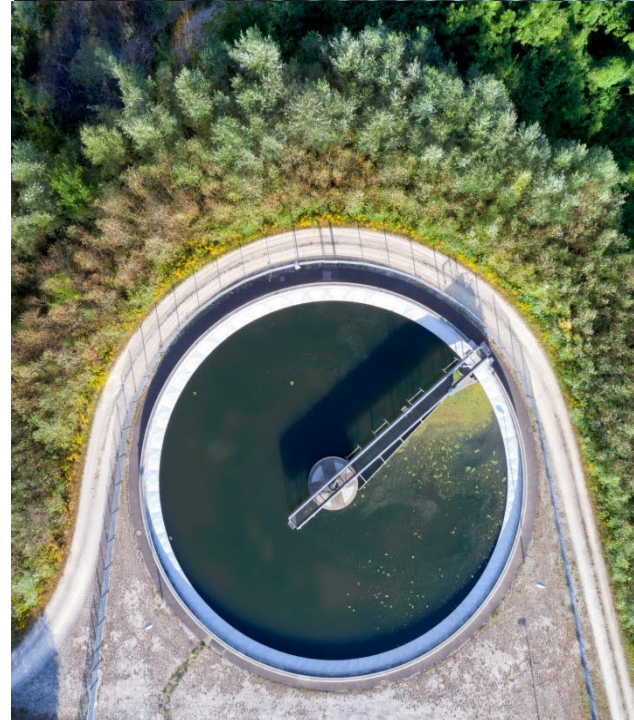


# AFRY Water APP

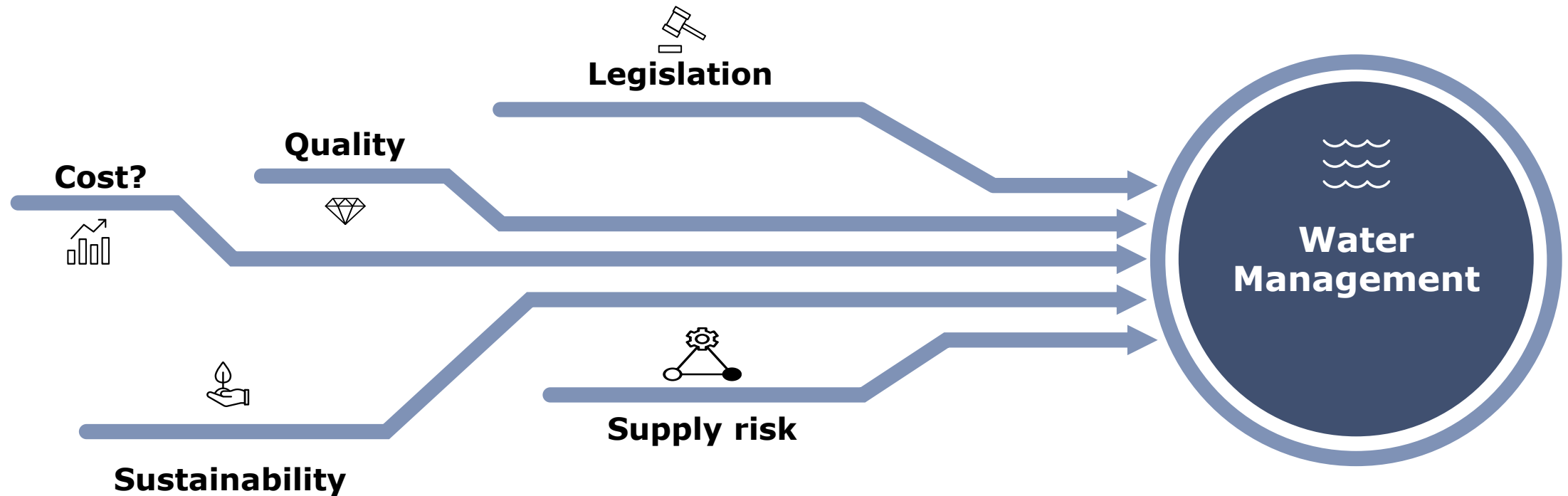
AFRY INDUSTRY

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# Why managing water is important?



