



## **The Joint Declaration of Intent for the INNOVATION DEAL on sustainable waste water treatment combining anaerobic membrane technology and water reuse**

**This Joint Declaration of Intent ("JDI") is between the following participants:**

**The European Commission represented for the purposes of signature of this JDI by**

- Commissioner Karmenu Vella for the Environment, Fisheries and Maritime Affairs
- Commissioner Carlos Moedas for Research, Science and Innovation

### **Public authorities**

#### NATIONAL AUTHORITIES

- Energy and Water Agency (Malta) represented for the purposes of signature of this JDI by Daniel Azzopardi, Chief Executive Officer
- Confederación Hidrográfica del Júcar (Spain) (Júcar Basin Authority) represented for the purposes of signature of this JDI by María Ángeles Ureña Guillem, President
- Águas de Portugal (Portugal) represented for the purposes of signature of this JDI by Cláudio de Jesus, Member of the Board
- Water Services Corporation (Malta) represented for the purposes of signature of this JDI by Paul Micallef, Executive Director

## REGIONAL AUTHORITIES

- Consellería de Agricultura, Medio Ambiente, Cambio Climático y Desarrollo Rural (Spain) represented for the purposes of signature of this JDI by Julià Álvaro Prat, Regional Secretary of Environment and Climate Change
- Entidad Pública de Saneamiento de Aguas Residuales de la Comunidad Valenciana (Spain) represented for the purposes of signature of this JDI by Enrique José Lapuente Ojeda, Manager of EPSAR

## **The Consortium**

### UNIVERSITIES

- University of Valencia (Spain) through the Department of Chemical Engineering represented for the purposes of signature of this JDI by Pilar Campíns-Falcó, Vice-Rector for Research and Science Policy
- Universitat Politècnica de València (Spain) represented for the purposes of signature of this JDI by José E. Capilla Romá, Vice-Rector for Research, Innovation and Transfer
- Nova University of Lisbon (Portugal) represented for the purposes of signature of this JDI by Fernando José Pires Santana, Dean of the Science and Technology Faculty

### RESEARCH CENTRES

- Institut Européen des Membranes (France) represented for the purposes of signature of this JDI by Mikhael Bechelany, Researcher at Institut Européen des Membranes
- Laboratoire de Biotechnologie de l'Environnement of INRA (France) represented for the purposes of signature of this JDI by Pierre Cellier, Deputy-Head of Research Division

## INNOVATORS

- H2020 SMART Plant Project consortium represented for the purposes of signature of this JDI by Gian Marco Revel, Vice Rector for European Research, Università Politecnica delle Marche (Italy)
- SME: Ecofilae (France) represented for the purposes of signature of this JDI by Nicolas Condom, Chief Executive Officer

## STAKEHOLDER

- Canal de Riego del Río Túrria (Spain) represented for the purposes of signature of this JDI by Luis Blanch Puertes, Vice President

## **1. Introduction**

1. To maintain our prosperity for future generations, it is necessary to strengthen our economic competitiveness and simultaneously promote low-carbon development, enhance our resilience to climate change impacts and reduce the burden on the environment and our reliance on fossil energy and scarce raw materials.
2. Creativity, entrepreneurship and innovation are essential to enable such a transition to green growth. Businesses, citizens and civil society organisations carry out many concrete initiatives to make the economy and society greener and create jobs and sustainable growth in the process.
3. The Circular Economy concept is a response to the aspiration for sustainable growth in the context of the growing pressure of production and consumption on the world's resources and environment. It can boost the European economy and competitiveness by bringing new business opportunities as well as innovative and more efficient ways of producing and consuming. The transition towards a circular economy gives us an opportunity to reinvent our economy and create new competitive advantages for Europe on a sustainable base.

4. Good framework conditions, such as fit for purpose regulations and adequate financial instruments, are a prerequisite for the development and successful uptake of innovative solutions.
5. Innovation Deal ("ID") is an instrument that can be used at the initiative of innovators and is designed to bring together innovators, national/regional/local authorities in Member States and European Commission services in a voluntary, cooperative, open and transparent exercise with the aim to study in-depth whether any perceived regulatory barriers really exist in EU legislation or Member States implementing measures that hinder innovative commercial or industrial development in the Circular Economy. The ID cannot derogate from existing EU legislation but may make use of the possible flexibility already allowed in such legislation.
6. The concept of ID has been launched in the European Commission Communication "Closing the loop – An EU action plan for the Circular Economy" (COM(2015)614/2). The Communication introduces the concept of innovation deals as «a pilot approach to help innovators facing regulatory obstacles (e.g. ambiguous legal provisions), by setting up agreements with stakeholders and public authorities». This pilot phase is therefore an opportunity for the European Commission to test this new approach in real life conditions and it is an important occasion to learn about the practical implementation.

