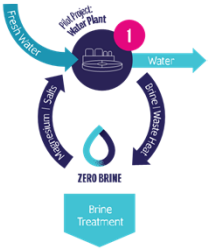
Funded by the Horizon H2020 Programme of the European Union

ZERO BRINE

Re-designing the value and supply chain of water and minerals: a circular economy approach for the recovery of resources from saline impaired effluent (brine) generated by process industries

H2020 project, June 2017 – May 2021

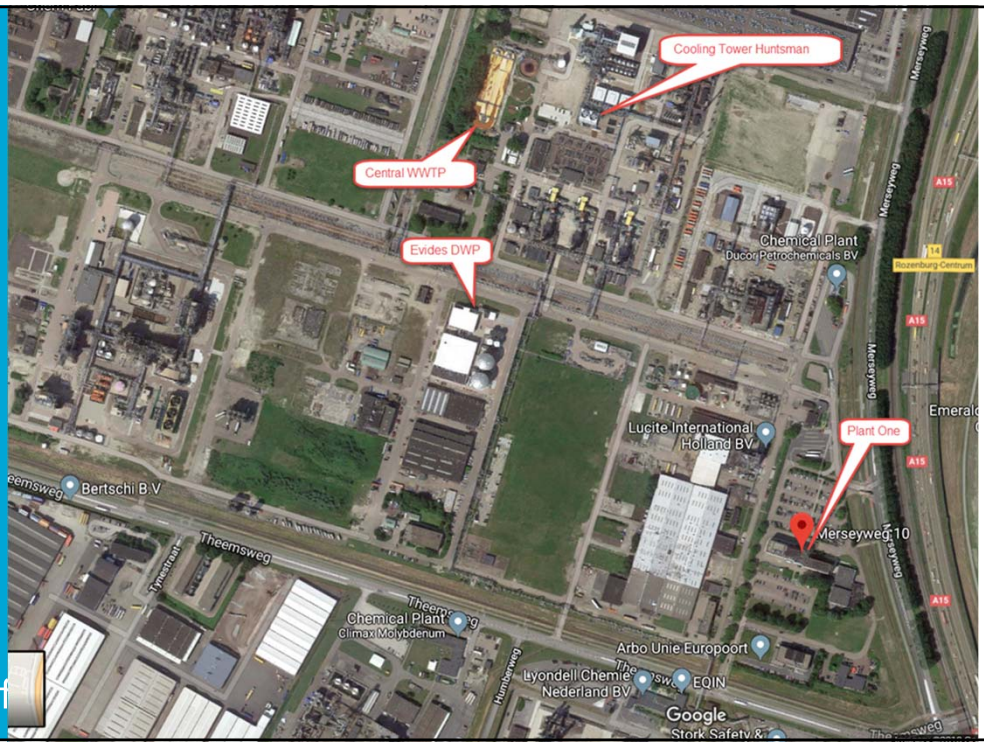
Funded by the Horizon H2020 Programme of the European Union



ZERO BRINE

Work Package 2

Re-designing the supply chain of water and minerals in the multi-company site of the Energy Port and Petrochemical cluster in Botlek area



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PLANT one Rotterdam b.v.

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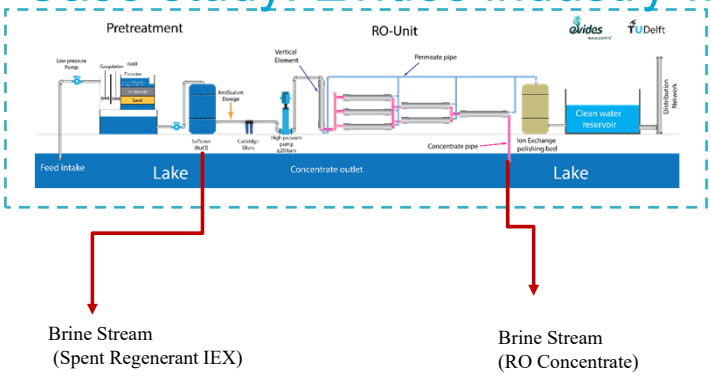
Case study: Evides industry water



