



ACCELERATE INNOVATION IN WASTEWATER MANAGEMENT

AcceLerate Innovation in urban wastewater management for Climate changE

H2020-MSCA-RISE-2016

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 ALICE project

Aim

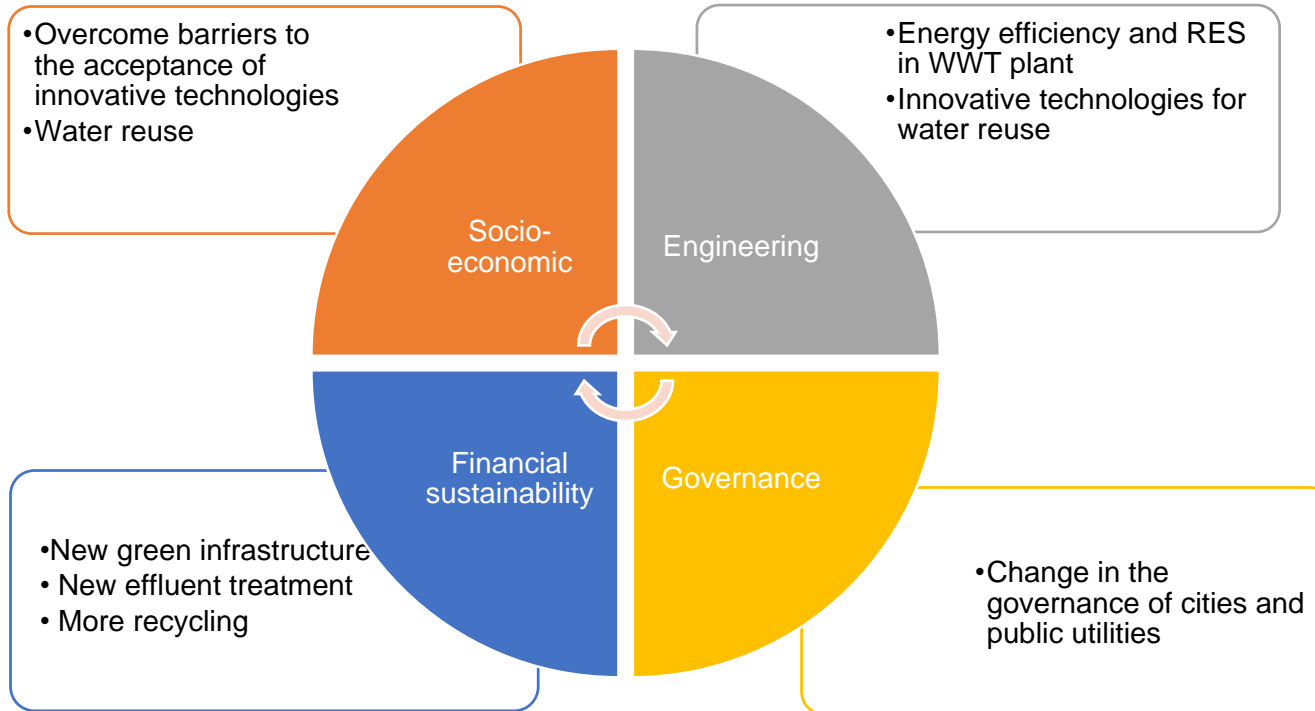
AcceLerate Innovation in urban wastewater management to address the future challenges arising from Climate change

Challenges

- Higher risks of **flooding** and **droughts**
- More **untreated sewer overflow** due to higher precipitation, more frequent storms and earlier melting of ice
- **Higher temperature of effluents** in receiving water bodies threatening the ecosystem
- **Higher energy demand** of water/wastewater utilities for having a better quality of effluent



