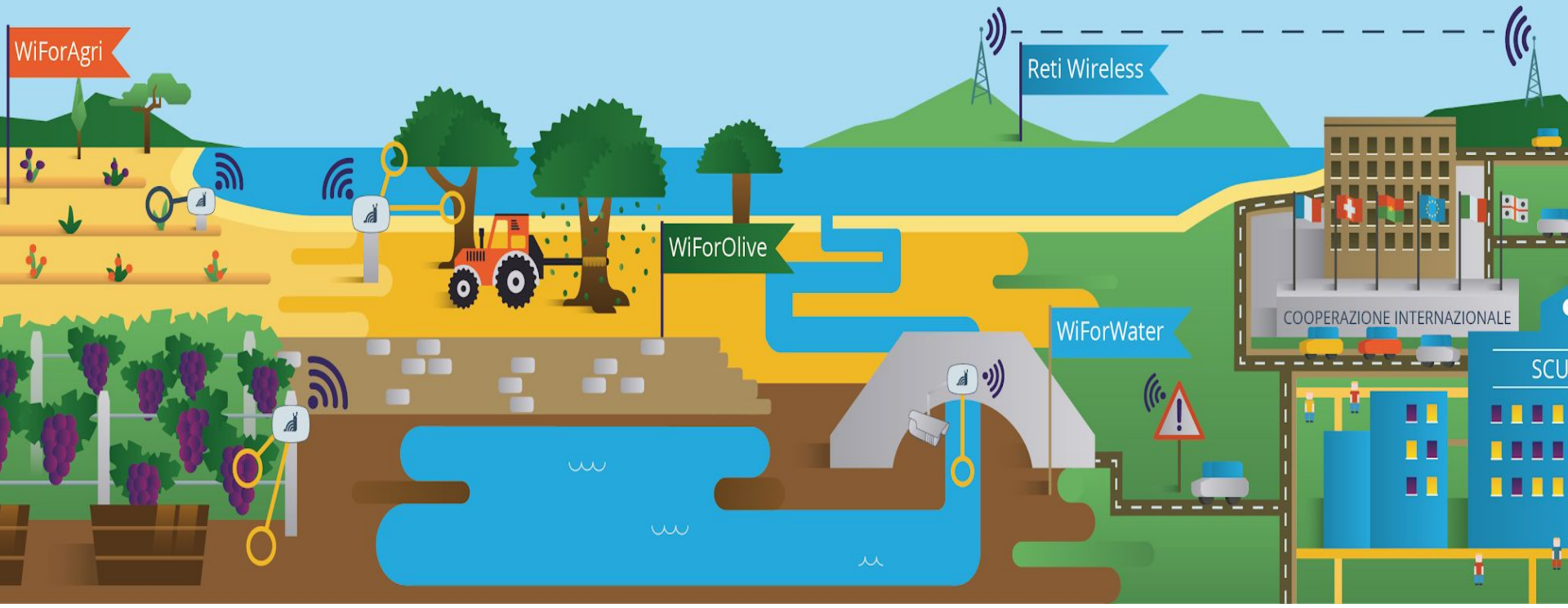




PRIMO PRINCIPIO

IoT solutions for Rural: Smart-Agriculture

- **Primo Principio: certified by the Italian Ministry as innovative SME**
- **WiFor Technology: awarded “Seal of Excellence” by the EU commission**





DSS and Smart Technology for Agricultural Crops monitoring

- starting point: **technology transfer** (necessary but not sufficient)
- now we can measure (better “monitor”) accurate **field-information (data)**

Goal → “Value from Information ”

CROP target examples:

- Grapewine
- Corn
- Apple
- Olive
- Irrigation (any crop)
- ... others



WIFORWINE



WIFORAGRI



Agricultural Crops monitoring → Typical Pilot-Project actions

Typical Pilot-Project actions:

