



# WaterClean Project

**27/11/19**

**Namur**

**IraSME & CORNET**

**Partnering Event**



## ENVIRONMENT

Air quality | Health & safety | Energy efficiency | Circular Economy

## MATERIALS TECHNOLOGY

(Bio-based) polymers & composites  
Emissions and odours from materials  
Lightweight materials  
Mechanical Recycling

## CHEMISTRY AND INDUSTRIAL PROCESSES

Intensified / continuous processes  
Micro/Meso fluidic technologies  
Catalysis and synthesis  
Chemical Recycling

## ANALYTICAL AND TECHNOLOGICAL SERVICES

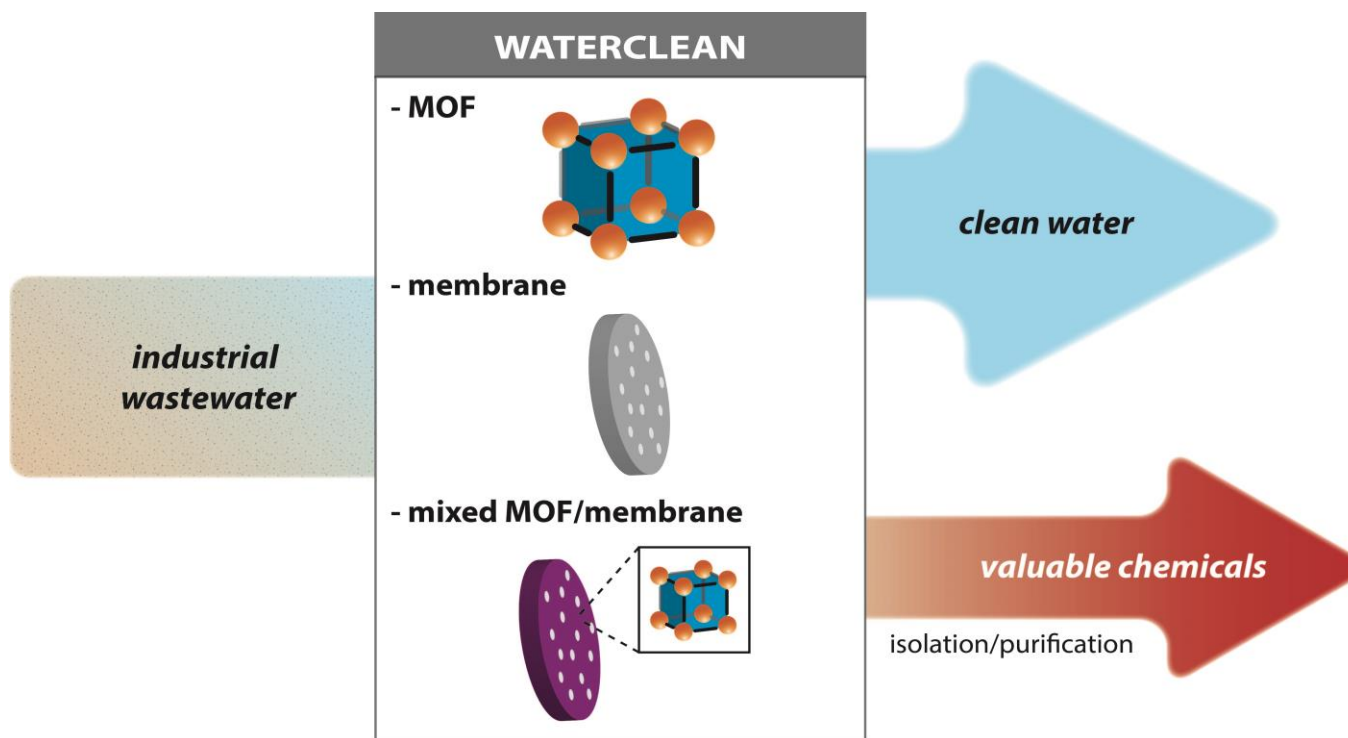
Extended characterization platform / reverse engineering  
Pilot equipment  
Products and processes improvement

700 industrial contracts per year

40 employees

Since 2000, Certechn has collaborated with 1400 companies

The objective of the project **WATERCLEAN** is to develop **innovative technologies** for the efficient **last-stage purification** of industrial wastewater, focusing on **emerging and persistent contaminants** and their potential valorisation

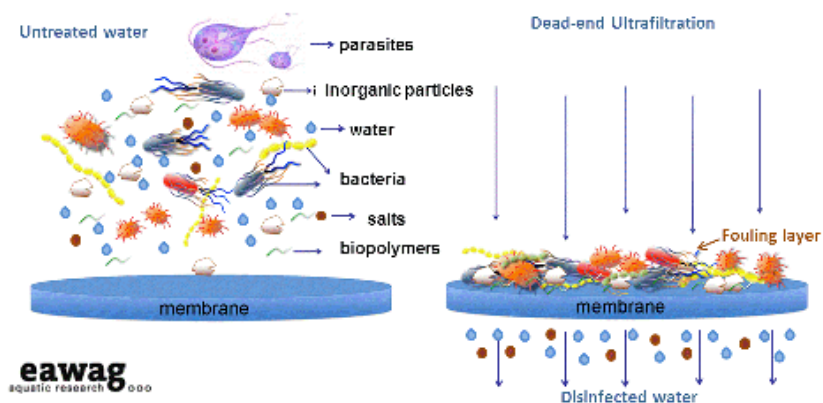


## ❖ Metal-Organic Framework (MOF)



- ✓ High surface area
- ✓ Selectivity, tunability
- ✓ Non destructive method

## ❖ Membranes



- ✓ Efficient and continuous separation
- ✓ Selective physical separation
- ✓ Non destructive method

- **Certech (Belgium)** : will identify, synthesize, characterize and shape the targeted MOFs. Focus on efficient, scalable and cost-effective synthesis of MOFs
- **Celabor (Belgium)** : will test and compare the efficiency of the MOFs and membranes in the purification of waste-water. Evaluation of the potential valorisation of valuable compounds for the industrial sector
- **Partner 3** : will develop polymeric membranes for the specific filtration of the targeted contaminants
- **Partner 4** : will perform toxicology studies of wastewater before and after this last-stage treatment to demonstrate the importance of the new technologies in terms of health and safety