# The industry navigates through multiple challenges



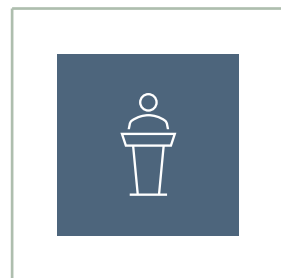
## REGULATION

- EU regulatory framework (e.g., EU Water Framework Directive) and Environmental French Code set wide number of obligations
- EU Taxonomy as well as EU Circular Economy Action Plan (to come) will reinforce existing regulation and associated reporting
- Country level specific plans



## AVAILABILITY & QUALITY

- Water availability and quality is key to secure operations and production value
- Climate change and new imperatives such as recycling and industry transformation will increase the pressure on water management



## EXTERNALITIES

- Stakeholders' expectations in terms of Corporate and Social Responsibility
- Access to funding with regard to investors and banks that are increasingly sensitive to environmental issues

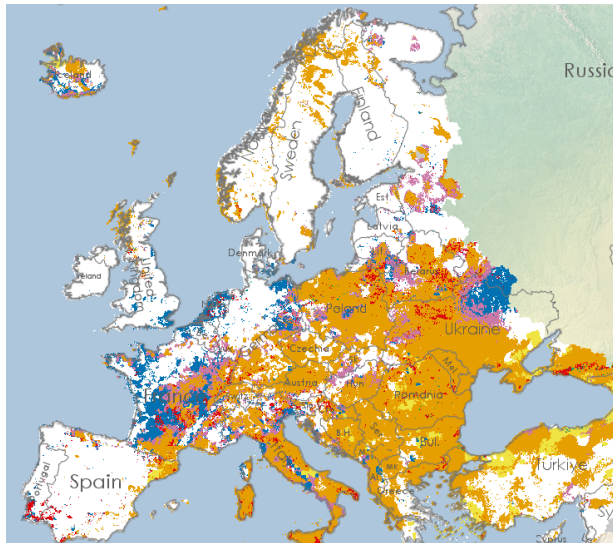


## COST

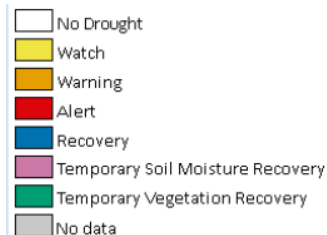
- AFRY studies outline an increase of "Point in Use cost" - up ~20-30 times of water cost
- Cost trends might grow ( water scarcity, required investments, sustainability imperatives, ...) in the absence of clear strategy and mitigation plan

## 1. CONTEXT

# Climate change is quickly increasing supply risks everywhere



<https://edo.jrc.ec.europa.eu/edov2/php/index.php?id=1111>



## From drought to century's worst floods: Emilia-Romagna disaster lays bare Italy's climate vulnerabilities

Calamity is latest in series resulting from 'dangerous mix of Italy's fragility, increase in extreme weather events'

Giovanni Legorano | 24.05.2023 - Update : 31.05.2023

NEWS ANNOUNCEMENT | 13 June 2023 | Joint Research Centre

## Severe drought: western Mediterranean faces low river flows and crop yields earlier than ever

A new report on drought in the western Mediterranean reveals the extent of the water shortage hitting the region. The severe drought is reducing soil moisture and river flows, and stunting plants and crops during their crucial growing season.

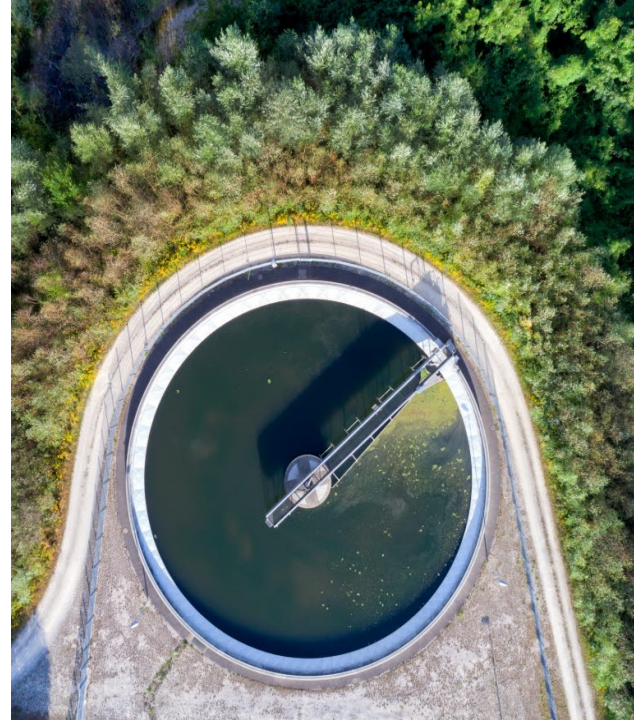
Drought hazard and annual precipitation predicted to increase in the Sirppujoki river basin, Finland