## **2. Specific conditions**

### **2.1 Context**

The European Commission adopted an ambitious Circular Economy Package which encourages actions that contribute to "closing the loop" of product or process lifecycles through greater recycling and re-use, and bring benefits for both the environment and the economy.

In relation to water, the Circular Economy concept assumes higher uptake of water reuse and higher recovery of energy and materials from waste water. Water reuse can contribute to the solution of the water scarcity problem affecting South Europe and increasingly other European regions. Recovery of energy from wastewater can provide a cost effective source of energy and offset the energy that urban water and

sanitary systems consume, thus also contributing to climate change mitigation. Recovery of materials from wastewater can provide valuable inputs into several economic sectors and improve economic viability of sanitary systems. In particular, nitrogen and phosphorus in wastewater can be a source of nutrients for agriculture production.

Anaerobic membrane bioreactors, as well as other innovative technologies, can enable synergistic application of water reuse and recovery of materials and nutrients with economic benefits for waste water treatment operators and users of treated wastewater. The traditional wastewater treatment plants could be transformed into 'water resources recovery facilities' where the waste water treatment process is optimised for the next use of the treated wastewater while the energy use, amount of waste (sludge) and greenhouse gas emissions and residual pollution from effluents are minimised.

Despite the obvious economic and environmental benefits of the Circular Economy approach in relation to wastewater, neither water reuse nor recovery of energy and nutrients has achieved large scale application in Europe. There are a number of market failures<sup>1</sup> and barriers that currently prevent water reuse and recovery of energy and use of nutrients from wastewater. This in turn prevents a potential higher uptake of new technologies that might be more suitable for water resources recovery facilities than the conventional technology. Among other issues there may be regulatory barriers that discourage water reuse by farmers and other potential users, oblige wastewater treatment operators to perform treatment in certain specific way or impose prohibitive costs on different actors.

## **2.2 Scope of the Innovation Deal**

The Innovation Deal focuses on an EU regulatory framework<sup>2</sup> affecting water reuse for agricultural purposes. It will analyse the regulatory barriers that prevent a paradigm shift towards converting waste water treatment plant into water and resource recovery facility, which relate to: (i) recovery of costs for water services, (ii) discharge requirements for urban wastewater treatment, and (iii) responsibility of

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<sup>1</sup> For e.g. DG ENV background document for the open interservice consultation on water reuse, see page 4 of the background document - [http://ec.europa.eu/environment/water/blueprint/pdf/water\\_reuse/Background\\_Public%20cons%20Water%20Reuse\\_en.pdf](http://ec.europa.eu/environment/water/blueprint/pdf/water_reuse/Background_Public%20cons%20Water%20Reuse_en.pdf)

<sup>2</sup> For example, article 9 of the Water Framework Directive - 2000/60/EC, and article 12 of the Urban Waste Water Treatment Directive - 91/271/EEC. In the first phase of the lifetime of the ID (*see article 6 of this document*), other EU regulatory barriers might be indicated.

end-users for water reuse. Other prominent barriers could be identified in the first phase of the Innovation Deal, which the Steering Committee may decide to include in this scope. The analysis will cover how the barriers affect different stakeholders within the whole value chain of water.

### **2.3 Objectives**

The overall objective of this ID is to contribute to a circular economy, climate resilience, resource efficiency, environmental protection and economic growth in Europe. The ID aims at facilitating the market application of anaerobic membrane technologies that might enable efficient recovery of energy and materials from wastewater while ensuring high level of environmental and public health protection.

Operational objectives of the ID are the following: (i) to identify, describe and analyse possible EU regulatory barriers, (ii) to clarify to what extent is the EU legislation at the origin of the perceived barriers to innovation, (iii) if necessary, to elaborate options for solutions to overcome these barriers for water to be reused and evaluate their feasibility, and (iv) if necessary, to develop a proposal on how these options could be followed-up.