Challenging areas



A multidisciplinary approach is needed to address the challenges

Research objectives

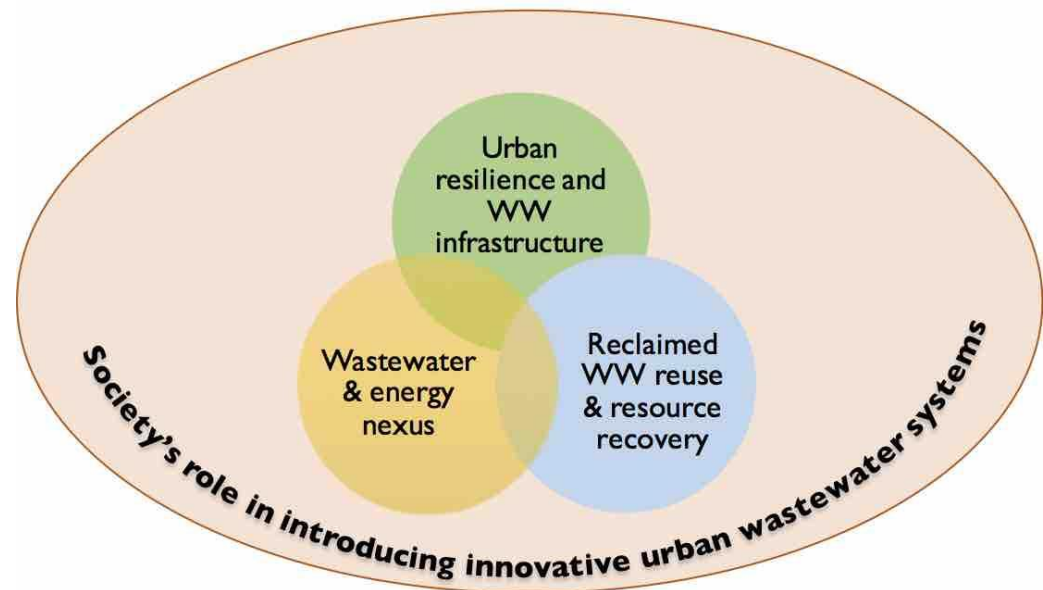
Through the *secondments and transfer of knowledge* ALICE will contribute to:

OB1. Improve the urban resilience of wastewater infrastructure

OB2. Investigate the wastewater and energy nexus in WWT plants

OB3. Enhance the reuse of reclaimed wastewater and resource recovery

OB4. Investigate social behaviour and acceptability issues



Main themes of ALICE

How are we going to achieve our goal?

ALICE is a **H2020 RISE project** –
Research and Innovation Staff Exchange

RISE promotes **international and inter-sector collaboration** through research and innovation staff exchanges