## 'The country is becoming a desert': Drought-struck Spain is running out of water

Spain is running out of water. After a long and painful drought, the country has been hit by an unusually early heat wave, evaporating even more of the "blue gold" it still has left in its reservoirs. While farmers fear for their survival, environmentalists say it is time for "Europe's back garden" to rethink how it uses and manages its increasingly scarce water supply.

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## 2. HOW COULD AFRY WATER APP SUPPORT YOU?

AFRY Water APP water management application has been created based on our wide experience supporting industrial clients to improve water management

### BENEFITS

#### FROM STRATEGY TO OPERATIONAL DECISIONS

- Information is available across the organization
- Tailor made information for each relevant role
- Promotes accountability

#### EFFICIENT DATA GATHERING

- Compatible with existing equipment
- Data gathering efforts are minimized through automatic connections to all relevant data sources
- One source of truth for information

#### VISUAL INFORMATION

- Visual information, for everyone
- Passive users receive relevant information required for action
- Automatic reporting

#### SCALABLE SOLUTION

- Start small, grow fast

#### INTEGRATION

- Works as a standalone application or in combination with other applications
- From productivity to quality or energy management, AFRY offers a full suit of applications designed to cover most of the needs for optimization and saving in industrial environments
- A few examples of applications working in combination with water management:

Waste Water  
Treatment Plant  
Optimization

Reverse Osmosis  
Control

Energy  
Management

Statistic Process  
Control

Centerlining

Laboratory Input

## 2. HOW COULD AFRY WATER APP SUPPORT YOU?

# Water management can be delivered on the top of AFRY Smart Platform as an engine or on client's platform

### FEATURES RELEASED V1.0

#### WATER METERS MANAGEMENT

- Keep traceability on the existing metering equipment

#### CALCULATIONS AND WATER FLOW MODELING

- Information from meters can be treated individually or combined to create meaningful information
- The information provided by each meter is endowed with great value for its analysis.
- Through classification, each position is clearly defined within the plant flow

#### DATA INTEGRATION

- Integrated information is calculated (daily, weekly, monthly) to optimize information volumes and obtain management level information

#### WATER BALANCES

- By conducting water balances at various positions, it is possible to immediately identify uncontrolled water volumes or define measurement needs

#### KPI

- Calculation of measurable metrics that monitor performance over time

#### DASHBOARDING

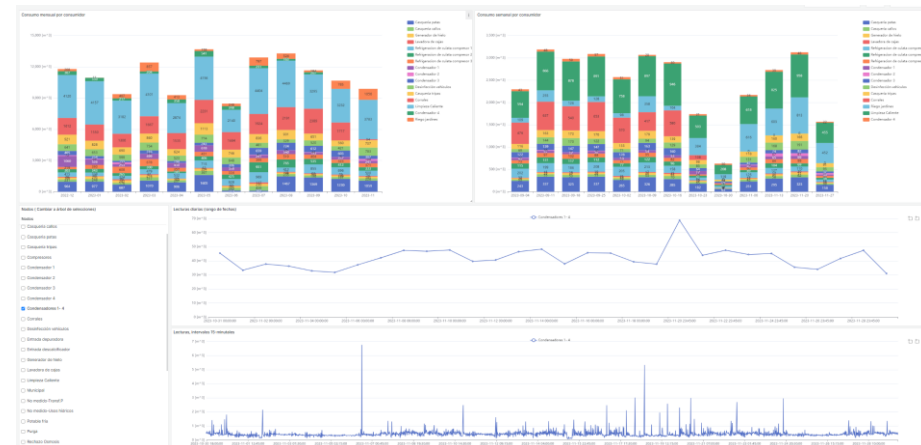
- Tailor made dashboards with role-based access

