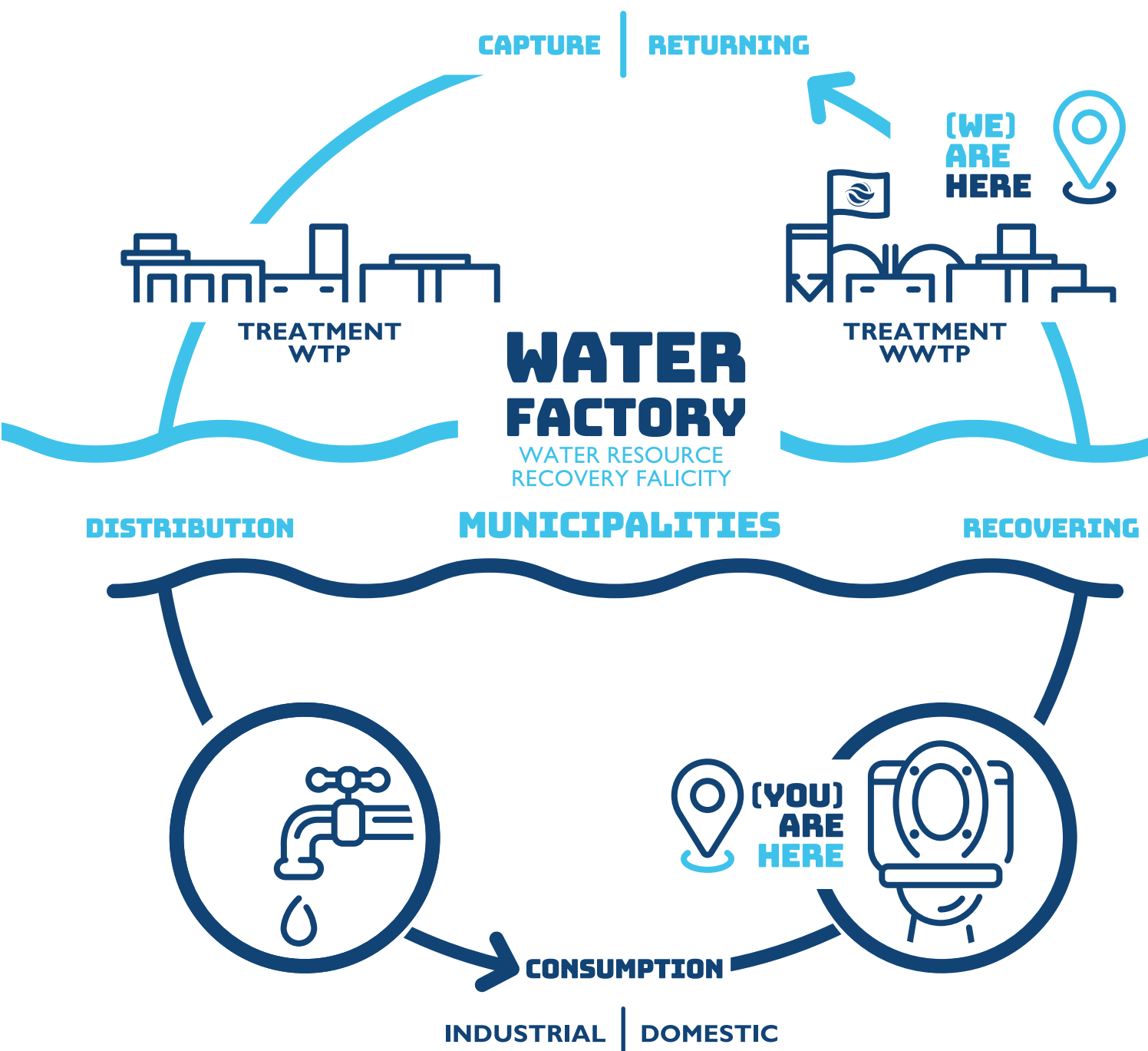


**URBAN WATER CYCLE  
MANAGEMENT:  
THE ROLE OF WE EACH PLAY**

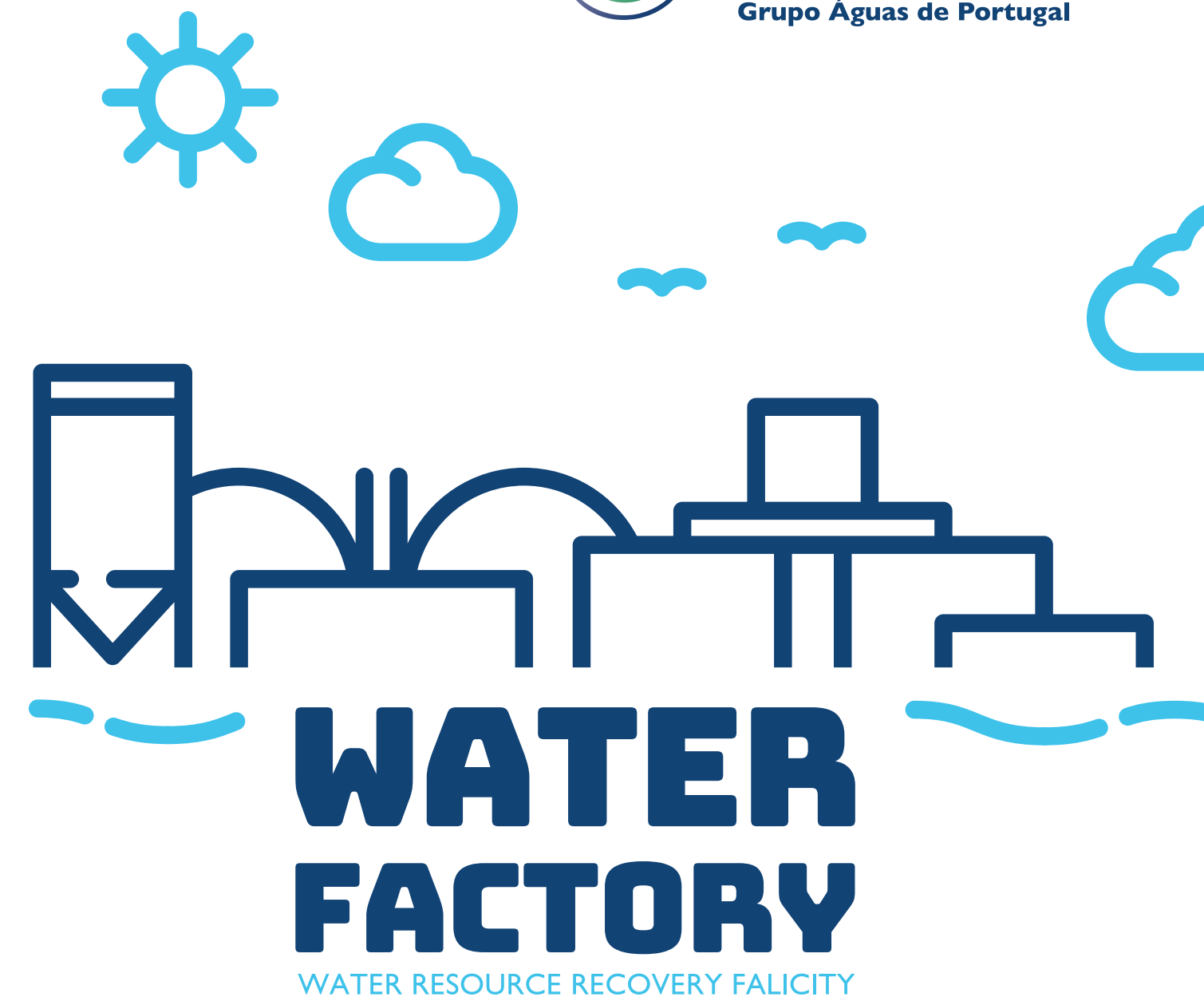


**LEARN ABOUT ...  
OUR WATER RESOURCE  
RECOVERY FACILITIES**

**INVOLVE...**  
ENGAGE, CONNECT,  
INFORM

**PARTICIPATE...**  
SHARE,  
RAISE AWARENESS

**...TO**  
CONSERVE, PRESERVE,  
PROTECT, VALUE



**WHO WE ARE**  
WE HOLD RESPONSIBILITY  
FOR THE SUSTAINABLE MANAGEMENT  
OF THE URBAN WATER CYCLE

WE ARE THE LARGEST WASTEWATER  
COLLECTION AND TREATMENT  
COMPANY IN PORTUGAL SERVING  
23 MUNICIPALITIES THROUGHOUT THE  
GREATER LISBON AND WESTERN REGIONS  
AND OVER TWO MILLION INHABITANTS.

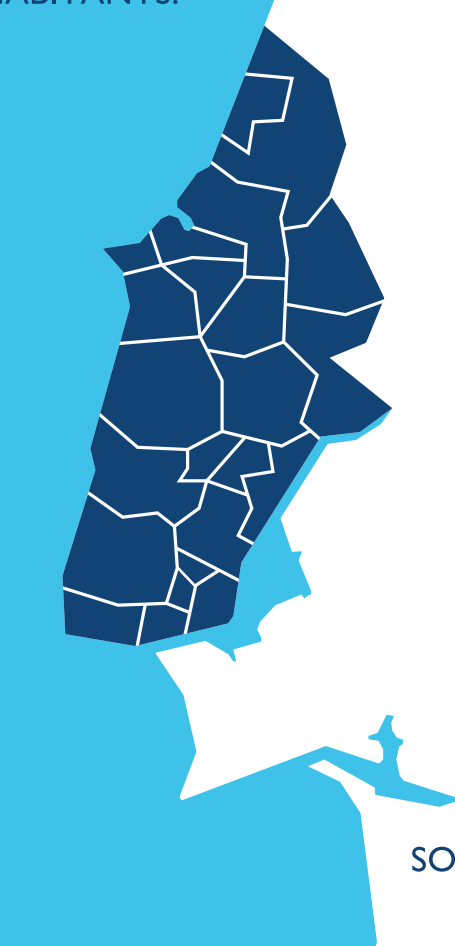
The water circulating in nature never varies  
across the continuous cycle between  