Tasks to be developed and partners involved in them, milestones, deliverables and communication strategy will be defined in work plan which will be agreed upon by the Steering Committee within two weeks after signing this JDI.

Other possible issues will be identified in the 1<sup>st</sup> stage of the Innovation Deal and analysed subsequently during the lifetime of the ID.

### **2.4 Actions for the European Commission**

- Active engagement to provide support to analyse relevant EU legislation.
- Set up an internal coordination arrangement among the relevant services of the European Commission to ensure the analysis of the perceived EU regulatory obstacles.
- Support the contacts and trust building with the participants of the ID, including public authorities in the relevant Member State in full respect of the subsidiarity principle.
- Take upon a facilitator role in following up the process along with the Coordinator of the Consortium and Public Authorities.

- Provide a central contact point within the European Commission on the requests concerning the ID.
- Share information with the other participants during the ID lifetime. This does not include sensitive data.
- Contribute to actively disseminate the outcomes.

## **2.5 Actions for the Public Authorities**

- Active engagement with the European Commission and with the other participants to provide clarification on transposed EU legislation and/or to explore the possibility to make use of existing flexibility in the relevant EU legislation to allow for testing or demonstration of the innovative solution proposed in the ID.
- Share information with the other participants during the ID lifetime.
- Share and disseminate the outcome of the ID to support EU added value. This does not include sensitive data.

## **2.6 Actions for the innovators and other participants**

- Active engagement to the objectives and activities of the ID.
- Availability and use of own resources to implement the ID.
- Share information with the other participants during the ID lifetime.
- Share and disseminate the outcomes of the ID to support EU added value. This does not include sensitive data.

The role of the Coordinator:

- Coordinate communication between members of the Consortium and the public authorities,
- Take upon a facilitator role in following up the process along with the European Commission,
- Take the initiative to start actions and activities on behalf of the Consortium and the Public Authorities within the ID in agreement with the European Commission,
- Follow the advances of the tasks and summarizing them for record tracking,
- Prepare the communication to the European Commission of the regulatory obstacles found to innovation.

## **2.7 Expected results**

- The European Commission, in cooperation with the authorities of the Member States, will produce the report with an in-depth analysis of the alleged regulatory obstacle to innovation put forward by the Consortium. This analysis is not a binding interpretation of the legislation analysed and is always subject to the final word of the Court of Justice of the European Union, the only institution that is solely competent for the interpretation of EU law.
- This analysis does not commit the European Commission to undertake any course of action whatsoever after the ID is finished. This analysis may serve the European Commission as a source of information and may consider launching further evaluation, consultation and assessment of the impact of this regulatory obstacle outside the framework of this ID. This could be done by making use of its currently existing tools for its regulatory and standardisation activities, according to the Better Regulation Guidelines.

## **3. Lack of legal effects**

The participants agree that the undertaken actions do not produce legal effects and are not legally binding.

## **4. Execution and compliance with EU legislation**

This JDI will be executed within the frame of the European Union legislation, particularly to the extent that these actions fall within the scope of EU rules such as on public procurement, competition as well as any standards and technical EU regulations.

The proposed innovation will not violate any EU legislation and must not infringe and/or jeopardise any environmental, social or competition principles.

## **5. Steering Committee**

The Steering Committee will have the following membership and functions:

- All participants that signed JDI will have representatives in the Steering Committee.
- The execution of this JDI will be supervised by the Steering Committee.

- The participants agree to disclose the relevant information to the Steering Committee.
- Disputes should be dealt within the Steering Committee.
- Without prejudice of the previous four paragraphs, the representatives of the participants within the Steering Committee may further agree on additional functions and procedures of this Steering Committee.
- All decisions will be taken by consensus in the Steering Committee.
- The Steering Committee will approve any communication material related to this ID.

## **6. Innovation Deal lifetime**

The ID will be finished after a maximum of 18 months after the signature of this JDI. The life of an ID is divided in three phases. Each phase cannot exceed the duration in months as indicated but it can be shortened. At the end of each phase the European Commission may discuss with the other participants if the necessary conditions for this ID are still met and, if it is not the case, may decide unilaterally to terminate the ID. The necessary communication actions will be defined in the work plan.