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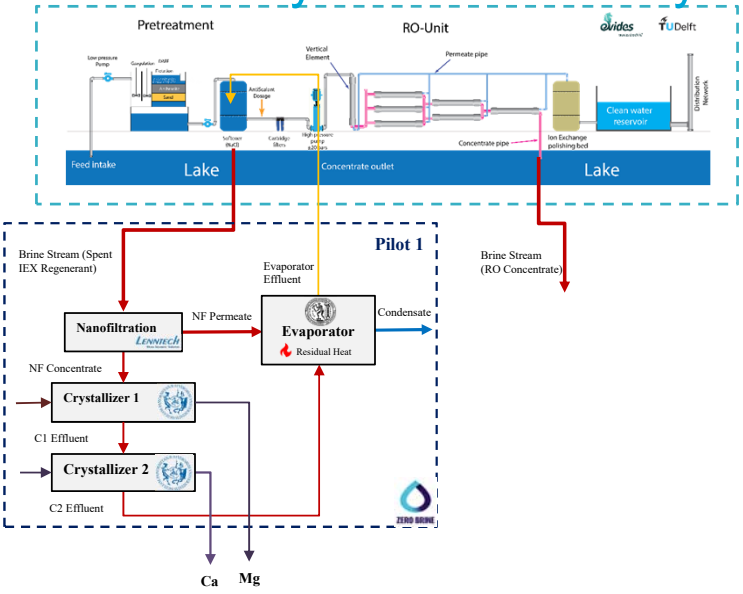
Case study: Evides industry water



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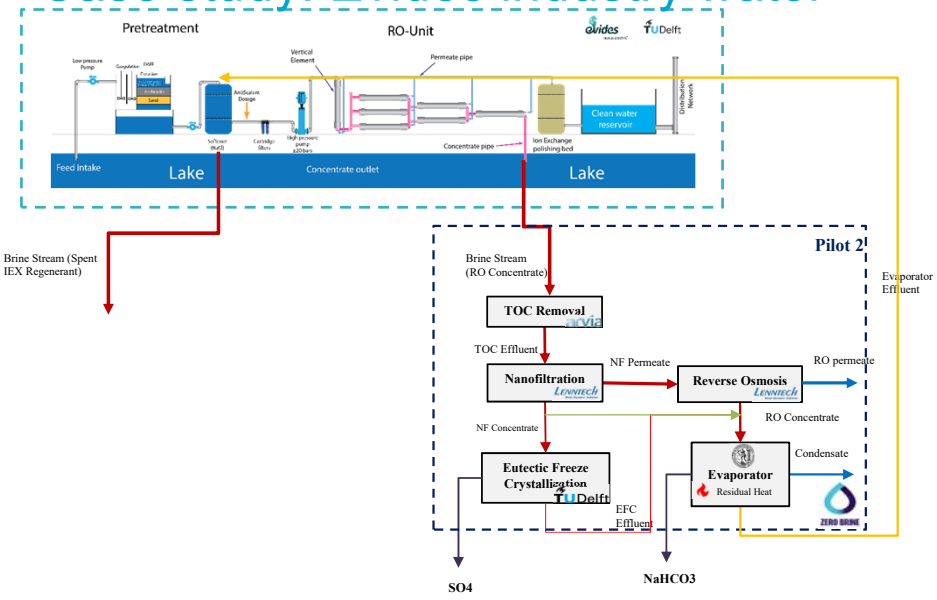
Case study: Evides industry water



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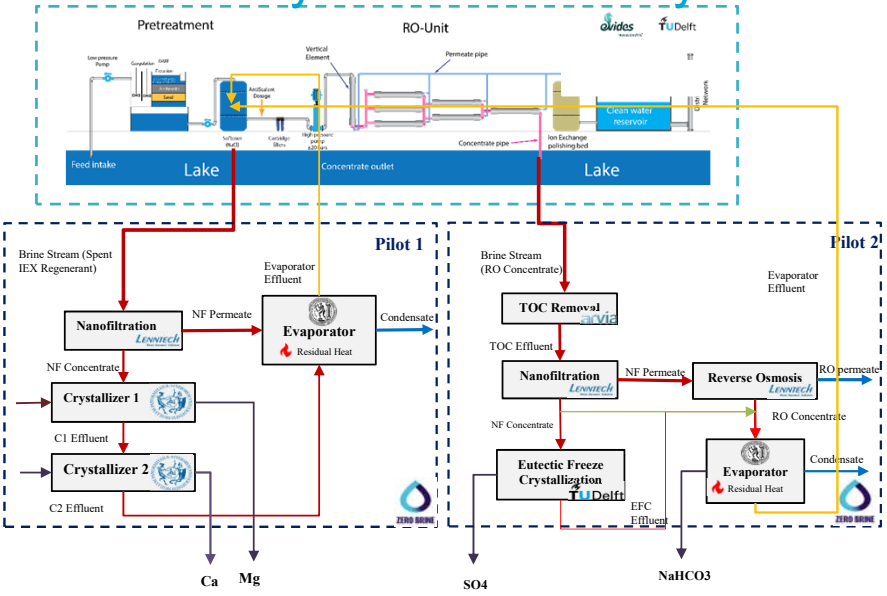
Case study: Evides industry water



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Brine Buffer Tank at Evides – Filling container

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Transport of brine to POR

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Brine arrival at POR

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Buffer tank at POR

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Pilot 1

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Nano Filtration
(Lenntech)

