



Sustainable Peri-Urban framework
for Climate Neutral development

SOLUTIONS PROVIDER

Water treatment system for green hydrogen production



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General Information

Solution Name

Water treatment system for green hydrogen production

Solution Type

Water Treatment System

Solution Owner

AAU

TRL Level

TRL 5 - 7

Challenge solved

Target Pain Point

The solution produces ultrapure water from pretreated domestic wastewater for green hydrogen production where quality requirements are extremely stringent

The Innovation

Core Functionality

- The system uses a special membrane that lets only water vapor pass through while blocking all impurities.
- It operates using low-grade heat, which can come from sources like an electrolyzer, making it energy-efficient.
- The system will be combined with pre-treatment and post-treatment steps to ensure the water meets the required high purity standards

Beyond State of the Art

The proposed water treatment system has already demonstrated its potential for efficient freshwater production from various water sources. SpurUp will demonstrate its applicability for producing ultrapure water—meeting the stringent quality requirements for green hydrogen production—when using pretreated domestic wastewater as feed.



User value - Benefits

01

Contribution to sustainable fuel production i.e. green hydrogen

02

Environmental improvement due to efficient water treatment

Implementation and validation

Living Lab

Aalborg



SPURUP

Sustainable Peri-Urban framework
for Climate Neutral development



National
Technical
University
of Athens



pwc



cesie
the world to only one direction



IUE
Institute
for Urban
Excellence



SIMAVI
Software Imagination & Vision



University of
BRISTOL



WEST
OF ENGLAND
MAYORAL
COMBINED
AUTHORITY



FGS



prometech



DITENCO
ocean efficient engineering



MG sustainable



IANUS
TECHNOLOGIES



ppc inspectra



Suite5
We Deliver Intelligence



Teletia
Technologies



UNIQ CUBE



ΑΘΗΝΑΪΚΗ
ΖΥΘΟΠΟΙΑ



Aalborg
Kommune



CITY OF
THESSALONIKI



ZAGORKA



Aalborg
University



PORT OF
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University



ULTRAQUA
UV DISINFECTION SYSTEMS



Fulcea



IAMR
European Research Institute
Marine 2000



AESS



IESI
Comune di Iesi



CNH



novelcore
Innovation & Commercial



frontier
innovation
centre



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