



ÁGUAS DO  
TEJO ATLÂNTICO  
Grupo Águas de Portugal



ÁGUAS  
DE GAIA  
EMPRESA MUNICIPAL, SA



**Water Recovery Facility  
A New Generation of Water**

**Hugo Pereira**  
Vice-President  
Águas do Tejo Atlântico

# ***Seminar Water Reuse***

## **O Valor da(s) Água(s)**

**A experiência da  
Águas do Tejo Atlântico**

March 30<sup>th</sup>, 2023

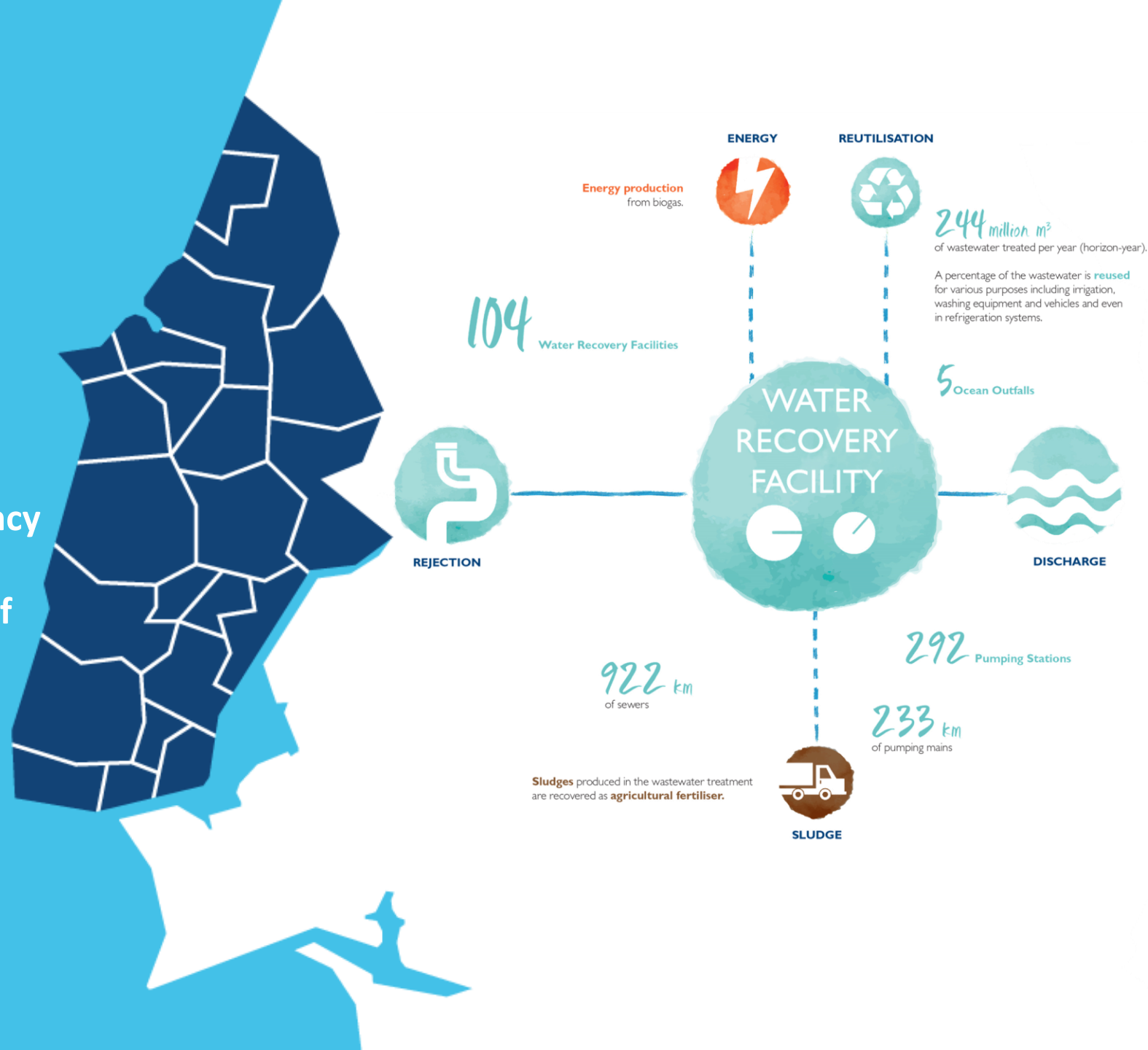
# Our Mission

Explore and manage the multi-municipal wastewater sanitation system of Greater Lisbon and West

