

eurecat

INNOVATION FOR A
FUTURE CIRCULAR
ECONOMY



"innovating for business"

Innovation with an impact

Experience and capacities in
in multiple sectors and
technologies.

We offer the best ideas and comprehensive solutions to the most complex challenges of the circular economy, decarbonisation, wastewater management and airpollution reduction, among others.



[Watch our corporate video on YouTube](#)



Comprehensive RDI
service
for businesses:

eurecat

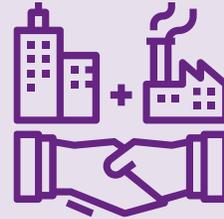
67%
of our
activity is with
SME

www.eurecat.org/en



49.2 M

Turnover
in 2020



1,700

Business
clients

Data corresponding to the end of 2020

We help companies discover new opportunities and participate in creating and improving products, services, processes and business models with an impact on their competitiveness and social wellbeing.

GREEN DEAL ↔ DIGITAL AGE



Disruptive Technologies

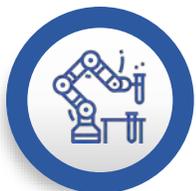


Macrotrends

- Diversity
- Inequality
- Climate change
- Demographic development
- Circular economy
- Platform economy
- Geopolitical changes
- Technological revolution
- Urbanization

Integration of multiple technologies

eurecat



Industry



Digital



Biotechnology



Sustainability

- 1. Advanced materials (metallics, composites, polymers) and new manufacturing processes
- 2. Functional printing and embedded devices
- 3. Interactive and autonomous robotics
- 4. Functional textiles
- 5. Chemical Technology
- 6. Innovation and product development

- 1. Sensor systems and IoT
- 2. Artificial intelligence
- 3. Big Data & Data Science
- 4. E-Health
- 5. Cybersecurity
- 6. Multimedia technologies

- 1. Nutrition and health
- 2. Omic sciences

- 1. Water
- 2. Air
- 3. Soil
- 4. Waste
- 5. Energy
- 6. Batteries
- 7. Environmental impact

Our differential value:

Our multi-technological capacities allow us to face complex challenges.



Applied R&D, the heart
of our activity

eurecat

2nd

Private Spanish
organization in
terms of H2020
funding

+ 85

H2020 Projects
under way

+ 30

H2020 Projects
led

+ 26

New H2020 projects
approved in 2020

+ 200

Big R&D&I
consortium
projects

Data corresponding to the end of 2020

We strengthen our innovative
capacity on an international level by
participating in Digital Innovation
Hubs and Open Innovation Test Beds.

INNOVATION FOR A FUTURE CIRCULAR ECONOMY



We are specialized in the more relevant areas to provide a comprehensive response to the main social, economic and environmental challenges.

Industrial processes

Decarbonisation

Air

Treatment, quality, CO² valorisation

Water

Recirculation, wastewater management, recycling

Energy

Higher efficiency, renewables

Environmental Impact:

Life Cycle Analysis,
Quantitative Irrigation
Analysis, Adaptation to
Climate Change

