

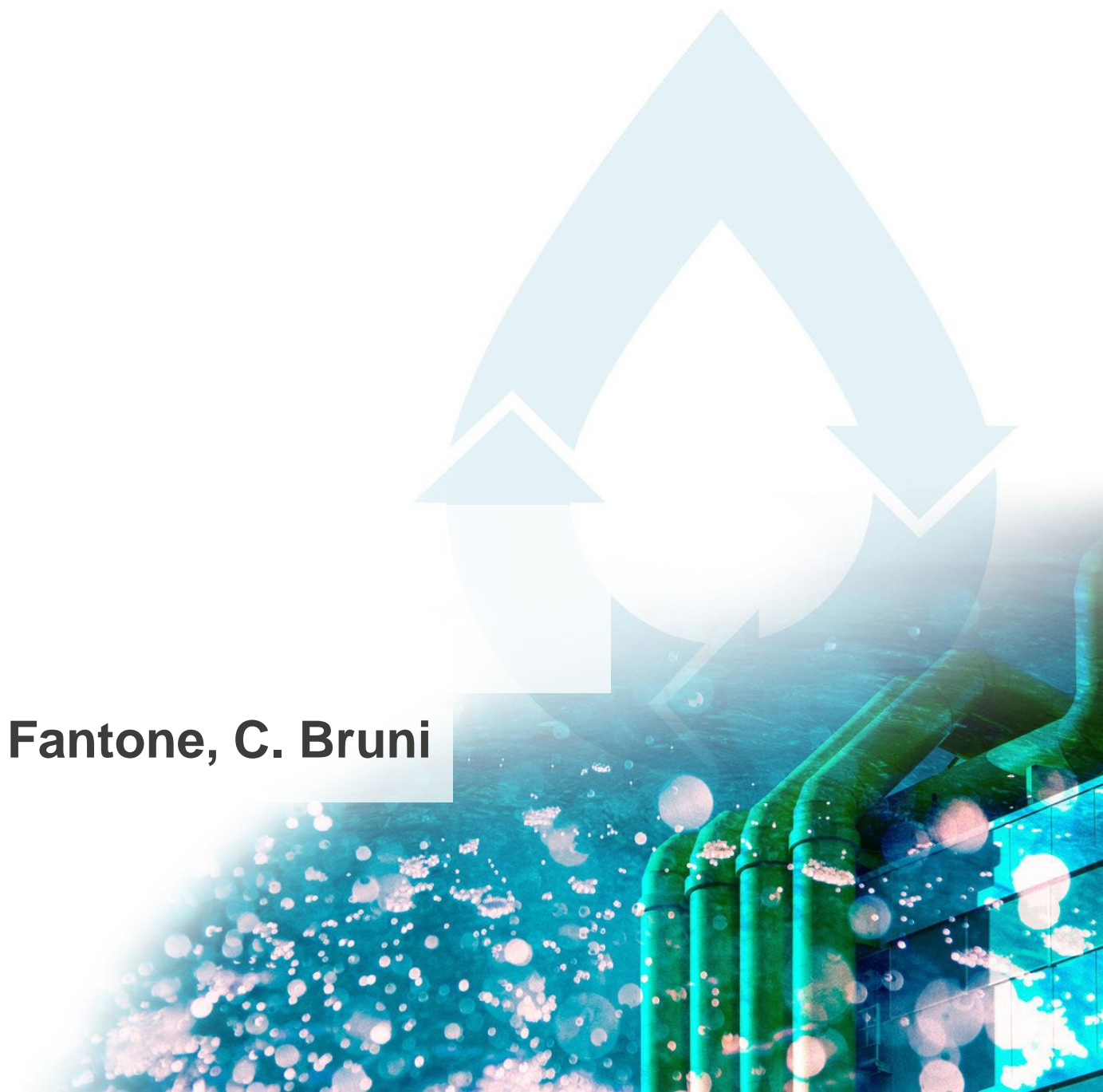


WATER SMART INDUSTRIAL SYMBIOSIS

Online seminar on heat recovery

A. Kleyböcker, S. Casa Garriga, F. Fantone, C. Bruni

February, 26th 2021





Ultimate (June 2020 – May 2024): Industry water-utility symbiosis for a smarter water society

- Promotion, establishment and extension of **Water Smart Industrial Symbioses**
- Development and demonstration of **innovative technologies** for symbioses
- **Assessment** of the technologies and development of **digital „support tools“**
- Development of **new business models** towards marketability

