

ReNEW

Resilient-centric Smart Green Networked EU Inland waterways

As climate change severely affects the performance of **Inland Waterways Transport (IWT)** operations, the priority is to create and test new solutions for **climate-neutral** and **climate-resilient IWT**.

By capitalising on cooperation opportunities with ongoing projects and initiatives, **the ReNEW project** plays a key role in **promoting economic growth** and **minimising the negative impact** on the environment and degradation of ecosystems. ReNEW will deliver:

An interdisciplinary IWT Resilience and Sustainability **decision-support framework** for IWT infrastructure

A Green Resilient IWT Dataspace and generic **Digital Twin**

Targeted innovative infrastructure **resilience and sustainability solutions**

Four real-life **Living Labs**, showcasing created innovative solutions



24
Partners



11
Countries



4
Living Labs



36
Months



7.6M€
Budget

Join ReNEW to Shape the Future of Sustainable Inland Waterways Transport!

Climate change is increasingly affecting Inland Waterways Transport (IWT) operations. At ReNEW, our mission is to innovate and implement solutions that are both climate-neutral and climate-resilient.

What is ReNEW's Stakeholder Community?

The ReNEW Stakeholder Community is an initiative designed to bring together diverse perspectives and ideas from the IWT community dedicated to sustainability and resilience, beyond the ReNEW consortium. We invite you to become a key player in this community. By joining, you will collaborate with experts across various sectors to drive advancements in digitalisation, automation, and sustainable infrastructure of inland waterways. Your insights and expertise are crucial in shaping a more integrated, resilient, and sustainable IWT system.



Stakeholder Community Form

The European Commission sees the digitalisation of the transport sector as a primary enabler of smart solutions for sustainable transport that can support resilience solutions and deliver economic, environmental, and societal benefits.

However, progress in adopting innovation by the IWT sector and achieving the associated resilience and decarbonisation goals is heavily restricted by systemic challenges affecting the European IWT digital and energy transition rather than by technology limitations.

To address these challenges, it is necessary to incentivise innovations across the dimensions outlined and provide robust validation of how and where innovation can support the transition to a sustainable, resilient, high-efficiency IWT system.



IWT system resilience is essentially co-dependent on infrastructure and barge/fleet reliability, maintainability, and fault tolerance. It embraces the sectors' key priorities: sustainable infrastructure adjustments, environmental friendliness and competitiveness of vessel fleet, digitalisation, integration of IWT in multimodal transport chains, and securing the availability of skilled workers.



ReNEW will contribute to achieving following impact targets

- 01** Help sustain IWT network **capacities** in inland waterways at levels not falling below 50% by improving navigability conditions and advancing resilience.
- 02** Enhance **land/sea/infrastructure resilience** to extreme weather and human-caused events while aiming to maintain network capacities to 80% levels during disruptions.
- 03** Contribute to the **sustainability** of the IWT systems network, promoting modal shift and supporting the EU goals for a 20% increase for inland waterways.
- 04** Ensure **resilience and smooth functioning** of passenger mobility as well as freight transport and logistics networks operating on these infrastructures.
- 05** Increase the **use of recycled materials** within or across transport modes by at least 30% in the Ghent Living Lab.
- 06** Reduce **environmental impact** during construction, maintenance, operation and decommissioning of the infrastructure in line with the EU environmental legislation.

ReNEW

Resilience-centric Smart, Green, Networked EU Inland Waterways

Improved navigability capacity

Enhanced inland waterways infrastructure resilience

Increase in modal shift

Smooth functioning of passenger and cargo mobility

Reduced environmental impact (CO2)

DIGITAL TRANSFORMATION

- Digital Twins
- Dataspaces
- UAV's
- IoT
- Blockchain

ENGINEERING

- Autonomous barge
- Planning and mitigation module
- Solutions for Resilience Scenarios
- Remote Control Center (MCC)

BUSINESS

- Green Energy
- Climate resilience
- Waste management
- Innovation
- Big Freight
- Capacity building
- Business models
- Modal shift
- TEN-T networks
- Policy-making
- Sustainability

LIVING LABS

LL1 - Ghent Hub

Multifunctional Synchronomodality City Logistics Hub and Remote-Control Monitoring

LL2 - Smart Douro

Navigability for Resilience and Environmental Sustainability

LL3 - Planning and Mitigation for Resilience

Planning mitigation for climate resilient and sustainable transport infrastructure boosting modal shift

LL4 - Autonomous Barge

Autonomous Zero Emissions Barge