Ensure the quality, continuity and efficiency of public water services, in the sense of protecting public health, the well-being of the population, accessibility to public services, environmental protection and economic and financial sustainability

Contribute to the regional development

Tariff stability

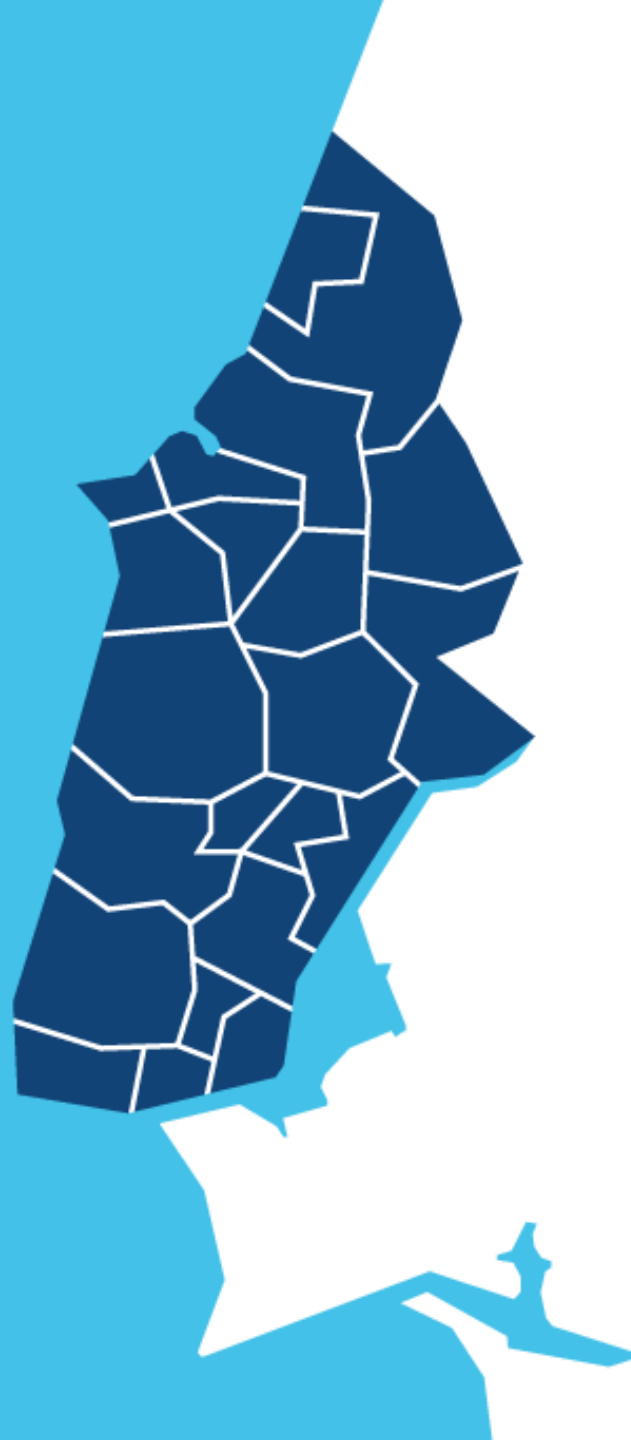




# Some of our Results:

**2022**

- **200km** coast
- **52** Blue Flags in our region!
- **Dolphins** return to the Tagus
- Safeguarding ecosystems attracted species (fauna and flora)
- Excellent conditions for tourism and water sports
- Increase in economic activities linked to Rivers and Sea