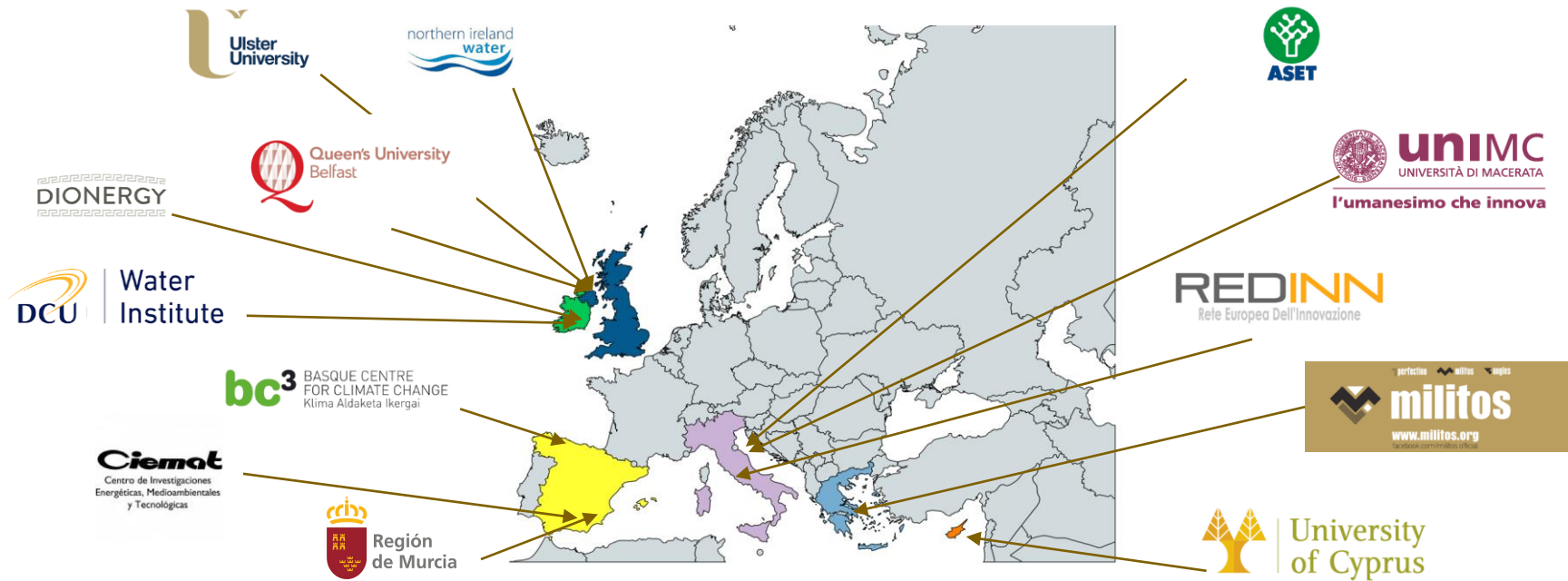
Academic and non academic partners along wastewater value-chain will exchange knowledge, develop training, research and innovation activities



Secondments will be cross countries and cross sectors

Consortium

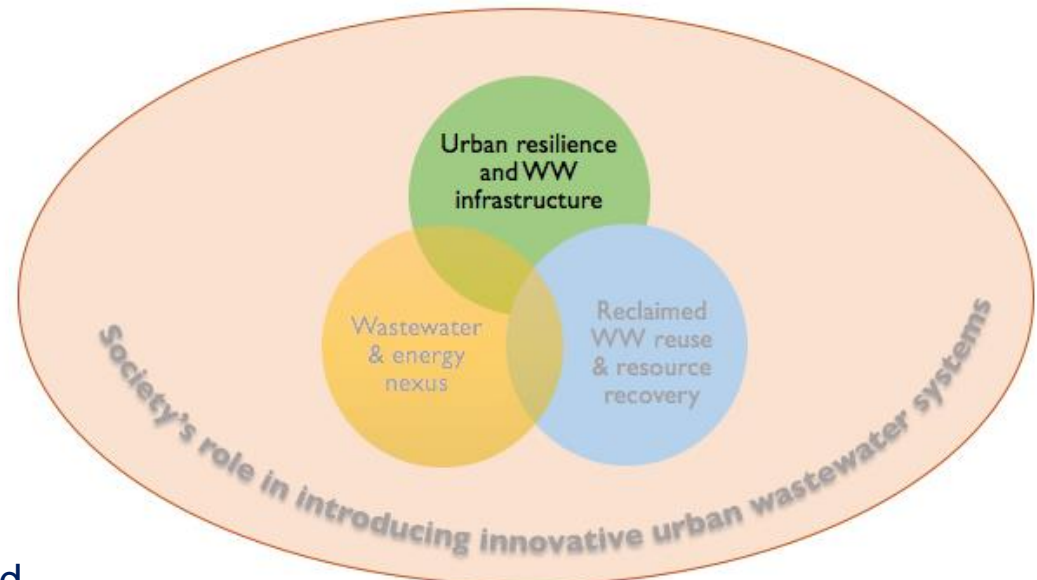
6 countries, 7 academic institutions, with ground-breaking expertise in complementary areas, 2 water utilities, 1 regional authority, 3 SMEs with complementary expertise to the academic institutions



