



Acqua Virtuosa System

Smart data for improving land and water management

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Irrigation efficiency

The increase of temperatures and the decrease of usable rainfall, leading to an increase of irrigation needs for crops. Irrigation has thus become an unavoidable source for obtaining economically sustainable and high quality productions. Drainage Authorities supply all the information together with water for its wise and efficient use, with the aim of achieving substantial savings of water while maintaining, or even improving, the productivity of crops.



Irrinet

Emiliano Romagnolo Channel

Irrinet is the irrigation service provided by the ERC, available to all farms in Emilia Romagna. It is a free service that provides irrigation advices about time of intervention and volumes to be used to obtain a quality product saving water resources. It is based on the Water Balance Method that is calculated by three different kind of data.



Real time meteorological data
from Arpa-Simc



Pedological data provided by the
Geological and Soil Service of
Emilia Romagna



Underground water data provided
by Agri-food System Development
Service of Emilia Romagna

Irrigation efficiency by Consorzio Bonifica Renana



set up



Acqua Virtuosa System



acqua virtuosa

OTTIMIZZARE, TUTELARE, CONDIVIDERE

1. Save water resources by optimizing the use of irrigation water both at the district level and at agricultural companies.
2. Collect essential data for the issue, according to the provisions of the new Classification Plan, of the variable quota of the irrigation contribution.
3. Activate a direct communication channel with user farms and farmers.

A grayscale illustration of the ancient Greek geographer Ptolemy. He is depicted from the chest up, facing slightly to the right. He has a full, curly beard and hair. He is wearing a robe with a high collar. In his left hand, he holds a ruler or scale, which is marked with numbers 10, 20, 30, and 40. The ruler is positioned diagonally across his chest. The background is dark and textured.

CityOmnis Tolomeo

Cartographic and Management system for Acqua Virtuosa

In 2016 **Sis.Ter srl** has developed a WebGIS platform (*Tolomeo*) for Consorzio Bonifica Renana. It is therefore possible to draw and locate individual agricultural plots through the perimeter polygon instead of a point, thus allowing a better and more accurate control of irrigated surfaces.

and not just that... let's see what *Tolomeo* is able to do



Appointment management



Classification Plan



Dashboard



Appointment management



Tolomeo is able to manage appointments with farmers for submitting irrigation declaration

Database with personal data and size of agricultural plot.

Historical of irrigation declarations of users (farmers).

Generation, by the software, of the irrigation declaration to be signed graphometric on tablets.

Automatically all these data are sent to IRRINET. Avoiding the farmer to do that.



Classification Plan



Tolomeo is able to draw up the classification plan

Owners of buildings and land located within the Consortium area contribute to operating and maintenance costs of the complex remediation system.

The Classification Plan identifies macro areas in which various remediation benefits are found, defines technical and economic indicators to be used for calculating benefits for each property and consequently the allocation of the consortium costs.

The Classification Plan takes into account the territorial and climatic transformations that have occurred in the last twenty years. This led to a breakdown of costs incurred by the Consortium more similar with the actual benefit granted to lands.



Dashboard



Tolomeo is a decisional tool for managing the consortium territory in real time

Enable and simulate the classification plan thanks to various index

Real time management of territory throw direct alerts sent to farmer's smart phones

Forecast of irrigation requirements

Dedicated Mobile APP

Forecast of irrigation requirements

Irrigation agronomic need



Constant data but lower accuracy

Historical and forecasts IRRINET

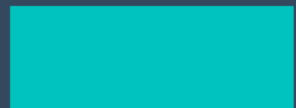


The system retrieves basic data of the requirements for each decade of the year and creates charts related to the past, also releases forecast charts for the next 15 days

Water Provided



Thanks to telecontrol sensors it measures how much water is released



Some numbers of *CityOmnis Tolomeo*

+30.000.000

m3

monitored distributed water

+20.000

HECTARES

monitored

+4000

AGRICULTURAL
PLOTS

managed

+1000

FARMERS

registrated



Coming soon



We will soon start to develop a management tool for this consortium too.



Thank you for your attention



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