



**ZERO BRINE**

## **D6.4 Semantic web service portal**

November 2018



<b>Deliverable 6.3</b>		<b>Semantic web service portal</b>	
<b>Related Work Package</b>	WP6 – Online Brine Platform – Application of the software for the case of Netherlands		
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<sup>1</sup> R=Document, report; DEM=Demonstrator, pilot, prototype; DEC=website, patent fillings, videos, etc.; OTHER=other

<sup>2</sup> PU=Public, CO=Confidential, only for members of the consortium (including the Commission Services), CI=Classified

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## 1. Overview of the Project

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The ZERO BRINE project aims to facilitate the implementation of the Circular Economy package and the SPIRE roadmap in various process industries by developing necessary concepts, technological solutions and business models to redesign the value and supply chains of minerals and water while dealing with present organic compounds in a way that allows their subsequent recovery.

These resources will be recovered from saline impaired effluents (brines) generated by the process industry while eliminating wastewater discharges and minimizing the environmental impacts of industrial operations through brines (ZERO BRINE). ZERO BRINE brings together and integrates several existing and innovative technologies to recover products of high quality and sufficient purity to represent good market value.

A large-scale demonstration plant will be tested in the Energy Port and Petrochemical cluster of Rotterdam Port by using the waste heat from one of the factories in the port. The quality of the recovered products will be aimed to meet local market specifications. Additionally, three large-scale pilot plants will be developed in other process industries in Poland, Spain, and Turkey, providing the potential for immediate replication and uptake of the project results after its successful completion.

## 2. Scope of the Deliverable

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This deliverable comprises the web-service portal that is developed in the framework of task 6.1 entitled “Development of Online Platform Tool”. The task is led by NTUA.

The provided information of this deliverable is part of the public data and can be accessed by all consortium partners of the ZERO BRINE project and the public interested in the results of the ZERO BRINE project.

### 3. Semantic Web Service Portal

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“In a circular economy, waste that can be recycled is injected back into the economy as secondary raw materials. These materials can be traded and shipped just like primary raw materials but, at present, they still account for only a small proportion of the materials used in the EU.”<sup>3</sup> In this context, the **Online Brine Platform (OBP)** is an active web service which aims to promote the flow of secondary raw materials, by linking the Brine Owners with the Mineral/Water Users and the Technology and Waste Heat Providers. The OBP will play a key role in replicating the paradigms generated in the framework of the ZERO BRINE project. The development of an Industrial Symbiosis platform for brine recovery will facilitate the application of a new, disruptive resource management concept of systemic eco-innovation proposed in ZERO BRINE project. In the OBP, the brine streams generated from process industries as well as the raw materials (minerals) and the water streams used by these industries can be mapped and possible interactions between the industries across the value chain can be identified.

The OBP is linked with the **Online Brine Portal**.

The portal offers access to relevant stakeholders on specific information in the domain of saline waste water management. The main concept is to present to the user a single web page that brings together content from various sources. Users will have the possibility to navigate through useful information such as:

- Brine streams generated by process industries (based on scientific and BREF documents)
- Industrial uses and properties of minerals (based on REACH regulation)
- Successful ZERO BRINE case studies
- NACE, EWC, PC, TF, AC, SU, SBI codes explanation, etc.

Moreover, within the portal, users will have the possibility to communicate in a forum. A search engine will be integrated to the portal. Browsing to the portal will be free but full access (to the platform and the portal) will remain limited unless for the registered users.

The portal will enable consultation and consensus building with the relevant stakeholders, facilitating the exchange of information and data produced by the project.

The Online Brine Portal link is:

[obp.uest.gr/portal](http://obp.uest.gr/portal)

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<sup>3</sup> [http://ec.europa.eu/environment/green-growth/raw-materials/index\\_en.htm](http://ec.europa.eu/environment/green-growth/raw-materials/index_en.htm)