9 Symbioses between:

Industrial sectors

- Agro-food
- Beverage
- (Petro)chemical
- Biotech

Service providers

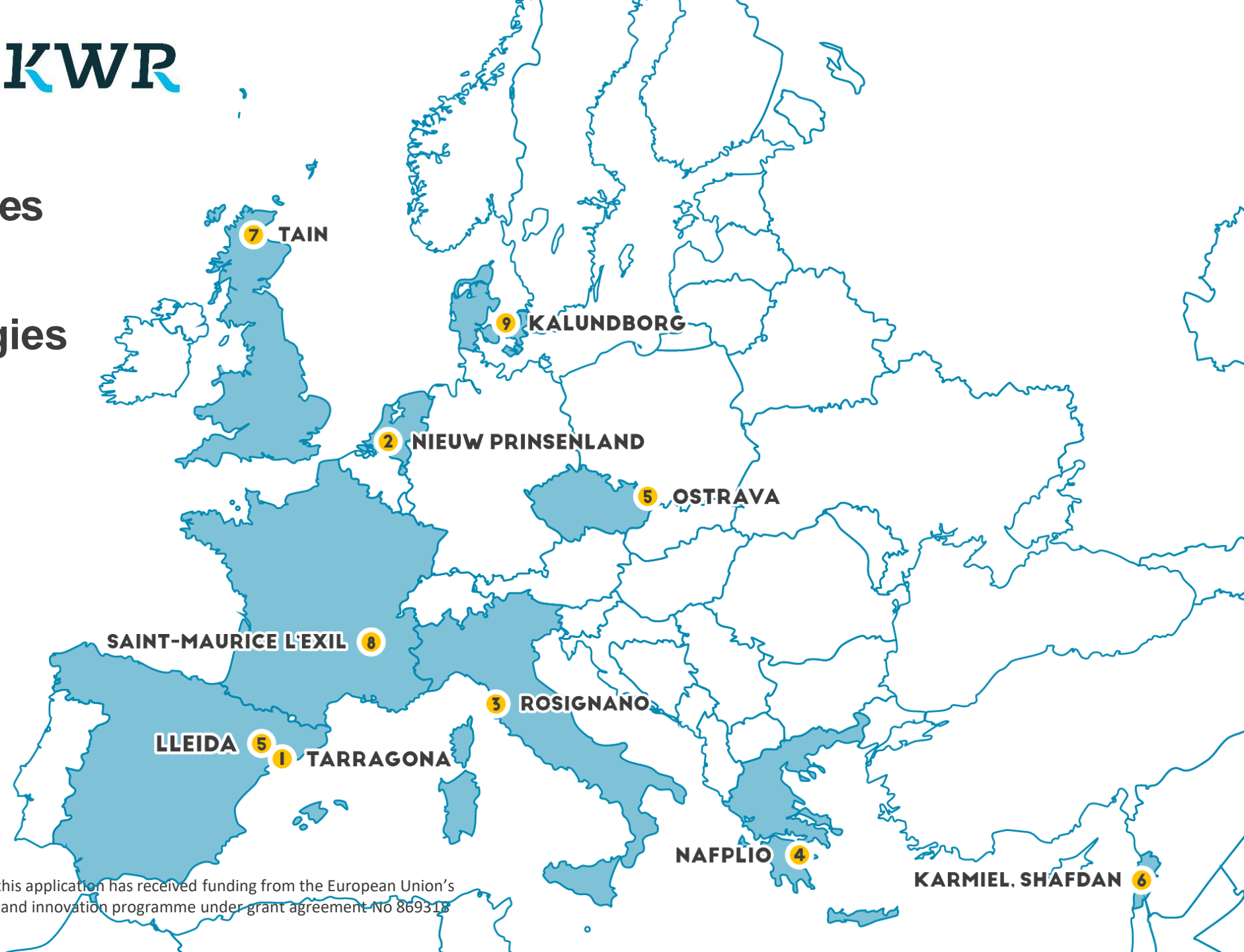
- Municipal utility
- Multi-industry utility
- Specialized SME
- Water services provider