#### ALARMS

- Deviations from expected volumes are notified

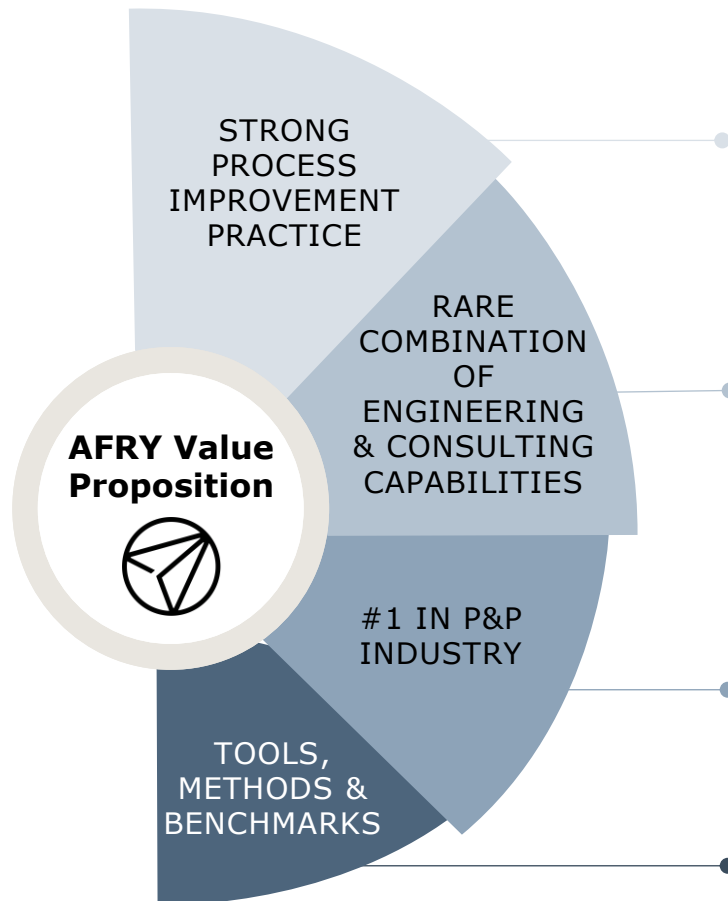
#### REPORTS

- Automatic tailor-made reports delivered



## 2. HOW COULD AFRY WATER APP SUPPORT YOU?

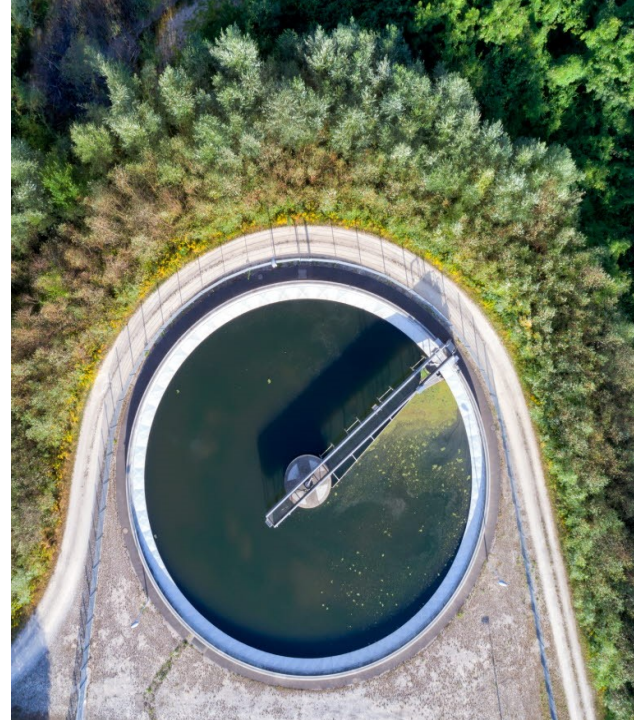
# We are uniquely positioned to support industry players in achieving sustainability and water management objectives