### **6.1 Early life (month 6)**

As soon as the JDI is signed, the Consortium will complete the collection of the necessary information and perform a thorough joint study of the relevant perceived regulatory barriers. This study should include an assessment of how the regulatory system affects the market uptake of the innovation and of its relative importance compared to possible other barriers. The absence of appropriate enabling regulation should also be considered. The participants will strive to consult with all relevant stakeholders. The European Commission, in cooperation with the authorities of the Member States, will analyse the study of these perceived regulatory barriers. The study should represent the general understanding of what is exactly the barrier that is hampering innovation.

Other possible issues may be identified in the first stage of the Innovation Deal and analysed subsequently during the lifetime of the ID.

The outcomes of this phase will be summarised in the report produced by the Consortium.

## **6.2 Intermediate review (month 12)**

All the participants will join efforts to develop and to assess possible options for solutions to overcome the indicated barriers. The assessment will explain how the options address the barrier, what the impacts and consequences may be, including the economic and environmental impacts, and which stakeholders may be implicated. The participants will strive to consult the assessment with all relevant stakeholders or describe the point of view of these stakeholders on the identified options.

The outcomes of this phase will be summarised in the report produced by the Consortium.

## **6.3 Conclusion and outcomes (month 18)**

The main outcome of this ID will be a final report jointly produced by the participants to the ID. The report will be based on the outcomes of the first two phases of the Innovation Deal, including an in-depth analysis of regulatory barriers. Possible options for solutions can be given. Recommendations for follow-up actions can be included.

Each participant acknowledges and accepts that it is also possible that the in-depth analysis has as outcome a lack of solution for the barrier to the innovation.

However, if the evidence gathered confirms the existence of this innovation barrier, the European Commission may consider launching further evaluation, consultation and assessment of the impact of this regulatory obstacle outside the framework of this ID by making use of its currently existing tools for its regulatory and standardisation activities.

## **7. Intellectual property rights / Sensitive information**

Intellectual property rights will be fully respected and confidential information not disclosed but information on the IDs and their outcomes will be kept open, transparent and sufficiently generic in order not to interfere with technology development or to give competitive advantage to a single entity.

Each participant will declare which sensitive information has to be removed from the documents to be published.

## **8. No funding**

IDs are an initiative undertaken on a voluntary basis. The European Commission does not fund either the preparation or the implementation of IDs. No requests for funding of an ID will be taken into consideration. All participants participate at their own cost.

## **9. Assessment and monitoring**

Specific monitoring and evaluation criteria and activities relevant to the ID are defined in the work plan, with the involvement of the European Commission services responsible for the evaluation and monitoring. At the end of each stage the Steering Committee will meet to assess the progress.

## **10. Modifications**

Each of the participants may ask in writing, with a notice of at least six weeks, to the other participants to change the terms of the JDI. Such amendment requires the written consent of all participants.

## **11. New participants**

New participants may accede to this JDI.

Any new participant will submit its application for membership in writing to the Steering Committee of this ID.

## **12. Disputes**

The participants undertake to attempt in good faith to resolve amicably by mutual agreement any dispute arising in connection with the validity, interpretation, implementation or alleged breach of this JDI. They will do it in the framework of the Steering Committee.

## **13. Termination**

Each participant is entitled to withdraw at any time from the ID, subject to a written notice period of 3 months, by providing the motivation.

#### **14. Start of work**

This JDI becomes effective on the day following its signature by all participants. It is concluded for a period of 18 months after signature.

Participants will ensure that the actions mentioned in this JDI are implemented as soon as possible.

#### **15. Publication**

This JDI will be published on the website {<http://ec.europa.eu/research/innovation-deals/index.cfm>} to allow other third parties to become acquainted and to encourage them and to be inspired.

The outcomes, the process, name of participants and the activities will be made publicly available. The outcomes and lessons learned will be disseminated in an open and transparent way.

Agreed and signed in 15 copies.

Done in Brussels, 07 April, 2017

#### **For the European Commission**

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Commissioner for the Environment,  
Fisheries and Maritime Affairs

Carlos Moedas  
Commissioner for Research, Science and  
Innovation

#### **For the Energy and Water Agency**

Daniel Azzopardi  
Chief Executive Officer

#### **For the Confederación Hidrográfica del Júcar**

María Ángeles Ureña Guillem  
President

**For the Águas de Portugal**

Cláudio de Jesus  
Member of the Board

**For the Water Services Corporation**

Paul Micallef  
Executive Director

**For the Consellería de Agricultura,  
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