Coordinator: **KWR**

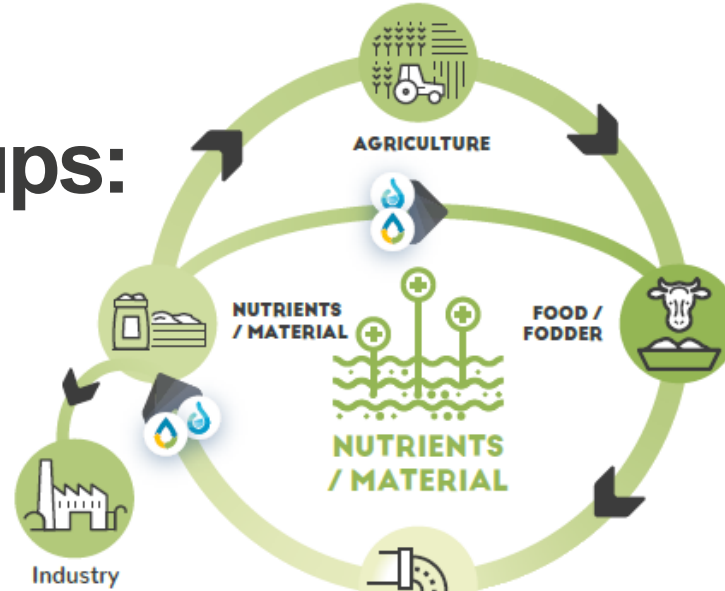
9 Case Studies
27 Partners
37 Technologies



The project leading to this application has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 869318