the earth's surface and the atmosphere.  
After ensuring its utilisation whether  
for human consumption or for productive  
activities, Águas do Tejo Atlântico then  
undertakes its appropriate treatment before  
returning the water to rivers and the sea  
under environmentally safe conditions and  
thus allowing it to resume its natural cycle.

Water is a finite resource, spread across  
five continents. Through new solutions  
and technologies, Águas do Tejo Atlântico  
is able to recycle used water, transforming  
and valuing it as new water (água+)  
applicable to multiple purposes.

Water is a resource-rich raw material.  
Águas do Tejo Atlântico generates new  
resources by enhancing the by-products  
of its activities and thereby contributing  
to fostering the circular economy.

We all gain not only a better environment  
but also a quality of life, for everyone!

**WHERE  
WE ARE**



- ALCOBAÇA
- ALENQUER
- AMADORA
- ARRUDA DOS VINHOS
- AZAMBUJA
- BOMBARRAL
- CADAVAL
- CALDAS DA RAINHA
- CASCAIS
- LISBOA
- LOURES
- LOURINHÃ
- MAFRA
- NAZARÉ
- ÓBIDOS
- ODIVELAS
- OEIRAS
- PENICHE
- RIO MAIOR
- SINTRA
- SOBRAL DE MONTE AGRAÇO
- TORRES VEDRAS
- VILA FRANCA DE XIRA



[WWW.AGUASDOTEJOATLANTICO.ADP.PT](http://WWW.AGUASDOTEJOATLANTICO.ADP.PT)



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FIND OUT MORE  
ABOUT THE WATER  
RESOURCE RECOVERY  
FACILITIES CONCEPT



**A NEW  
GENERATION  
OF RESOURCES**



**ÁGUAS DO TEJO ATLÂNTICO  
CONTRIBUTES BOTH TO THE  
CIRCULAR ECONOMY AND  
TO A BLUER PLANET!**

In wastewater treatment, nothing gets lost  
and everything takes on new value.