# An evolution of the sector in Portugal that marked 3 decades

2022 - 2032



3

2012 a 2022

CONSOLIDATION: Scale and professional services

2

2003 a 2012

EFFICIENCY: The generalization of regional integration

1

1993 a 2003

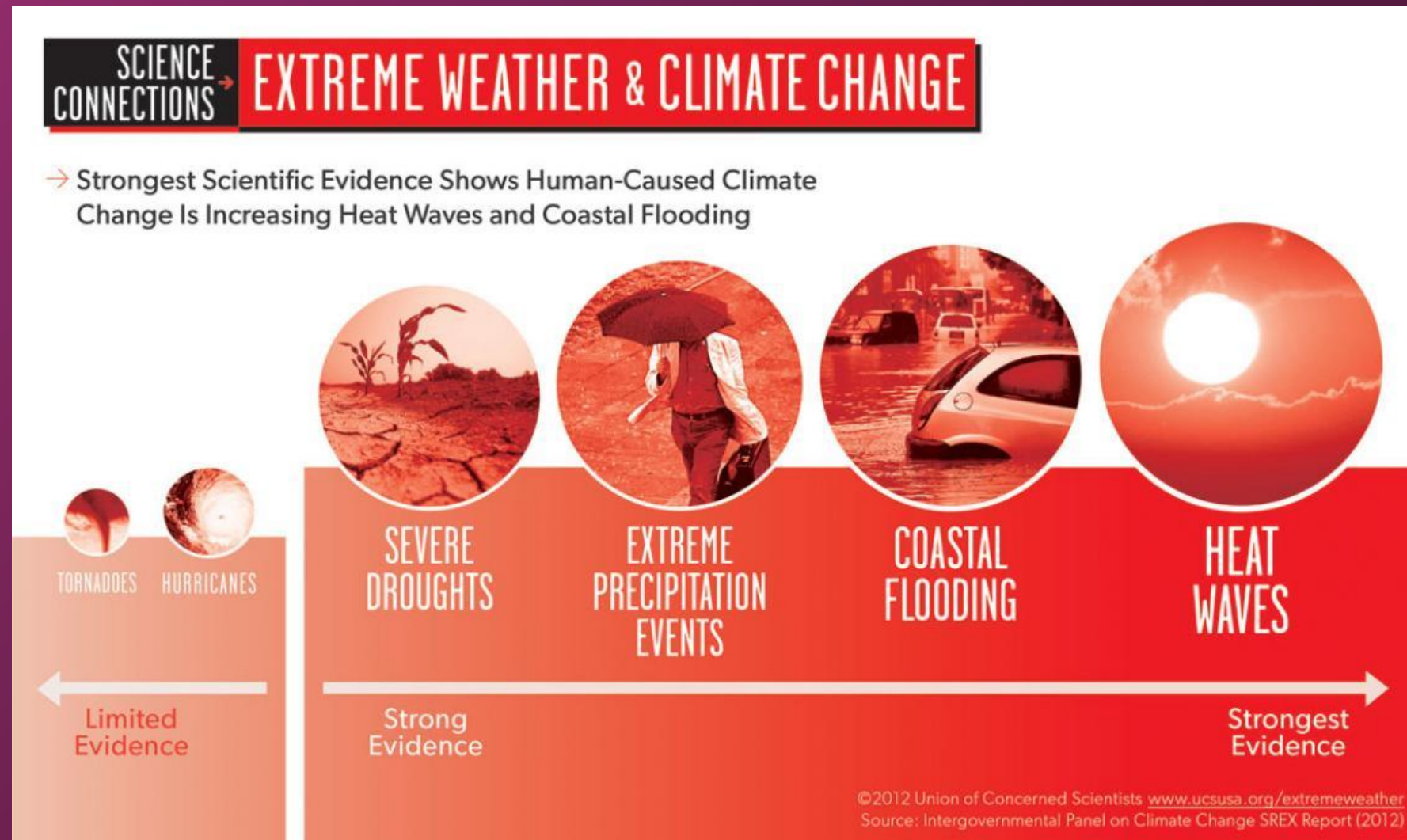
EFFECTIVENESS: Solving 1st generation problems, principle of entrepreneurship



**NEW  
REALITIES!**

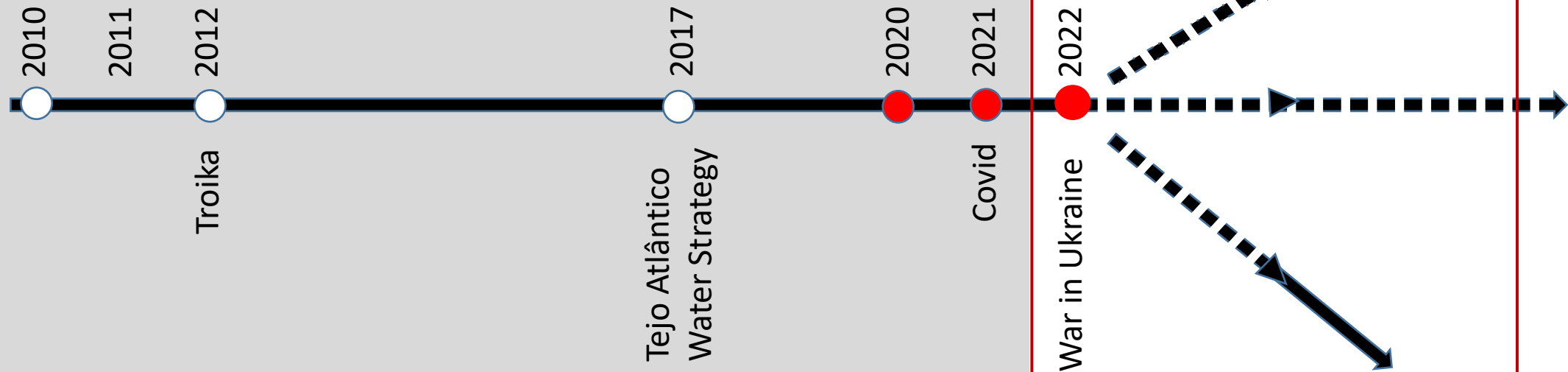
**Climate  
change and  
associated  
extreme  
factors  
demands**