3 Cross-cutting Technology Groups: 9 Topics



F. Fatone C. Bruni

- Nutrient recovery
- High added value products
- Metal recovery

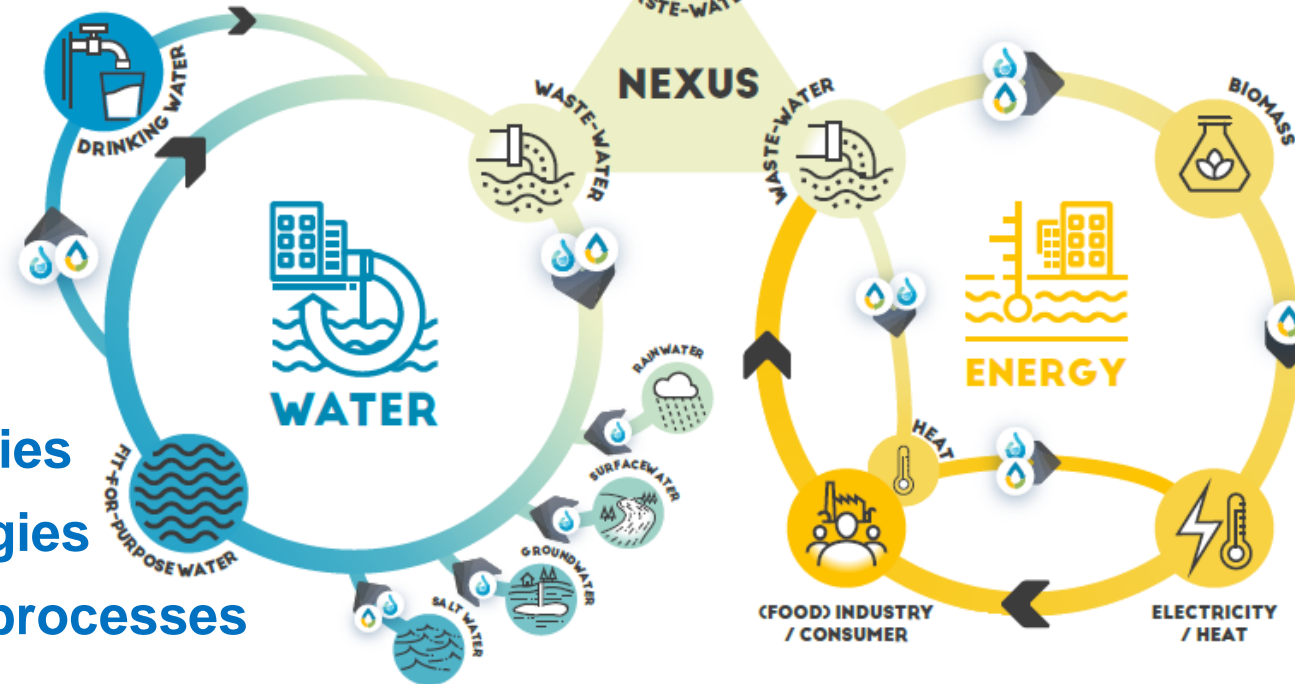


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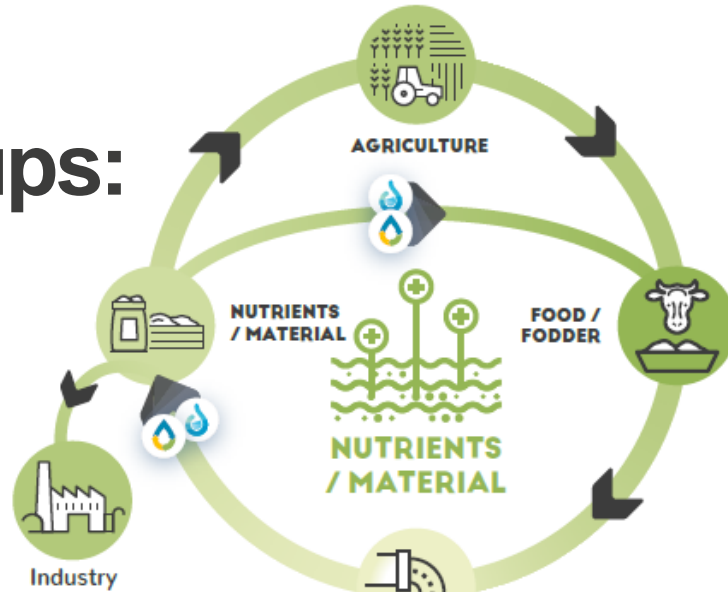
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- Biogas technologies
- Heat recovery
- Digitalization