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MF-PFR Crystallizer
(UNIPA)

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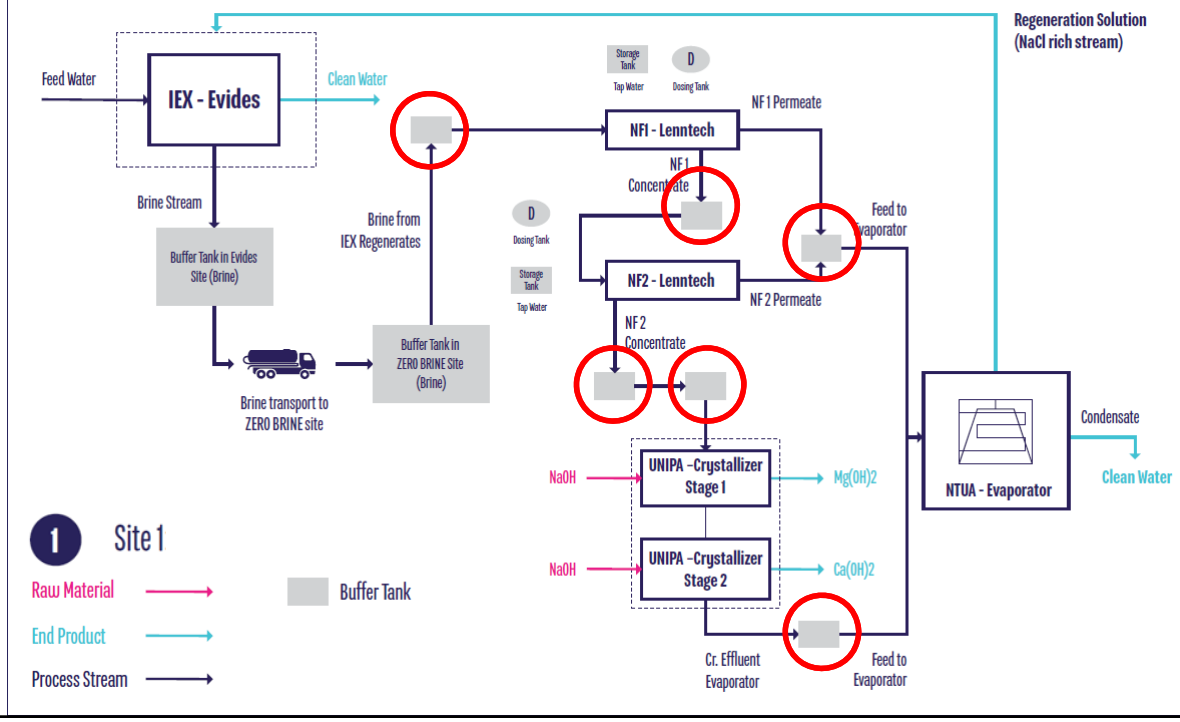

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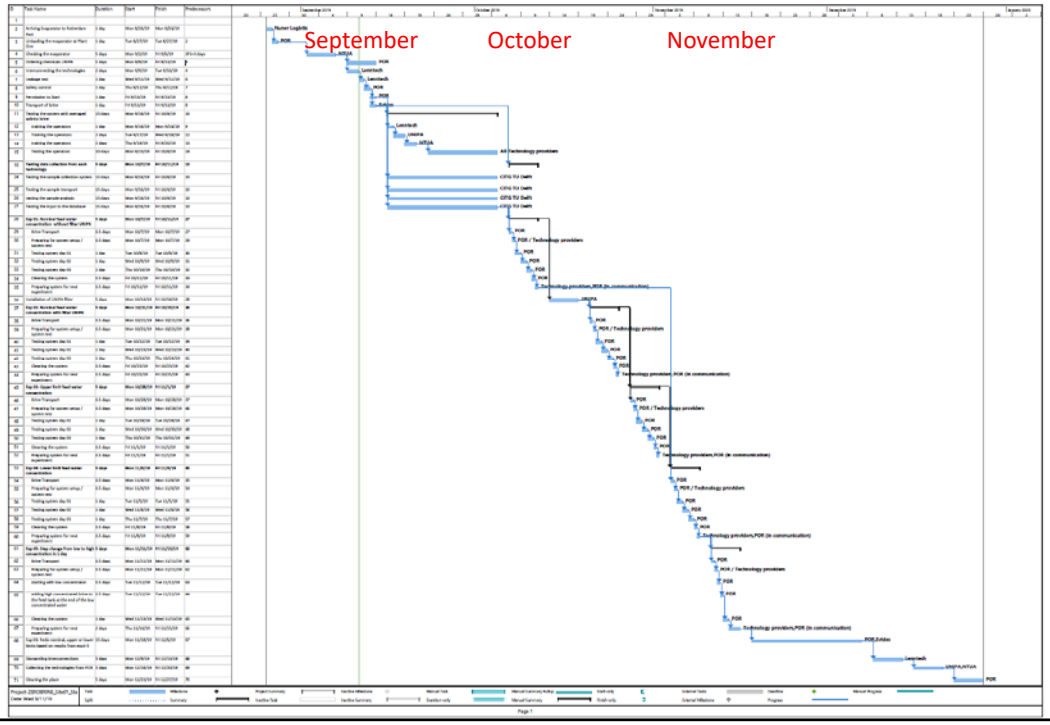
Training
Testing
Experiments
01
02
03
04
05
(06)