**NEW  
(SIMPLER)  
MINDSETS!**





# Last 10 years



# Next 10 years

# Priorities

- Resilience
- Adaptation
- Efficient use of resources
- Decarbonisation
- Transformation







SHALL WE SIMPLIFY?

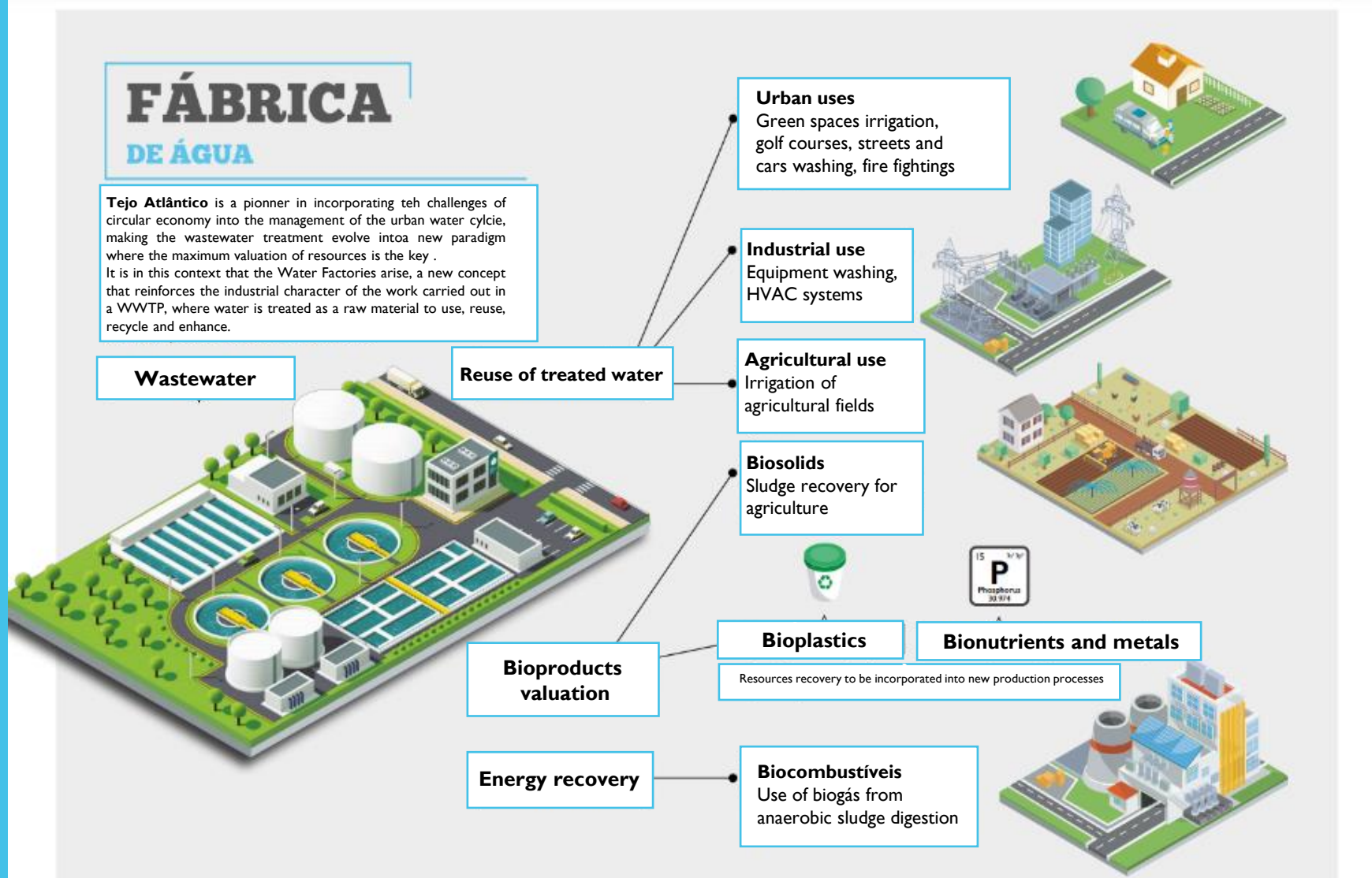
WWTP = WATER  
FACTORY

i.e. Industrial establishment where raw materials are transformed into products



# Water Recovery Facility

## Former Waste Water Treatment Plant



A concept that increases the industrial feature of the work carried out in a Wastewater Treatment Plant (WWTP), where water is treated as a raw material full of resources for:

**use, reuse,  
recycle and  
recover.**

# Creating Value to the society

**agua<sup>+</sup>**  
reciclada não potável

2 500 000 m<sup>3</sup>/year

**biolamas<sup>+</sup>**

90 000 ton/year

**BIOENERGY**

18 GWh/year

**BIOPLASTICS**







## HIDROGASMOVE- (partnership with DOUROGÁS)

Biogás purification and transformation into biofuel to power public transport fleets



**BIO Gás**  
**BIO Energia**





# GUIA (2022)

Average flow 2 m<sup>3</sup>/s

Served population 800.000

Biogas production 4.7 M m<sup>3</sup>

Energy consumed 14 MWh

Energy produced 12 MWh

85% energy neutral

BIOENERGY





# PROMINENCE

Pilot Project

Rock in Rio 2018/ 2022

Result of a working group that included:

Portuguese Environment Agency, Lisbon City Council, Águas do Tejo and Atlântico and General Directorate of Health and the National Institute of Health Doctor Ricardo Jorge.



ONGOING...

Mafra Urban Park

IKEA Loures- Air Conditioning

Parque das Nações - watering green spaces

## EXAMPLES IN DEVELOPMENT...

Watering Golf Courses - Royal Óbidos

Street washing Lisbon, Loures and Cascais



INÍCIO / LOCAL

# Jardins do Parque das Nações começaram a ser regados com água reutilizável

Os espaços verdes da zona norte do Parque das Nações, em Lisboa, começaram esta terça-feira a ser regados com água reutilizável e não potável. O sistema poderá ser replicado noutros jardins da cidade.

