of their territories**



*On the 21-22 of June 2023, 22 partners from 9 European countries gathered in the region of Asturias, Spain, for the first meeting of the EU- funded project GUARDIANS. This project aims to empower small and medium-sized farms to become competitive through digital technologies.*

The name of the project, [GUARDIANS](#), is quite evocative and reflects the idea that **smaller farms, equipped with the right tools, can become the guardians of their own territories**. They can promote the sustainable use of land and preserve biodiversity.

[Fidel Díez](#), Coordinator of GUARDIANS, said that the project will be extremely relevant for the agri-food sector because “GUARDIANS will test digital solutions in small local agriculture and livestock producers **with the clear aim of improving the productivity and rentability of these farms through technology** and, at the same time, **improving the quality of life of the people living in rural areas**, which is at heart of what we do at [CTIC](#).”

To empower such farms, the project will use a co-creation and multi-actor approach to involve people in the protection and development of their own territories. The key to GUARDIANS strategy is the **adoption of a set of innovative digital solutions**, including both software and hardware technologies, to solve the problems related to the administrative and funding reporting for the [EU Common Agricultural Policy](#), to smart agriculture for labour support, and to environmental valorisation.

Even though digital technologies and farming sound like two separate worlds, the reality is that digital innovation helps small- and medium-sized farms to thrive and compete in a market dominated by bigger companies. **Digitalisation can improve both economic and environmental**



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**sustainability**, resulting in a more efficient use of the land and a better preservation of the territories' characteristics and biodiversity.

GUARDIANS selected **nine technologies** to build a catalogue of digital solutions from which the farmers can choose the right ones for them, for both arable and livestock farms. Among the provided technologies, some are **software helping farmers to manage their crops and livestock**, or the quantity and quality of nutrients used, avoiding waste and soil pollution. It is the case of SATIVUM, a support tool for crop management developed by [ITACyL](#), and of the environmental progress, profitability and provenance tool by [CARBON](#).

Other technologies proposed by GUARDIANS rely on both software and hardware, such as GrassGuard, the **drone for grassland care** provided by [CZU](#), or the drones for field protection and **wildlife management** developed by [FLOX](#).

Platforms and monitoring systems are in the GUARDIANS catalogue as well, with the **climate and weather monitoring platform** realized by [LINKS](#), the **beehive protection and monitoring system** provided by [ART21](#), the **greenhouse gas monitoring platform** for stables by CTIC, and **soil health and assessment service** created by [IVL](#).

**Blockchain technology** is another important ally for the guardians of the territory, with the blockchain- based environmental certification system developed by CTIC.



Figure 1 Maps of technology providers, pilots, testbeds, and other partners.

The project aims to carry out at least **25 digitisation processes**, incorporating new digital technologies into the routine production processes of different small- and medium-sized farms.

One of the main obstacles that GUARDIANS will face is the **uptake and acceptance of digital technologies by farmers**. In fact, besides the technological one, this project also has a strong social focus on involving different players within the agri-food chain.



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Cooperatives, livestock farmers, farmers, technology providers, and others will all be involved in the **co-creation project** to ensure that the technologies identified as the new tools for the guardians of the territories are **optimised for the farmers** who will be the end-users.

The technologies will be tested in **6 pilot cases in different European countries**: Italy, Spain, Sweden, and the Czech Republic. The farms were selected to represent the widest possible range of environmental, climatic, and socio-economic conditions across Europe. GUARDIANS has planned a replication phase in which at least 95 farmers will be reached.

The journey of the new guardians of our territories and biodiversity has just begun, led by CTIC Technology Centre, and it will last four years.

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