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ID	Experiments	TDS	EC	Start date	Duration
		g/L	mS/cm		Week
1	Hands-on training of the operator	20-40	30-65	September 16	1
2	Testing setup with operators	20-40	30-65	September 23	2
3	Exp 01: Nominal feed water concentration without filter UNIPA	20-40	30-65	October 7	1
4	Exp 02: Nominal feed water concentration with filter UNIPA	20-40	30-65	October 21	1
5	Exp 03: Upper limit feed water concentration	60-80	90-125	October 28	1
6	Exp 04: Lower limit feed water concentration	2-10	3-15	November 4	1
7	Exp 05: Step change from low to high concentration in 1 day	From 10 to 60 g/L	From 15 to 100	November 11	1
8	Exp 06: Redo nominal, upper or lower limits based on results from exp1-5	TBD	TBD	November 18	3

[1] The mentioned values are estimation of the electrical conductivity (EC)
[2] Exp = Experiment
[3] To be determined

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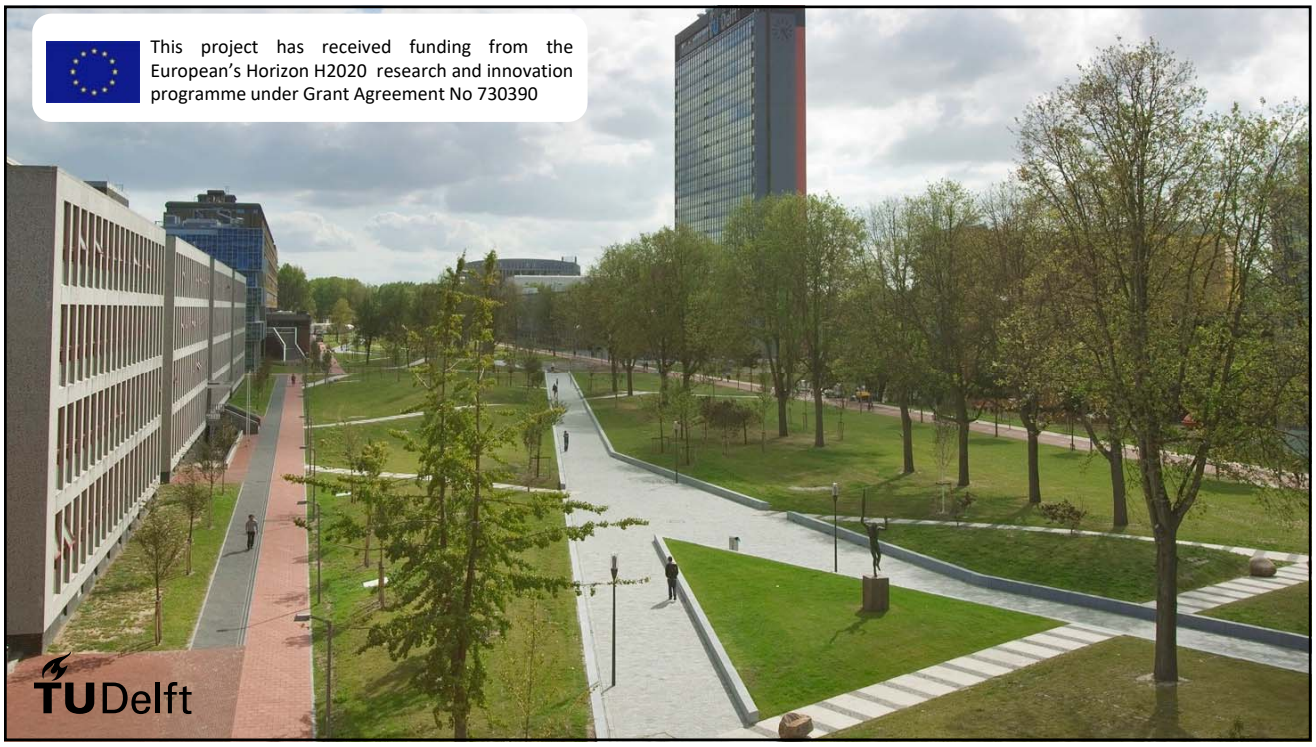
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