- Leading in the areas of water management for both green fields and existing operations
- +100 projects / year related to industrial water management and water treatment worldwide
- Strong sustainability practice from strategy to impact assessment, reporting, financing, decarbonization, and circular economy. Deep understanding of sustainability frameworks and regulation
- Global engineering company. Our 19,000 employees bring deep technical expertise in different sectors and environmental capabilities including waste mgt, recycling, biodiversity, energy efficiency,
- Leading Consulting Division in Energy, Bio-industry and sustainability with a comprehensive service offering including Market & regulation, Strategy, Transactions, Operational & Digital Transformation
- Profound expertise in the industry
- +3000 experts, 45 years of experience, involved in more than 90% of the world's largest mills
- Proprietary tools, frameworks and benchmarks to secure and accelerate projects (Cost in point use, digital monitoring tools, etc.)

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PALACIOS / 4 PRODUCTION PLANTS IN SPAIN

# Water consumption monitoring



**Client name:** Palacios Alimentación

**Project name and brief:** Water monitoring across 4 production plants in Spain.

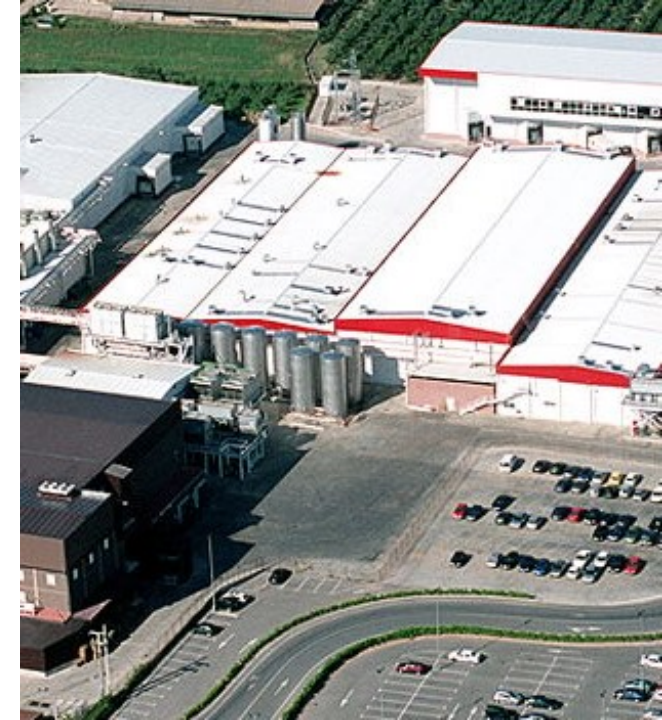
**Services description:**

Implementation of onsite equipment together with data collection technology, and cloud environment for data analytics.

**Execution period:** 2021-23

## Key facts

- Analysis and definition of metering positions for an efficient water management.
- Installation of water meters and use of IoT technology for data communications.
- Cloud environment.
- Dashboarding and automatic reporting.
- Remote water manager supporting daily water management activities.



# Water consumption monitoring

**Client name:** El Encinar de Humienta

**Project name and brief:** Water monitoring in beef slaughterhouse

**Services description:** Implementation of onsite equipment together with data collection technology, and cloud environment for data analytics.

**Execution period:** 2022

## Key facts

- Analysis and definition of metering positions for an efficient water management.
- Installation of water meters and use of IoT technology for data communications.
- Cloud environment.
- Dashboarding and automatic reporting.
- Remote water manager supporting daily water management activities.



## CONTACT INFORMATION

### **CÉSAR NUEZ**

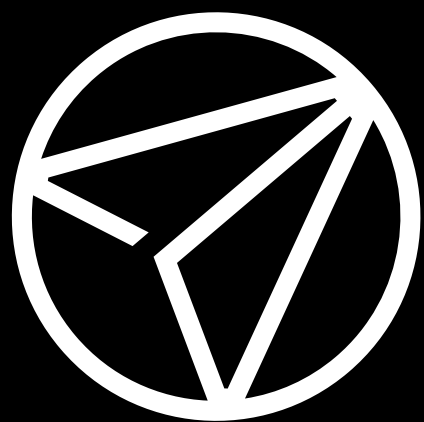
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