

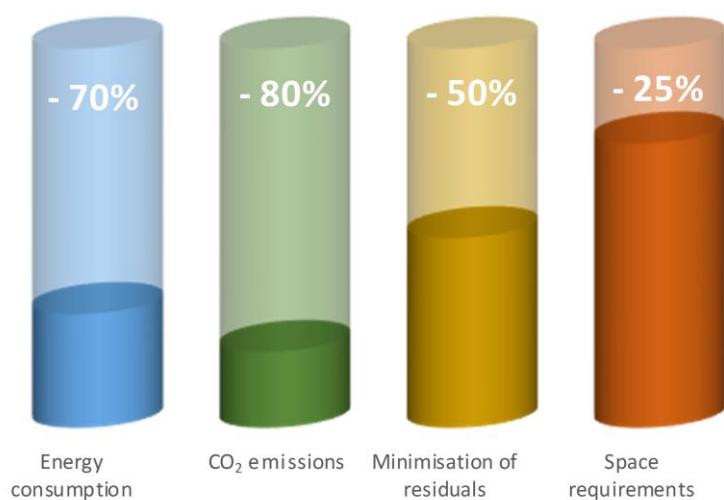
LIFE MEMORY: MEMBRANES FOR ENERGY AND WATER RECOVERY

Most of current wastewater treatment plants are based on aerobic processes characterised by a very high-energy demand and the generation of undesirable outputs, mainly greenhouse gases and sludge. These processes show poor environmental performance and do not take advantage of the resources contained in the wastewater: energy, nutrients (phosphorus and nitrogen) and water.

It is necessary to develop and implement **new technologies** involving a significant **change of paradigm** in the urban wastewater treatment field towards a **sustainable** treatment process from an economic, social and environmental point of view.

Anaerobic biological processes transform the organic matter into biogas – a renewable source of energy – with low sludge production, and combined with membrane filtration can treat and disinfect low-loaded wastewaters at ambient temperature.

In this context, **LIFE MEMORY project** aims to demonstrate at industrial prototype scale the technical and economic feasibility of an innovative technology, **AnMBR**, as an environmentally friendly alternative to conventional urban wastewater treatment processes.



The expected results applying AnMBR technology instead of conventional WWTPs are the reduction of the **energy consumption** by 70%, the avoidance of **CO₂ emissions** by 80%, the reduction by 50% of **sludge production** and the reduction by 25% of **space requirements**.

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LIFE MEMORY team presents preliminary results for optimising the filtration process in AnMBR technology



Preliminary results for optimising the filtration process in AnMBR technology were presented in the 8th IWA Membrane Technology Conference & Exhibition for Water and Wastewater Treatment and Reuse, held in Singapore in 5th – 9th September 2017. It was highlighted that the upper-layer controllers implemented in the prototype plant would allow achieving considerable savings in the operating cost of the filtration process. Indeed, considerable low operating costs are expected in the AnMBR plant compared to conventional aerobic processes.

The EIP water conference 2017 counted with the participation of the LIFE MEMORY team

More than 800 attendants, including decision makers and technicians, political leaders, regulators, industry and agriculture representatives, researchers, start-ups, investors and young professionals were gathered on 27 and 28 September in Porto (Portugal) in the EIP Water Conference 2017. LIFE MEMORY's objective of turning wastewater into a source of energy, nutrients and simultaneously, a water resource suitable for reuse, was described in the oral presentation "Curving the line to accelerated resource recovery: The LIFE MEMORY, INCOVER and RUN4LIFE projects, and a closer look at resource recovery factories".



Specialised online press follows up LIFE MEMORY project



The website www.aguasresiduales.info published the article "Demonstration of anaerobic membrane technology for treating urban wastewater: LIFE MEMORY project".

The article describes the implementation of AnMBR technology in the demonstrative prototype plant located in Alcázar de San Juan (Spain) within the LIFE MEMORY project. The application of AnMBR technology for treating real urban wastewater at industrial scale was highlighted.

The progress report of LIFE MEMORY project was presented in November 2017

The report gathers the works and progresses achieved since April 2016 until September 2017 within LIFE MEMORY project. Deliverables related to Action B2 (Guidelines for SANMBR design and operation), Action C1 (Impact Assessment: Interim Report) and Action C2 (Interim report on the whole process in terms of energy efficiency, carbon footprint and on the LCA) were included in this report to the European Commission.