Soils

Decontamination

Ecodesign
&
greentech

New products
and processes

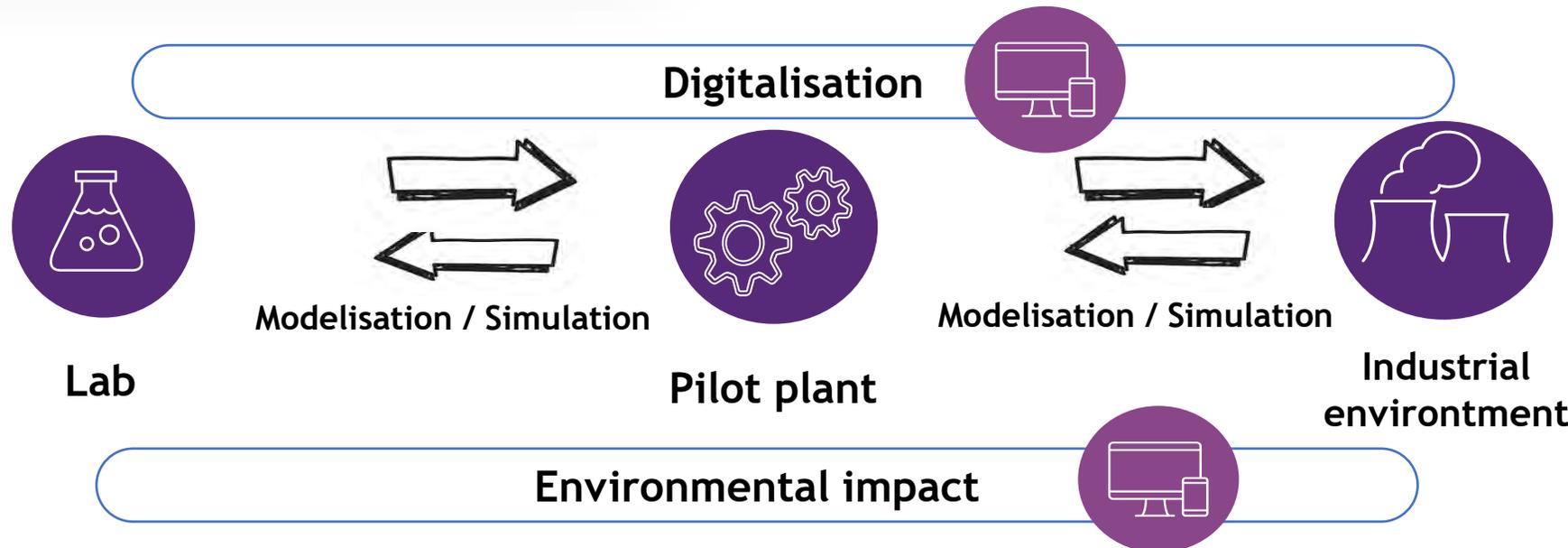
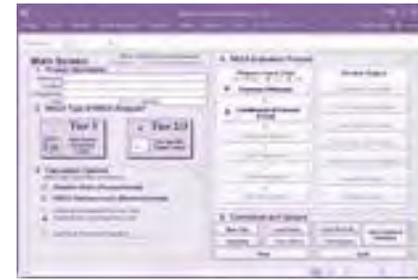
Batteries

Storage and mobility

Waste
and
resources

Metals, textiles, plastics,
composites, agro, food,
etc.

Methodology

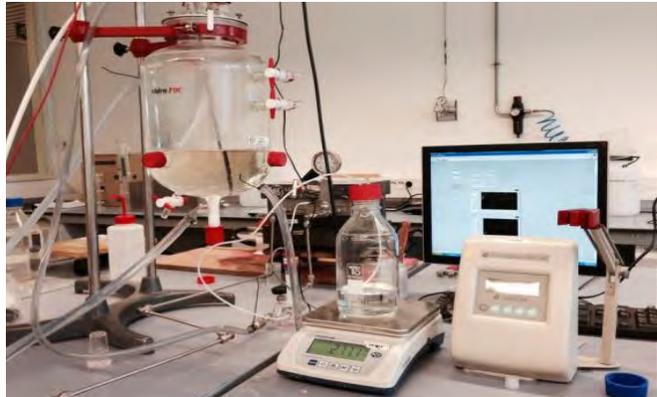


Our added-value

Methodology that links laboratory-scale work, pilot plant and industrial reality, with digitisation as a transversal axis



Leading infrastructure



Laboratories and pilot plants for environmental treatment

Infrastructure to test treatment of water, waste, air, contaminated soils both on a laboratory scale and a pilot plant.

Chemical and microbiological analysis.



Laboratory and living-lab of Climate Change

Aquatic Ecology Laboratory and living-lab in the Ebro Delta to develop Climate Change Adaptation projects.



Battery and electric vehicle laboratory

Centre of reference in southern Europe for applied research, trials and the development of battery packs.

Leading infrastructure



Energy laboratory

Infrastructure for working with electrical energy equipped with a micro-grid coupled with renewable energies.



Omic sciences centre

Unique scientific and technical infrastructure (ICTS) owned by the Rovira i Virgili University. The centre is managed by Eurecat and equipped with the latest technologies in metabolomics and provides integrated solutions with support units in proteomics, genomics, transcriptomics and advanced imaging.



We are recognized as a KET Technology Centre by the European Commission thanks to our close collaboration with SMEs on their market-oriented research and innovation activities.

We bring the most cutting-edge technologies closer to the productive fabric in a bid to initiate the move towards a more efficient and sustainable productive model.

