



5/8

CURRENT TRL
& TARGET TRL

- 10%

IRRIGATION

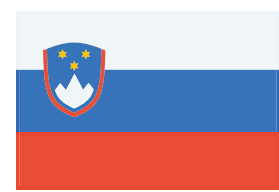
+ 20%

EFFICIENCY

- 10%

PLANT PROTECTION
PRODUCTS

COUNTRIES



PARTNERS

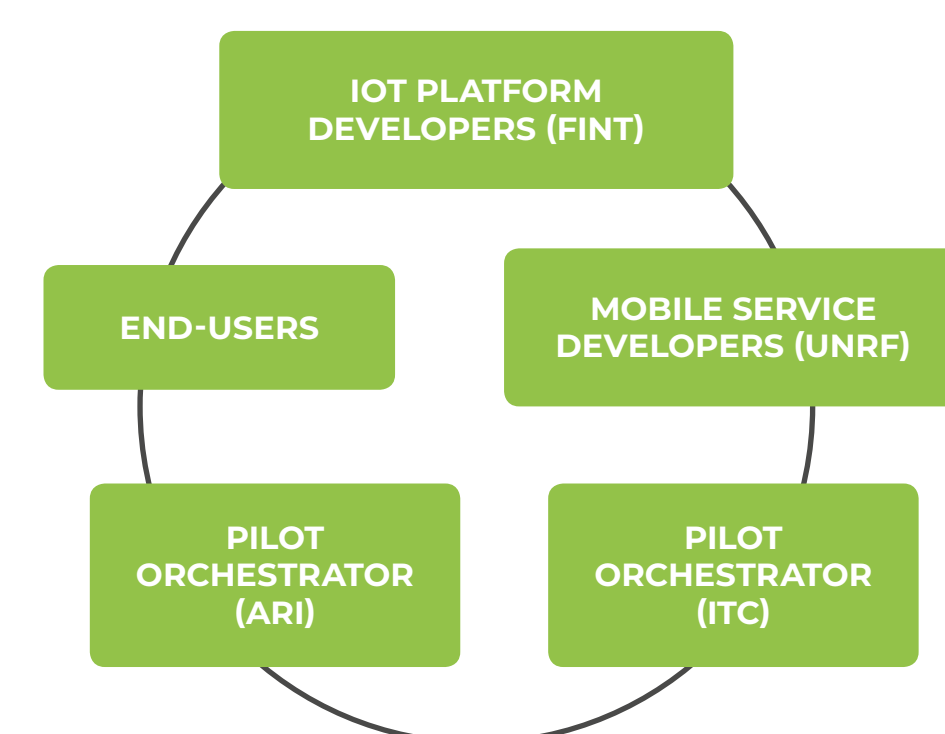


INOVACIJSKO TEHNOLOŠKI GROZD
INNOVATION TECHNOLOGY CLUSTER



4.5 DIGITAL ECOSYSTEM UTILISATION

Currently, only a fraction of the plant protection products applied successfully tackles pests or insects, while the rest unnecessarily pollutes the environment. By utilising data stemming from IoT devices in the field, cloud computing and analytics technologies, this use case timely notifies the farmer to proceed with such activities while addressing challenges related to irrigation. Synergised parameters result in a service which increases the total farm productivity, contributing to food security. By incorporating innovative traceability technology, this use case integrates information from the entire food value chain to a marketplace, offering elaborate value propositions to users. Hence, it enables stakeholders in the agri-food sector to participate in an innovative digital ecosystem.



PARTNERS

- Future Intelligence Ltd (FINT)
- ITC / Digital Innovation Hub Agrifood (administration of >10 pilots and Communication Leader)
- University of Nicosia Research Foundation (UNRF)
- Agriculture Research Institute (ARI), Republic of Cyprus (administration of >5 pilots and Agronomical Leader)

HOW IT WORKS



This use case delivers tailored information to farmers based on the data acquired by IoT devices (low-cost weather stations) regarding high farm input-costs (plant protection, irrigation water). As a result, IoT devices, cloud computing and analytics technologies translate data into services and increase the Total Farm Productivity (TFP) factor which consequently assures food security.

In addition, the use case involves track and trace services and queries incorporating the achievements within IoF2020, being the first solution that delivers on- and post-farm traceability features. Lastly, an innovative marketplace where on- and post-farm information can be published and shared with external business entities to validate food content.

THE IMPACT

OUR OBJECTIVES

Engage agri-food partners from Cyprus, Slovenia and Greece;
Deploy more than 25 IoT devices in regions where IoF2020 has not been present so far;
Provide IoT-enabled irrigation and plant protection services to farmers;
Expand and evaluate the objectives and results to other use cases in the fruits and vegetables sectors.

ON ENVIRONMENT

- Efficiency improvement – farm visits per farm (-20%);
- Reduction of pesticide use – ratio of initial kg product / kg input (-5-10%);
- Water use reduction – ratio of initial kg product / kg (m3) input (-5-10%);
- Cost reduction / kg input (10%);
- Increased total factor productivity of farms.

SOCIAL IMPACT

- Connected IoT devices (<60);
- Increased IoT uptake among end-users;
- Information provision to consumers on growth and farm supply chain conditions;
- Boosted farm sustainability;
- Strengthened data privacy and security;
- Improved consumer trust.