- **consultancy**: technology design
- set-up of agri monitoring network : **monitoring stations** totally wireless and energetically self-sufficient
- Set-Up of **innovative ad-hoc prediction Software** (depending on specific crop)
- **Training** of technical staff of farmers-partner
- **Tuning prediction model to the local microclimate**: Agrometeo and field data feed the prediction model which **provides DSS** (decision support system) to producers
- Project duration: 2-years

CROP target examples:

- Grapewine
- Corn
- Apple
- Olive
- Irrigation (any crop)
- ... others



PRIMO PRINCIPIO

WiForAgri Solution: Smart-Service for Agri

Features



Possibility of setting
SMS/e-mail alarms



Data visualization
through intuitive diagrams



Forecast models of diseases
and risky situations



Management of field
data and logbook

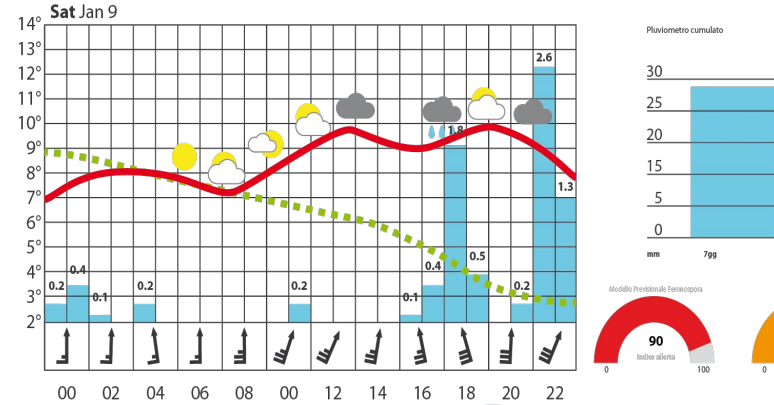


Historical data storage
and possibility to export data
in tabular form



Possibility to create
ad hoc customizations

***“Value
from
Information”***

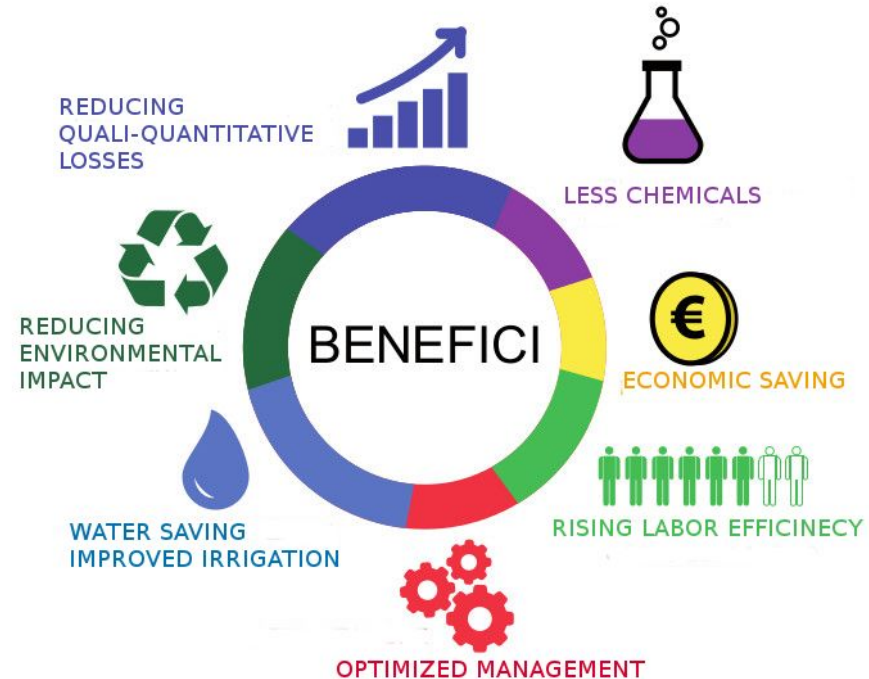




PRIMO PRINCIPIO

WiForAgri Solution: Value and Benefits

- Rationalization of pest management and herbicides, **pesticides and fungicides saving**
- **Irrigation and fertilizers optimization** and **savings in labor costs** and rising labor efficiency due to remote monitoring e control
- **Guidance to the farmer** about the optimal time for harvesting and improvement in the average **product quality**
- reduction in **environmental impact** due to the reduction and rationalization of operations