Prepared for the challenges of the future: Centre for Climate Change Resilience

Centre of
Excellence



Centre en
Resiliència Climàtica
by eurecat

Technology and knowledge to face climate emergency

The Climate Change Resilience Centre (CRC) has the mission to promote R & D & I focused on climate change and contribute to sustainable development by accelerating the ecological transition, through applied research of excellence, technology and innovation.

CRC works in a coordinated manner with social and economic agents, citizens, business and public administrations; and in full alignment with national and international climate change adaptation policies.

It is promoted by Eurecat, the Amposta City Council and the Rovira i Virgili University, in collaboration with other institutions and entities firmly linked to the territory and with a concern and determined commitment to adaptation to climate change and sustainability.

www.centreenresilienciaclimatica.org/



Prepared for the challenges of the future: Battech

Joint
Research
Unit



The reference center for R&D in batteries in southern Europe

The new mobility will be electric, connected, shared and autonomous, and the battery will be at the center of this paradigm shift towards electrification.

IREC, the Energy Research Institute of Catalonia, and Eurecat have created BATTECH, a reference center to cover all the R & D & I of the battery ecosystem in southern Europe, which includes research, development and innovation of the entire value chain for the markets for electric mobility, renewable energies and capital goods.

BATTECH's activity encompasses eco-design, new materials, testing and validation, assembly, industrialization, second life and circularity of the next generation of electric cells and batteries. With BATTECH, we are moving towards innovation with industrial, economic and social impact, in the field of batteries and electric, light and ecological mobility.



**Your R+D+i
partner for batteries
and electrification**

MARBEL



Future
Mobility.
Batteries

MARBEL: Manufacturing and assembly of modular and re-usable EV batteries for environmentally-friendly and lightweight mobility

Eurecat coordinates the Marbel project, focused on the production of more sustainable and efficient electric batteries. Eurecat will provide knowledge in circular design, sustainability, topological optimization and materials such as recycled aluminum, as well as its specialized laboratory methodologies developing new tests to evaluate the performance and safety of the new batteries, including both their first and second life.

<https://marbel-project.eu/>



Horizon 2020
European Union Funding
for Research & Innovation

AquaSPICE



Development and implementation of digital and circular water use innovations to promote a sustainable use of water and advancing sustainability process of industries.

- The AquaSPICE project aims at materialising circular water use in the European Process Industries, fostering awareness in resource-efficiency and delivering compact solutions for industrial applications, including water treatment and reuse technologies, as well as closed-loop recycling practices.
- The solutions promoted by the project enable and facilitate the immediate uptake, replication and up-scaling of the innovations, by providing comprehensive strategic, business and organisational plans which offer a range of well-defined solutions, suitable for various cases.

www.aquaspice.eu



Large-scale demonstration of water-smart and efficient management systems to promote a circular economy.

- The WATER-MINING project aims to be an example for social embedding of innovative solutions in a wide spectrum of technology applications.
- WATER-MINING provides examples for real-world implementation of the Water Framework Directive to help the transition to Circular Economy, incorporating EU Green Deal packages.
- The project will bring together efforts to evaluate the circularity of the proposed solutions by analysing their sustainability through the development of a system of environmental indicators
- The demonstrations will integrate innovative technologies developed by partners and from previously funded EU projects.