Research activities/Outputs

Urban resilience and WW infrastructures

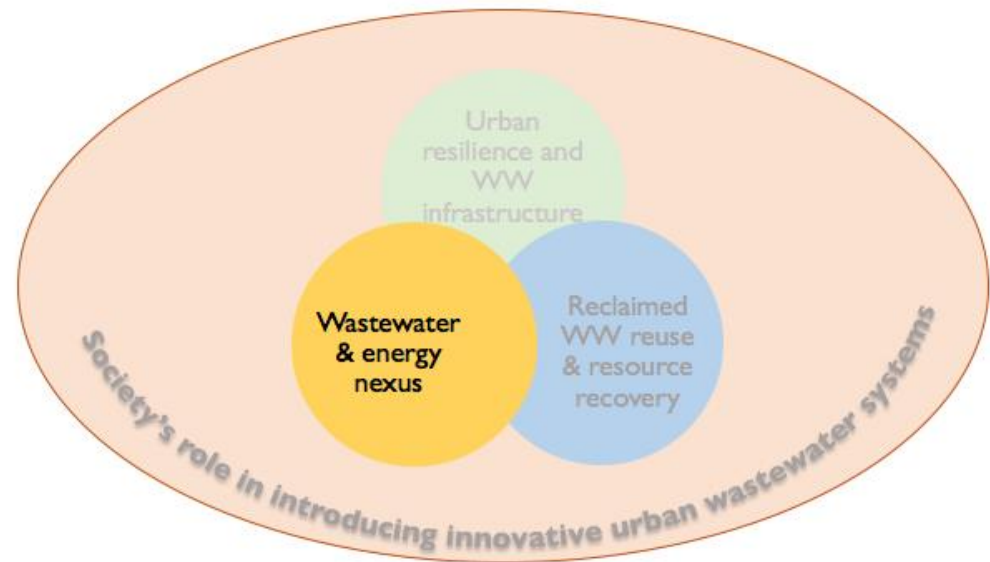
- Development of a new methodology for vulnerability assessment for WW infrastructure validated through 2 case case studies:
 - Belfast (NI)
 - Murcia (South of Spain)
- Socio-economic analysis of green infrastructure
- Identification of the legislation to build and operate WW infrastructure to increase resilience



Research activities/Outputs

Wastewater & energy nexus

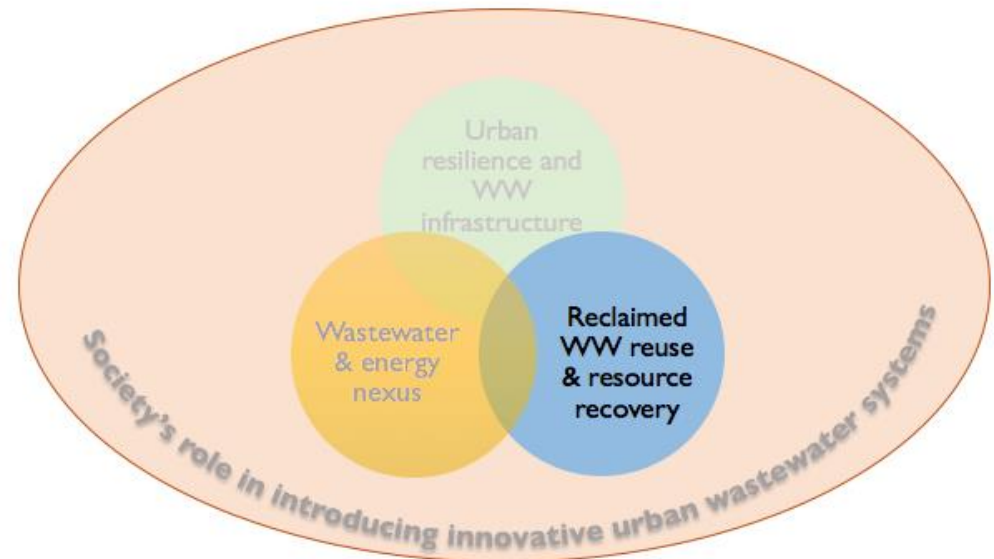
- Test a new tool for identifying the potential for energy and resource optimisation
- Identify methodologies to optimally manage different renewable sources
- Analyse regulation and financial issues to advance the implementation of energy efficiency measures in water utilities