DN/Lusa

22 Março 2022 — 19:58



## TÓPICOS

- nacional
- Parque das Nações
- seca
- local
- Câmara Municipal de Lisboa







# Cooling and heating **IKEA** Loures (456.420 m<sup>3</sup>/Year)



Treated wastewater  
18.883.300 m<sup>3</sup>

Internal reuse  
274.037 m<sup>3</sup>

Irrigation potencial reuse  
100%



# Strategic Plan for Water Reuse in Lisbon

SUSTAINABILITY STRATEGY ON WATER USE

WATER EFFICIENCY PLAN

LISBON DRAINAGE PLAN



An initiative of the  
European Commission

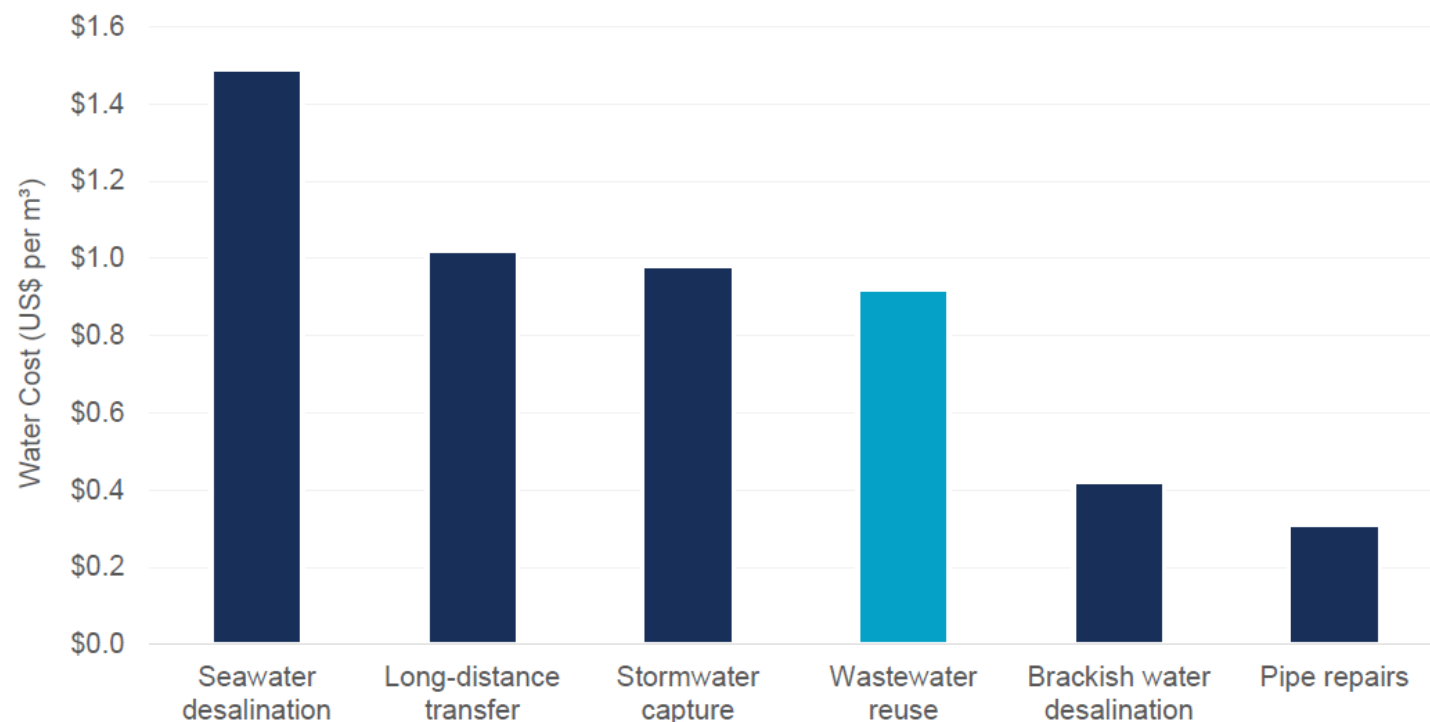




## drivers ECONOMIC FEASIBILITY



Relative Water Supply Cost per Source



Source: Bluefield Research

➤ Potable water reuse economic feasibility is increasing because of the constriction of water resources.

**Bluefield Research**  
study reveals that  
the costs of  
**Water Reuse**  
are very competitive  
*versus* alternatives.





New EU Regulation about **Reuse Water** will apply from 26/06/23



It will encourage and facilitate **Water Reuse** in the EU

New law in Portugal (DL nº 11/2023) simplify the 2019 version



**SIMPLEX**

Simplify the 2019 law version:

- Quality parameters suitable for the defence of public health;
- Licensing / prior communications;
- ...

**+ INNOVATION**

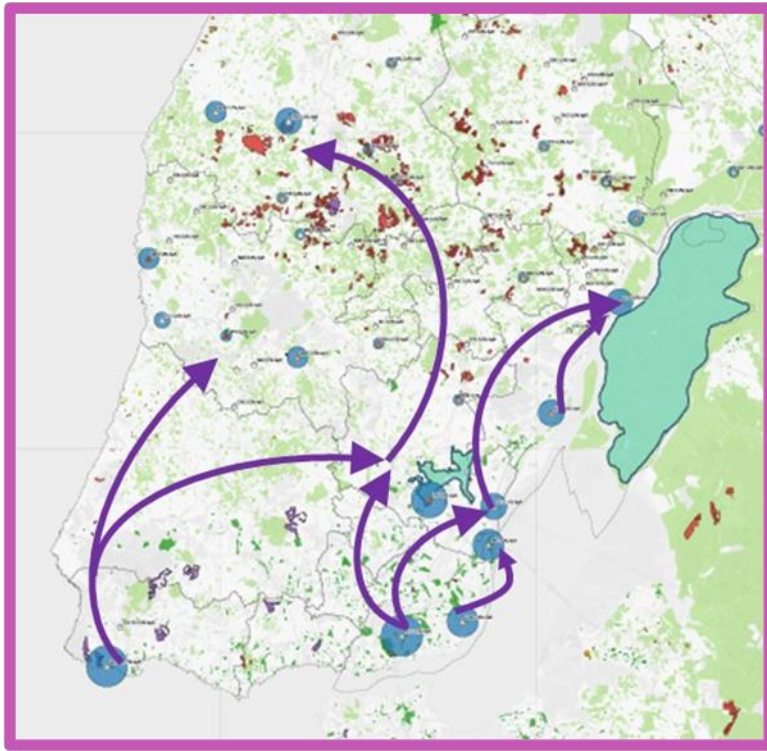


- + Efficiency in agricultural irrigation;
- + Technology: Reuse monitorization;
- + Sensors / IoT / IT management;
- + Water “Circulars”;
- + Aquifer recharge

