The implementation of the robotic service pilot in agriculture using cloud technology achieved significant milestones in enhancing precision agriculture, data-driven decision-making, remote monitoring, and autonomous operations. Cloud computing facilitated the collection and analysis of extensive data for informed decisions in crop management and resource allocation.

Real-time monitoring through cloud-connected robotic systems allowed farmers to observe and respond promptly to changes in crops, irrigation, and equipment. Moreover, the autonomous capabilities of cloud-connected robots, equipped with sensors and cameras, enabled tasks such as planting, harvesting, and weeding, contributing to increased efficiency, productivity, and sustainability in farming practices.

The MiFood Robot automates harvesting and collecting food in farms. The robot collects and stores food items including fruit and vegetables in farms faster, maximises crops produced and enhances sustainability increasing efficiency and reducing CO2 emission on harvesting. The result is quicker harvesting time, food waste reduction, labour shortage reduction, more efficient collecting, lower labour costs, and reduced risk of accidents.

MiFood is analysing different solutions for improvement and further development of robotic solutions. With the new possible appliances, new AI models are required, as well as integration with the Cloud services compared to the current solution.

Integration of the MiFood Robot with EOSC Services: compute services, AI platform. EOSC DIH consultancy on the technical solutions

The pilot and the developed solution will support agriculture sector by enhancing operational efficiency through automation and data-driven decision-making, which will lead to substantial cost savings. Additionally, the cloud-connected robotic agriculture systems are expected to contribute to environmental sustainability by precisely managing resources, minimizing the overall environmental impact of farming practices. Moreover, the planned continuous monitoring and data analysis facilitated by the solution are expected to optimize crop management, resulting in improved yields and higher-quality produce. TRL increased from TRL6 to TRL7.