Research activities/Outputs

Reclaimed WW resource & resource recovery

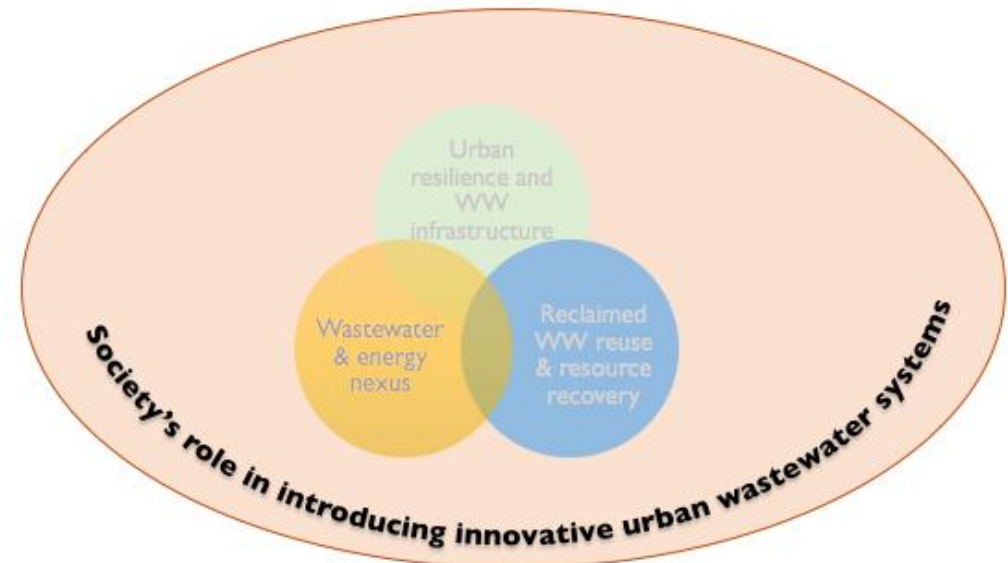
- Investigate the use of new technologies to expand the use of reclaimed WW
- Identify and share best practices (Murcia experience)
- Identification of new solutions to overcome the main regulatory barriers



Research activities/Outputs

Society's role in introducing innovative urban WW systems

- Engage with stakeholders in identifying the importance of the attributes to define innovative management systems
- Analyse citizens' attitudes, preferences and willingness to pay for upgrading WW infrastructures
- Identify 'nudges' for behavioural changes



Transfer of knowledge objectives

Academic and non academic partners along the wastewater value-chain will exchange knowledge, develop training, research and innovation activities

KT1. Encourage innovative methodologies and practices of water utilities and regional authorities

KT2. improve the understanding of academia of problems that cities and WW utilities are facing

KT3. improve the understanding of industry on new market opportunities

KT4. improve the understanding of the wider public on the societal challenge and make people aware of their role

ALICE
H2020-RISE-PROJECT
RISE - Research and Innovation Staff exchange



Impact

- Enhancing the potential and future career perspectives of staff
- Contribute to improve the resilience of WW infrastructure
- Support political and managerial decisions in the field of wastewater
- Benefit wastewater manufacturers identifying new market opportunities in the EU
- Contribute to improve wastewater infrastructure and water services
- Benefit EU citizens from a greater understanding of their role in improving wastewater services

Thanks for your attention

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