**+ COMMUNICATION**

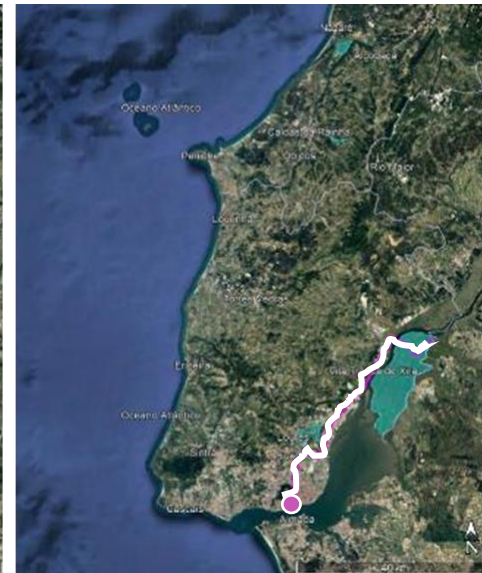
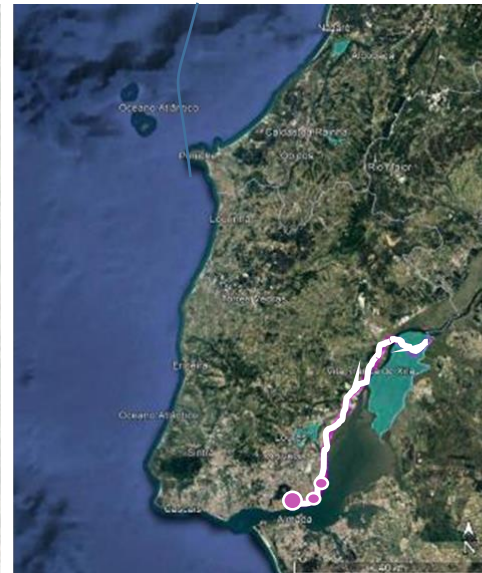
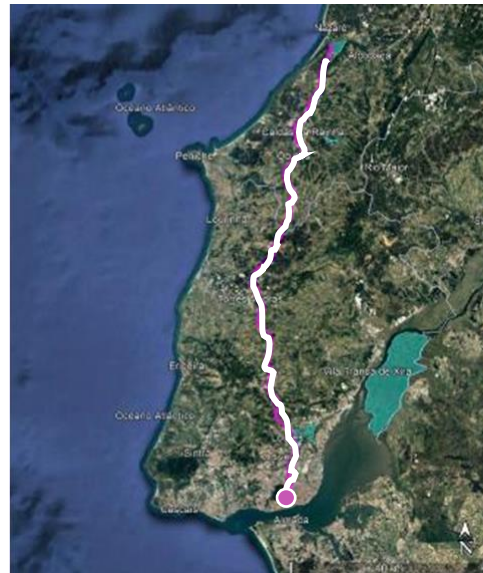
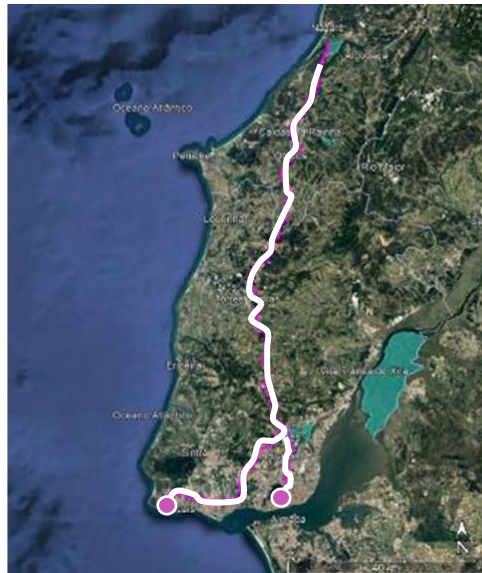
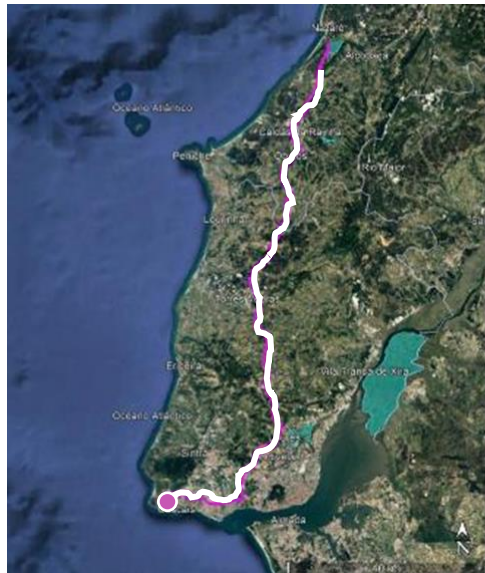