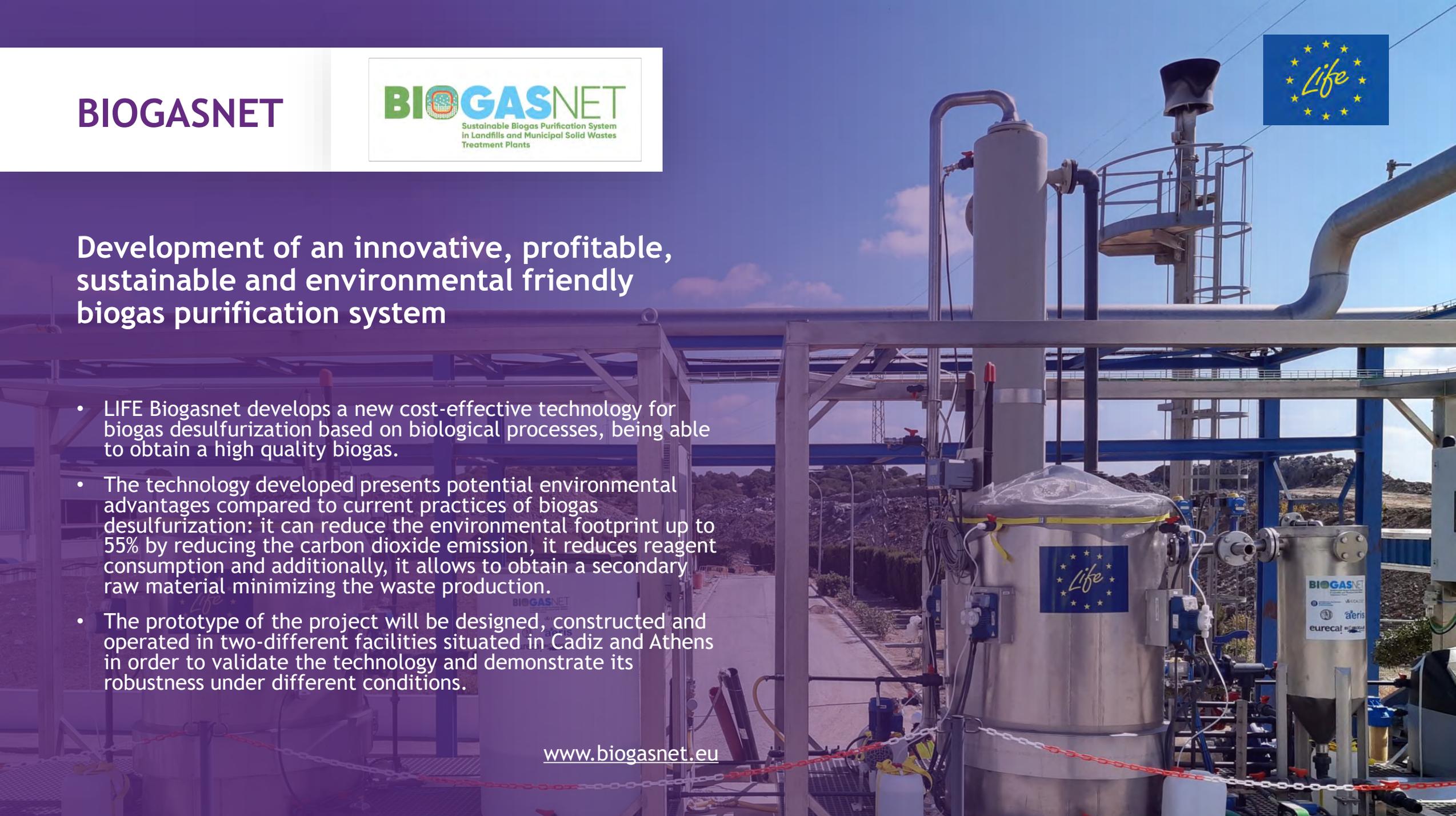
BIOGASNET



Development of an innovative, profitable, sustainable and environmental friendly biogas purification system

- LIFE Biogasnet develops a new cost-effective technology for biogas desulfurization based on biological processes, being able to obtain a high quality biogas.
- The technology developed presents potential environmental advantages compared to current practices of biogas desulfurization: it can reduce the environmental footprint up to 55% by reducing the carbon dioxide emission, it reduces reagent consumption and additionally, it allows to obtain a secondary raw material minimizing the waste production.
- The prototype of the project will be designed, constructed and operated in two-different facilities situated in Cadiz and Athens in order to validate the technology and demonstrate its robustness under different conditions.

www.biogasnet.eu



LIFE SOLIEVA



LIFE SOLIEVA

Currently, wastewater from the table olive industry is composed of NaOH, salt and organic matter and accumulates in evaporation ponds, which leads to a loss of water and usable resources, occupation of the land and a high risk of contamination due to spills or overflows of the ponds. The project will demonstrate a zero liquid discharge scheme (ZLD) capable of recovering water, salt, NaOH and polyphenols, an organic compound with high added value that can be used in the food industry.

The main objective of the LIFE SOLIEVA project is to demonstrate the technical, environmental and economic feasibility of the organic compound recovery (OCR) technology based on membrane filtration, vacuum concentrator and spray drying, combined with advanced solar evaporation (ASE), to face the environmental challenges of the table olive sector in the treatment of its process waters and update the environmental legislation related to the use of water.

www.lifesolieva.eu



Solieva Pilot Plant

REWATCH



Reclaimed petrochemical industry wastewater at pilot scale of an innovative system

Demonstration on a pilot scale of a new system for treating wastewater from the petrochemical industry in one of DOW Chemical Ibérica's production plants. The system makes it possible to obtain high-quality reclaimed water which can be reused in the same industrial operations.