PRIMO PRINCIPIO

Case-Study AIPO: olive-fly Prediction Model

Where: Veneto - Garda lake (Region of Veneto and Lombardia)

When: 2015-2016 duration: 2 years - **Budget:** about 100.000 Euro

Customer: AIPO - Interregional Consortium of high-quality (DOP)

Target: olive-oil producers (more than 2.500 farmers)

Challenge:

- mandatory integrated defense (focused on “olive fly”);
- optimize irrigation;

Goal: allow our customer (AIPO) to provide tools for farms to adopt a wise and **sustainable use of pesticides** and to **reduce water and hydric-stress** on olive plants



AIPO

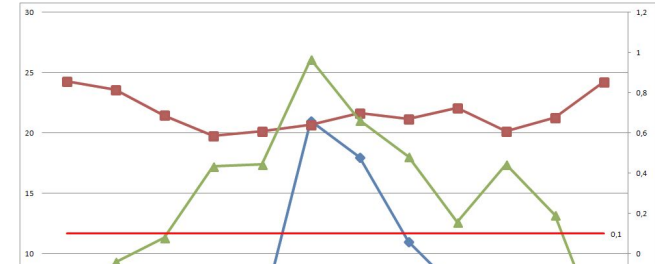
AREA
SCIENCE PARK





Case-Study AIPO: WiForAgri actions and solutions

- agro-meteorological monitoring network for AIPO in Sud-Garda (pilot area): **4 monitoring stations** totally wireless and energetically self-sufficient
- Development **ad-hoc prediction SW** for “olive-fly”
- **Validation of prediction model** with a pilot-project on field
- **Training** of AIPO technical staff
- Using the tablets provided within the project, the WiForAgri platform has enabled AIPO staff to **upload field data**
- Agrometeo and field data feed the **prediction model which provides DSS** (decision support system) to producers (→**value from information**)



Alarms on customised risk thresholds via SMS / email to users or user groups.

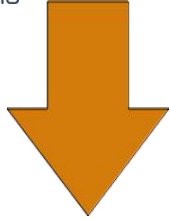


Import and management of crop data (phenologies, pathologies, irrigation, treatments...)

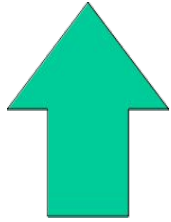


PRIMO PRINCIPIO

Case-Study AIPO: benefits and results



(-30 / -60)%
chemical treatment



first-quality
product

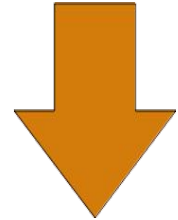


AIPO has an ICT
solution for monitoring
agro-meteo and field
data of producers

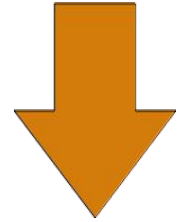


AIPO has a validated
forecasting model for
olive-fly

Target (final users):
Pilot-Project → about 200 farmers
Potential → more than 2.500 farmers



reduction of
production costs



reduction of water
and hydro-stress



PRIMO PRINCIPIO

Primo Principio and Area Science Park: IT Consultancy Solutions and Services for Rural



WIFORWINE



WIFORAGRI



WIFORWATER



Smart IoT Solutions
for **development and innovation**
in **Agriculture, Agri-Food Industry**
and **Smart-Water management**

turnkey HW and SW
for **private and public**
sector (from local to
national scale)

IoT **Project Design**
Consultancy
Pilot Project
Training
Support

improving economical and
environmental **sustainability**
of agri-producers



improving **funding capability** and
competitiveness
of **agri-producers** and **public bodies**
operating in the Agro sector

Let's plan a Pilot-Project in your Country !