- + Recognition;
- + Involvement;
- + Information;
- + Results



# WATER CIRCULARS

From the largest WWTP to where water is needed for irrigation





CERVEJA ARTESANAL  
PRODUZIDA COM  
ÁGUA RECICLADA

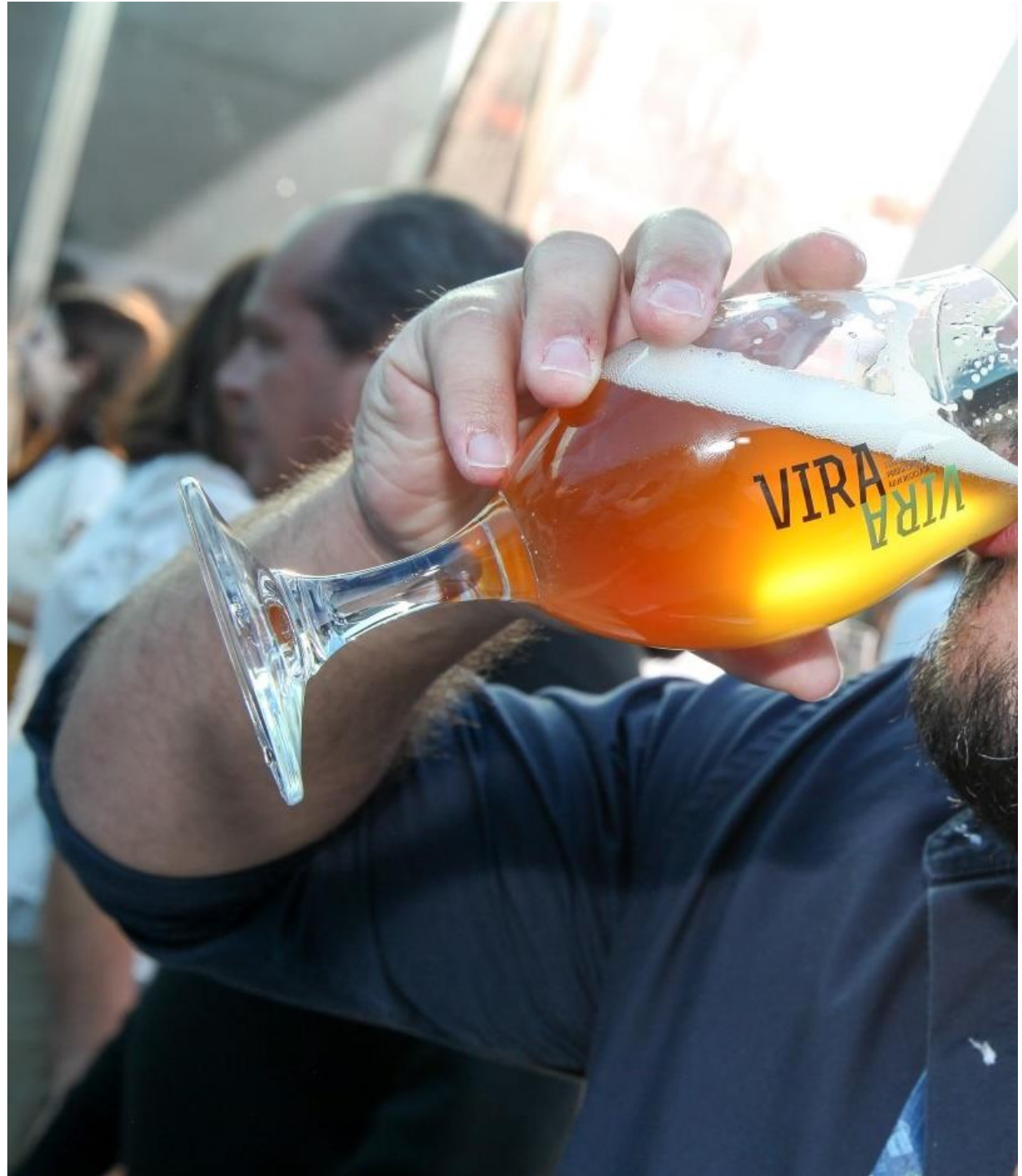
# VIRA



VIRA, a brand of craft beer created by Tejo Atlântico made from **água+**, with complementary treatment through ozonization and reverse osmosis, subject to the most rigorous quality tests

**100% secure.**

**VIRA was created to change mindsets and raise awareness of the importance of reuse as a way to preserve our most precious resource, water.**







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**Thank You!**

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