Specifically, the project has brought on stream a prototype installed at DOW's ethylene cracker which treats 6 m³ per hour of a complex mixture of petrochemical wastewater. REWATCH differs from other water reuse projects in that it is designed to treat wastewater in the same place where it is produced and where it can be reused, which will help towards sustainability in water use process solutions management in the area which is exposed to exceptional water stress at certain times of the year.

REWATCH is a circular economy project yet is also designed to tackle climate change because it reuses water, a resource which will be increasingly scarce in the Mediterranean looking at the predictions for water availability in the region in the envisaged scenarios.

www.rewatch.eu

iBATHWATER



iBATHWATER project demonstrates the efficiency of the integrated management of the urban sewage through an open platform capable of combining operational and managerial information with innovative online microbial measurements to ensure water quality and analysis tools to minimize health risks.

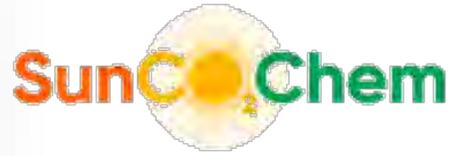
Partners are demonstrating the urban sewage system in Berlin and Barcelona, two cities with different aquatic natural ecosystems and needs related to urban waters planning and management, allowing the evaluation of the technology in both river and sea water. iBATHWATER aims to reduce the pollution load discharged into receiving waters and improve the quality of bathing waters, both in beaches and rivers, up to a 30% in Barcelona and 20% in Berlin.

www.ibathwater.eu



Barcelona Pilot Plant

SunCoChem



SunCoChem project addresses the need of the European Chemical Industry to reduce their dependence on carbon feedstock by producing highly competitive and integrated solutions enabling the carbon-neutral production of energy and high-value chemicals.

SunCoChem will provide a solution based on a competitive tandem photoelectrocatalytic reactor to efficiently produce oxo-products from solar energy and CO₂ emissions from the European Chemical Industries. This will be achieved by process intensification coupling a solar-driven carbon dioxide reduction to CO/water oxidation to O₂ with CC bond carbonylation reaction catalysed by novel multifunctional hybrid photoelectrocatalysts.

The project will deliver materials with improved catalytic performance from cheap and earth-abundant raw building block with application in the solar-driven chemistry to produce chemicals by using renewable energy (sunlight) and renewable carbon sources (CO₂).

www.suncochem.eu

Bizeolcat

BiZeolCat 

Project aiming at lowering carbon footprint of the refining industry by reducing gas flaring and converting these gases into valuable products. Development of light olefins and aromatics using light hydrocarbons (C1, C3 and C4) by implementing new procedures, involving innovative catalysts synthesis methodologies and novel reactor design and processing, demonstrating their improvement in sustainability and economic scalability in existing industrial processes.

BiZeolCat project shares the vision of an innovative and sustainable economy based on circular economy principles as making efficient use of resource.

www.bizeolcat.eu

Circular solutions for the water cycle

Reuse of water, recovery of nutrients and energy from wastewater, with 10 demonstration sites in Europe.

The demonstration site at Tossa de Mar (Spain) a touristic region located on the Mediterranean, characterized by high seasonal demand, frequent water scarcity episodes, also causing saltwater intrusion, has the objective to implement fir-for-use water quality.

<https://nextgenwater.eu/>



Soiltakecare



Environmental
remediation

International project co-financed by the European Regional Development Fund (ERDF). It aims to improve the management and rehabilitation of contaminated soils in the southwestern region of Europe that brings together Spain, Portugal and the South of France.

<https://soiltakecare.eu>





iClimaBuilt



Energy
Technologies

Development and implementation of digital and circular water use innovations to promote a sustainable use of water and advancing sustainability process of industries. Innovative insulating and energy storage materials in building envelopes that have climate adaption capabilities.

The iClimaBuilt project develops and implements advanced energy technologies materials, with improved insulation and energy harvesting properties, for smart building materials which have the ability to adapt to a diversity of climates.

<https://iclimabuilt.eu>

eurecat!



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"innovating for business"

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