- Membrane technologies
- Adsorption technologies
- Advanced oxidation processes



3 Cross-cutting Technology Groups: 9 Topics



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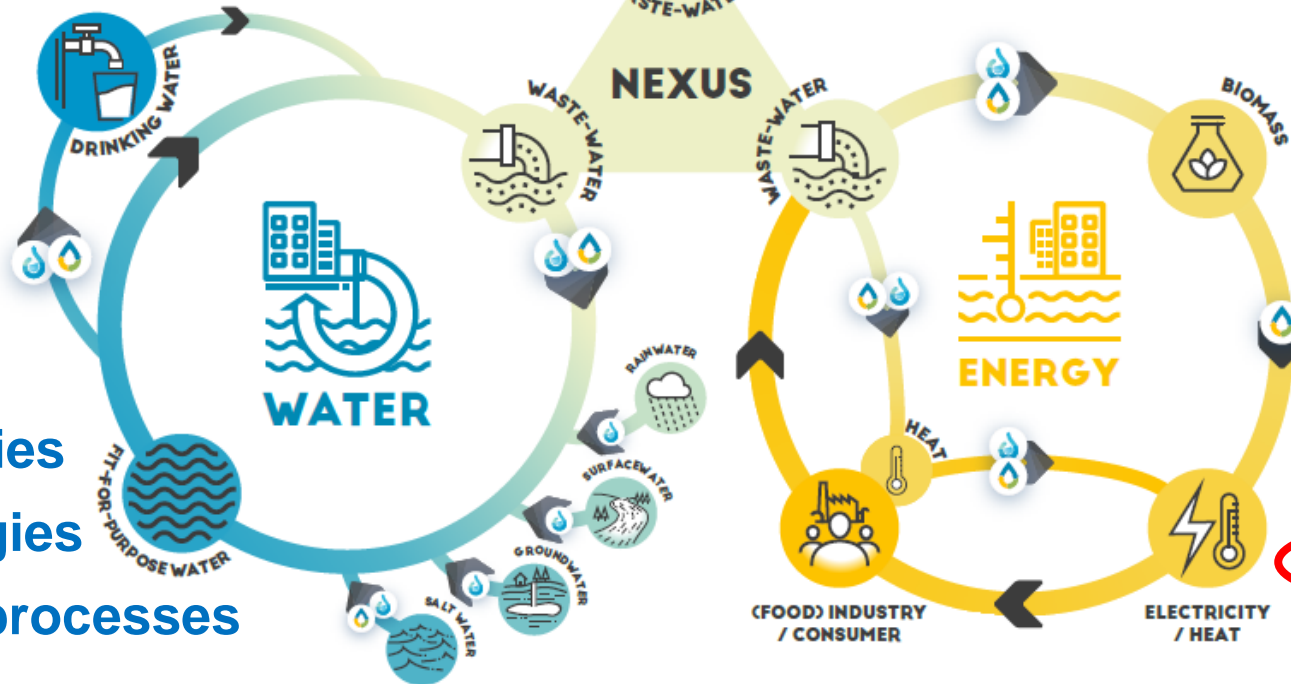
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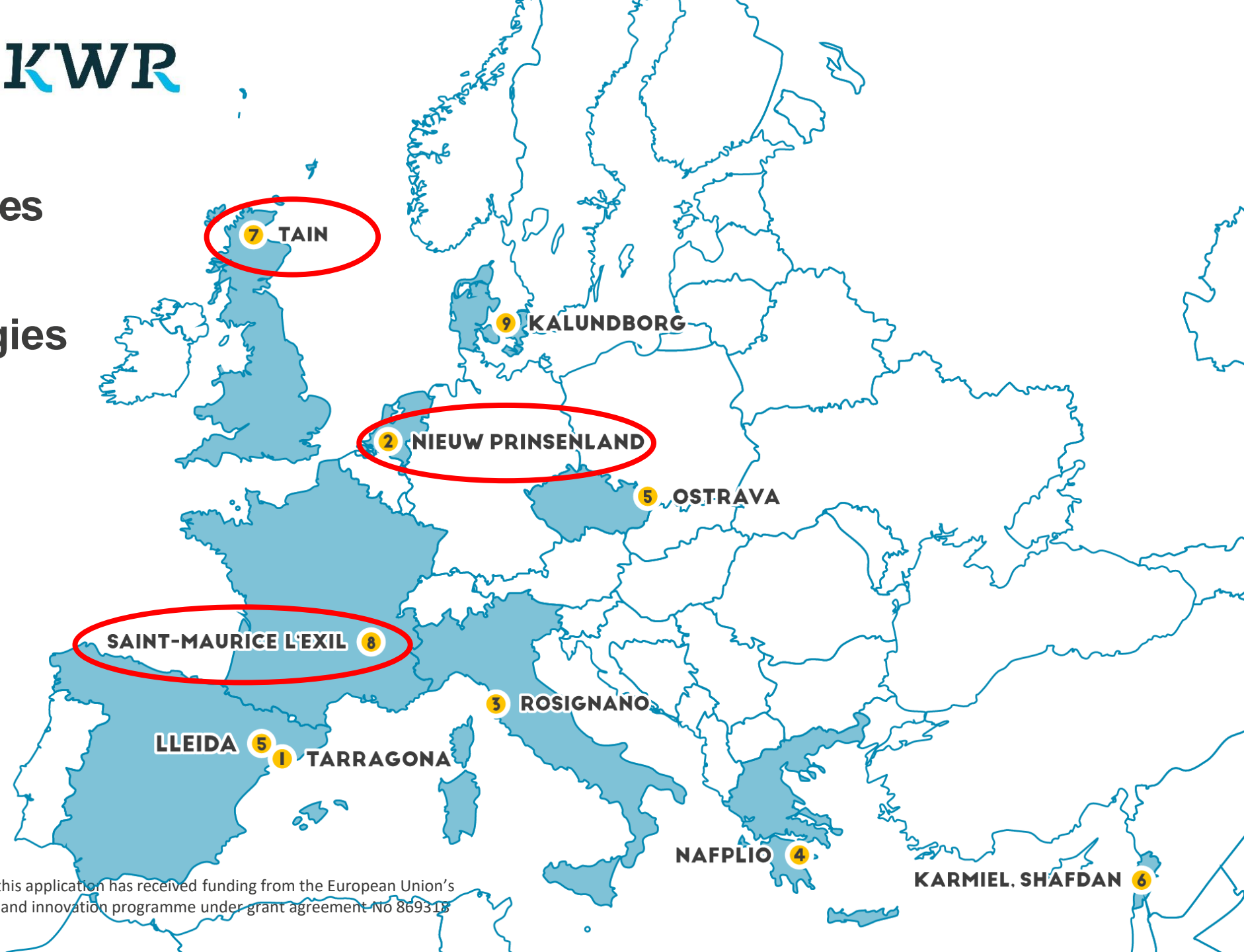
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- 10:15 **CS7 Tain:** Heat recovery from anaerobic membrane bioreactor effluent
Marc Pidou (Cranfield University)
- 10:30 **CS8 Chemical platform of Roussillon:** Recovery of heat from flue gas washing water
Anne Reguer (IWS Chemicals, Recycling & Recovery Europe, Suez)
- 10:45 **CS2 Nieuw-Prisenland:** High temperature aquifer thermal energy solution in greenhouses
Marette Zwamborn (KWR)
- 11:00 Short break
- 11:05 **NextGen:** Aquifer thermal energy system at the greenhouse of Koppert-Cress
Martin Bloemendal (TU Delft & KWR)
- 11:30 **BioKS:** How to avoid corrosion in aquifer thermal energy systems in Germany?
Hilke Würdemann (Merseburg University of Applied Sciences)
- 11:55 End**