Project Ô
Innovative circular water systems

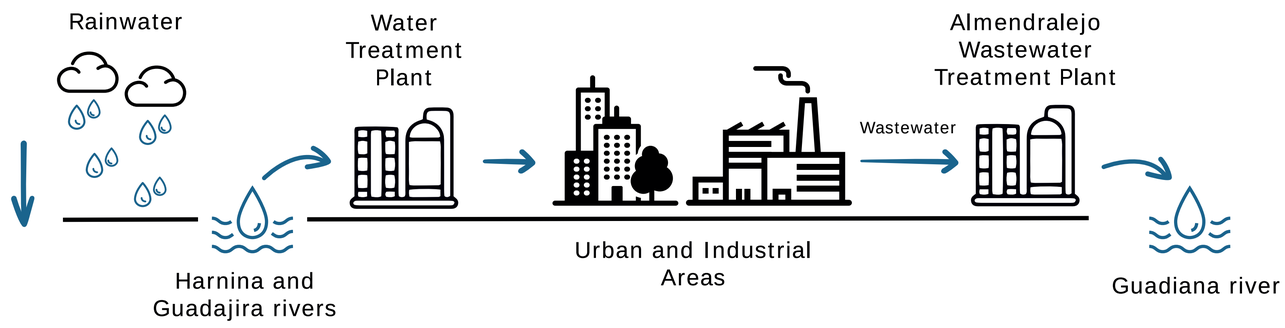
Almendralejo, Spain with SOCAMEX

Supporting the detection and processing of complex pollutants, the protection of water treatment plants and water reuse

Background

Almendralejo is a small Spanish city about 160 kilometres north of Seville. It has a population of around 35,000 and **is home to almost thirty businesses processing olives** for consumption as both fruit and oil.

The wastewater from both households and industry is sent for treatment to the nearby wastewater treatment plant in Almendralejo. If a spill occurs, toxic wastewater could damage the biological treatment system of the treatment plant. This means that toxic pollutants could end up untreated in the environment.

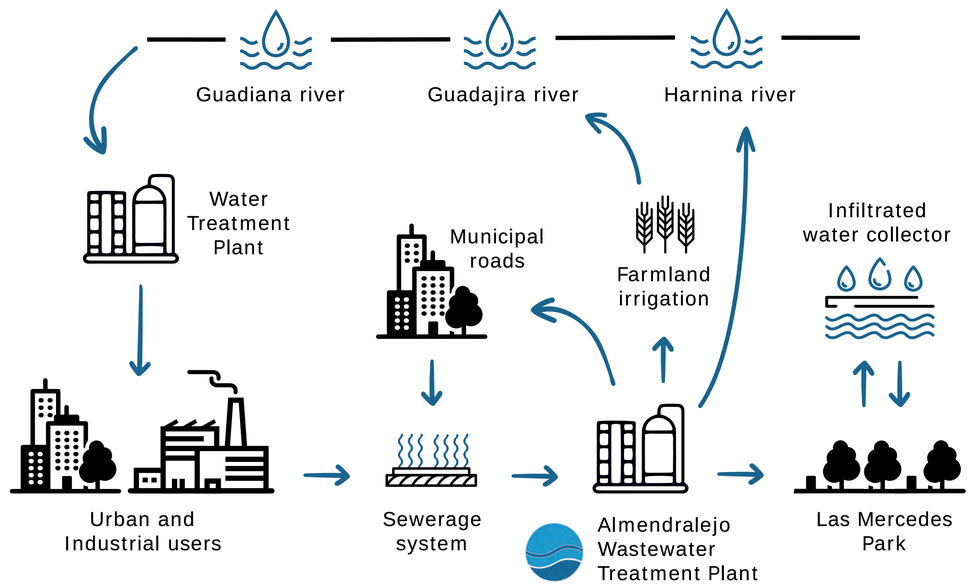


Circular Water Economy

Using Project Ô technologies, water use can apply a circular economy approach.