LIFE MEMORY project was present in the IWA World Conference on Anaerobic Digestion



On 17th-20th October 2017, Beijing (China) hold the 15th IWA World Conference on Anaerobic Digestion (AD-15).

The industrial prototype AnMBR plant designed and operated within LIFE MEMORY project was presented in this conference. Special attention was paid to the fuzzy-logic-based controller implemented and the considerable savings in the operating cost that it would allow achieving.

LIFE MEMORY in the meeting “Encontro Nacional de Entidades Gestoras de Água e Saneamento”

The *Encontro Nacional de Entidades Gestoras de Água e Saneamento* was celebrated on 21th-24th of November 2017 in Évora (Portugal).

Advances in the exploitation of the demonstrative prototype plant were presented. After more than one year of operation, promising results have been obtained in terms of organic matter removal efficiency, methane yield and biodegradation potential, waste sludge production, energetic efficiency, greenhouse gases emissions and membrane performance.



More than 150 people have visited the prototype plant of LIFE MEMORY project



Several visits to the prototype plant located in Alcázar de San Juan (Spain) are being organised since its start-up in September 2016. The main aim is to disseminate among local population the features and advantages of AnMBR technology in terms of sustainability (e.g. energy saving, greenhouse gasses emission avoidance and waste production reduction).

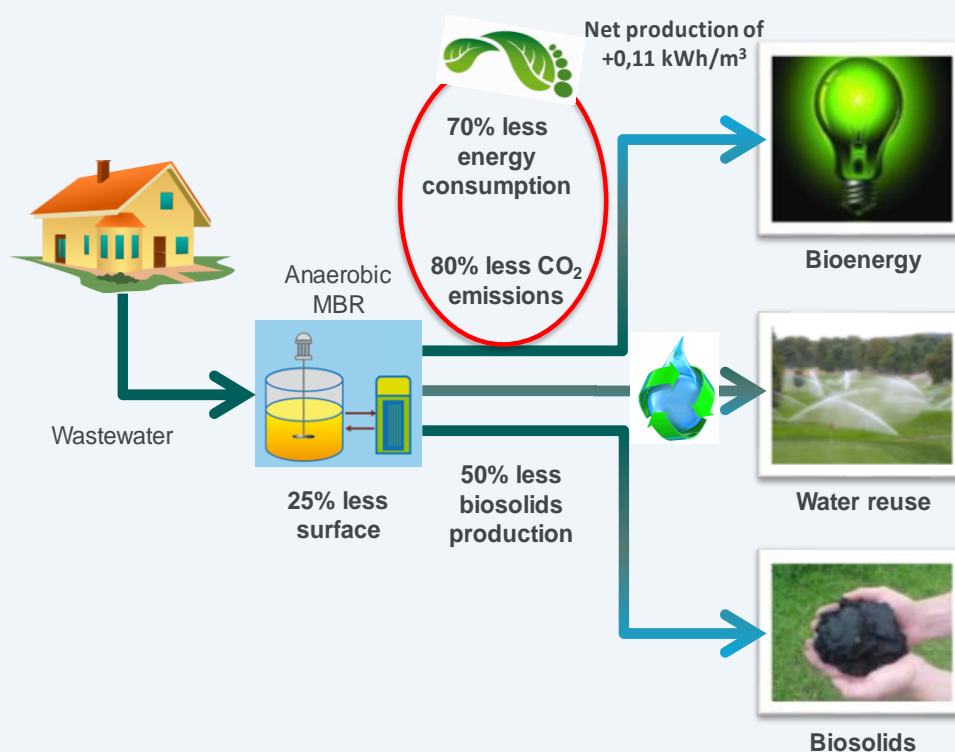
More than 150 students, researchers and journalists have already visited the prototype plant.

LIFE MEMORY'S SURVEY

LIFE MEMORY project is willing to assess social awareness and acceptance of the benefits of the optimised AnMBR process. A survey with 8 multiple-choice questions related to wastewater treatment processes, sustainability and AnMBR technology is being circulated.

The survey is available in the website of LIFE MEMORY project and answers from all social contexts are welcomed.

www.life-memory.eu



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