The **Circular Economy** is complementary to the linear  
economy. The wastewater treatment process endows  
new value on wastes through applying innovation  
to transform them into by-products that promote Reuse,  
Recovery and Recycling (the 3R), thus ensuring the more  
efficient management of natural resources.

Hence, we all win! Not only a better environment  
but also a better quality of life for its population!



**WATER RESOURCE  
RECOVERY FACILITIES  
PRESERVING WATER  
RESOURCES**

## EFFICIENT WATER USE

EVERYONE'S CONTRIBUTION IS ESSENTIAL

### REDUCE WATER CONSUMPTION! REUSE IT WHENEVER POSSIBLE.

USE ONLY THE WATER YOU NEED.

IN THE END, WE RECYCLE TO GIVE WASTEWATER NEW VALUE!

BY CHANGING ATTITUDES AND ADOPTING MORE SUSTAINABLE HABITS IN OUR DAILY LIVES, WE CAN ALL CONTRIBUTE TO EFFICIENT WATER USAGE AND PRESERVING THE ENVIRONMENT.

### DID YOU KNOW THAT...

ABOUT 60% OF DAILY DOMESTIC WATER CONSUMPTION GOES TO BATHING AND TOILET FLUSHING AND WITH ONLY 1% USED FOR DRINKING?

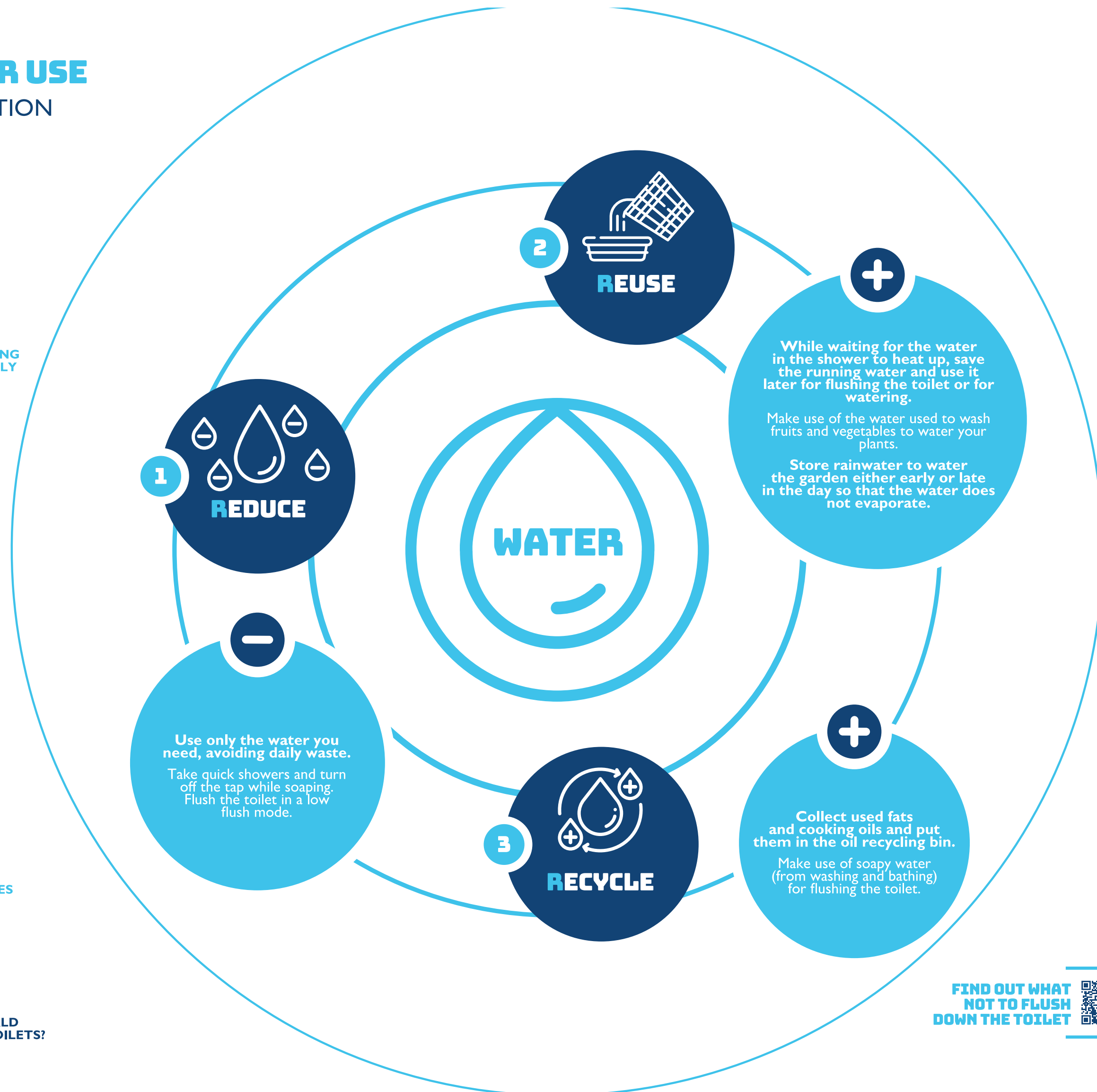
A DRIPPING TAP CAN WASTE UP TO 25 LITRES A DAY?