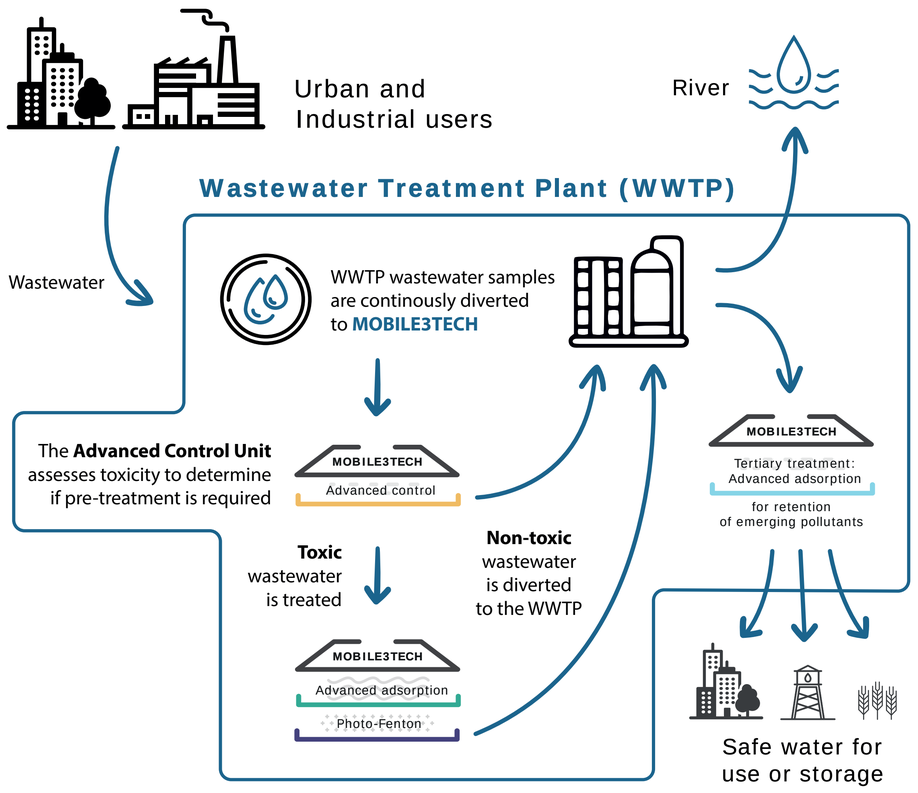
By participating in Project Ô, the potential benefits to this region include:

- **» Maximising local water reuse** to strengthen resilience against changes in the climate and economy and increase the efficiency of water management.
- **»** Closing the loop requires new infrastructure and use of technologies which can lead to an **increase in local jobs in the environmental sector.**
- **»** Water management is supported by an **increase in health and safety measures** through strict regulations, quality standards, management plans, policies and permits for water reuse, storage and transportation.
- **» Improving the local environment** through decreases in water taken from and discharged into the local river basin.
- **» Protecting the local area and wastewater treatment plant** by treating toxic water and accidental spills.



Technology

MOBILE3TECH technology treats complex pollutants that may damage water treatment plants.



MOBILE3TECH technology design includes:

- **»** An advanced control unit to test wastewater quality and determine if pre-treatment is required according to the toxicity.
- **»** A cost-effective pre-treatment unit that increases the biodegradability and decreases the toxicity of wastewater before conventional treatment at a water treatment plant.
- **»** The regeneration of saturated activated carbon for reuse reducing the consumption of new activated carbon.
- **»** Low investment and operational costs.
- **»** Compatibility with existing facilities, minimising works to incorporate the new system.
- **»** The retention of emerging pollutants for safe water reuse.

DAP Decision Analytic Platform

Project Ô has also developed **a Decision Analytic Platform (DAP) to aid water resource management** and help decision-makers compare the effect of making particular decisions.

Find out more!

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