EACH FLUSH OF THE TOILET CONSUMES 10 TO 15 LITRES OF WATER?

A 5-MINUTE SHOWER CAN USE UP TO 100 LITRES OF WATER?

ONE LITRE OF OIL CONTAMINATES UP TO ONE MILLION LITRES OF WATER?

THERE ARE MORE PEOPLE IN THE WORLD WITH MOBILE PHONES THAN WITH TOILETS?



FIND OUT WHAT NOT TO FLUSH DOWN THE TOILET



## WHAT WE DO

WE TREAT, RECYCLE AND VALUE

FIND OUT WHAT HAPPENS TO WATER AFTER WE USE IT



### WASTEWATER TREATMENT PROCESS IN A WATER RESOURCE RECOVERY FACILITY

Urban wastewaters are channelled to Wastewater Treatment Plants (WWTPs) through complex networks of gravity drains, interceptors and pumping stations.

Before embarking on treatment, all the trash that has entered the wastewaters, mostly carried along by rainwater, is removed by a process called **Screening**. Subsequently, smaller solids are then removed through **Sieving**. The most common residues (grid particles) removed in this pre-treatment stage are: hairs, cotton swabs, wipes, sanitary towels, tampons, condoms, dental floss and small plastic objects and this list still continues.

Then, **Grit and Grease Removal** takes place through a process of sand sedimentation and scraping off the oils and fats (from the surface), which are then sent off to an appropriate final destination.

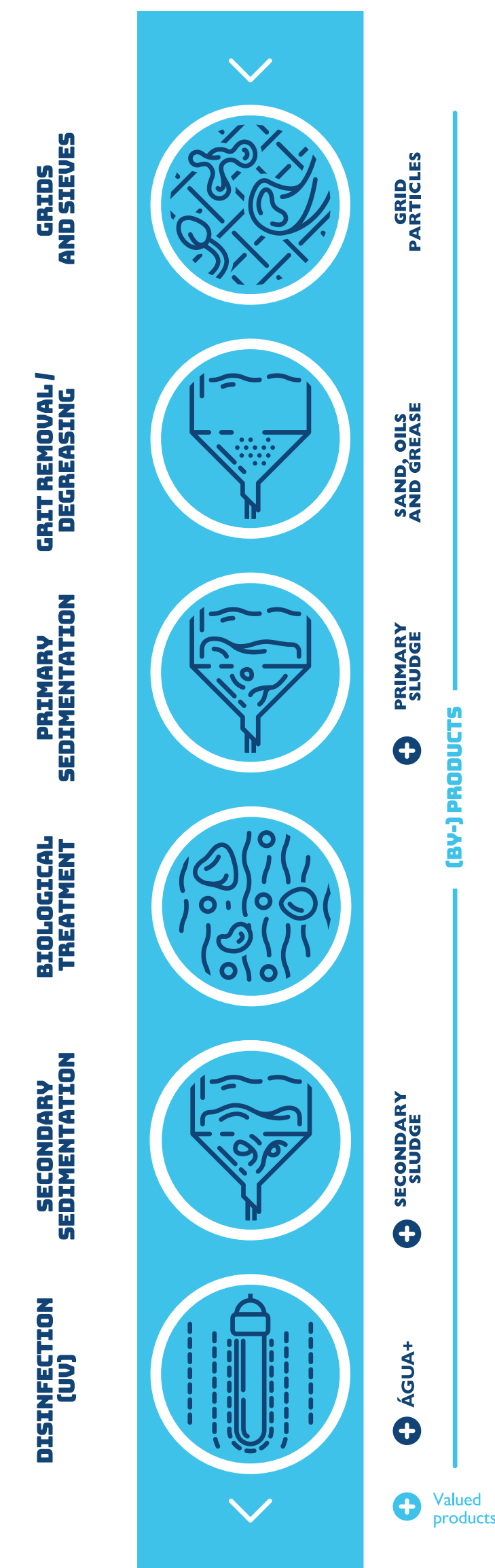
After this pre-treatment phase, **Primary Sedimentation** takes place to remove suspended solids from the wastewaters through a solid / liquid separation operation taking place in primary clarifiers.

In the **Biological Treatment** phase, aeration establishes the ideal conditions for the growth of microorganisms that then degrade the main pollutants in the wastewater. The flocs formed in the biological reactor are sent to **Secondary Sedimentation** as they hold enough weight to settle at the bottom of the clarifier with the treated and clarified waters above.

When dealing with sensitive waters reception areas, we also need to remove nutrients, such as nitrogen and phosphorus, to avoid eutrophication phenomena.

**Disinfection** then allows for the reutilisation of treated waters for different purposes, including discharge into the water sources serving for bathing, recreational and agricultural purposes. In this phase, the clarified water is subject to prior filtration, after which it is also disinfected by ultraviolet (UV) radiation or chlorine to eliminate any pathogenic microorganisms still present in the water.

The (bio)lamas, the sludges resulting from this process are also subject to treatment, through thickening and dewatering for later agricultural recovery and composting. Additionally, the Biogas produced during the anaerobic digestion of sludge is also subject to exploitation.



## WE ADD VALUE

WASTEWATER A RESOURCE-RICH IN RAW MATERIALS

AT **ÁGUAS DO TEJO ATLÂNTICO**, WE CREATE AND VALUE NEW (BY)PRODUCTS FROM THE RECYCLING OF TREATED WASTEWATERS.

ÁGUA+ RECYCLED WATER



BIOLAMAS FROM THE WATER RESOURCE RECOVERY FACILITIES, A QUALITY COMPOUND



### WE ADD VALUE...

**agua+**

We reuse treated water to generate new value. This recycled water may be put to countless uses.

**biolamas+**

Once treated, the sludges resulting from the treatment process are excellent agricultural fertilizers.

**+ BIOGAS**

The biogas produced during sludge treatment is recovered for the production of energy.

**+ BIOPLASTICS / BIONUTRIENTS**

New products are under development.

