

NWE making an impact!

Cooperation in action



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Mathieu Mori Programme Director

Dear reader,

It is with great pride that we present you with this new edition of "NWE making an impact! Cooperation in action". Here, you will find highlights of the projects the Interreg North West Europe programme (NWE) is funding.

Following nine calls for projects and one targeted call on renewable energy, all the funding for the period 2014-2020 has been allocated and 102 projects have been approved to date. The vast majority of our projects are still up and running and we will continue to fully support them until the end of the implementation phase in December 2023.

Because we aim to make a long-lasting impact in North-West Europe, our programme has always put a lot of emphasis on maximising our projects' results. To enable further inspiration and create new links, we have developed an ambitious and innovative capitalisation strategy including new communication tools and major networking events.

In this framework, we have also encouraged our most successful projects to think of how they could maximise the impact of their results and achievements: by extending their geographical coverage, including new target groups or engaging new economic sectors. To that aim, we have launched two calls for capitalisation with a total budget of 30.5 million euros ERDF.

This publication is yet another tool to our capitalisation strategy. It is designed to give even more visibility to our projects, showcase their results and provides evidence of the positive impact of transnational cooperation on our territory. It gives the possibility for projects to get to know one another and network. Ultimately, it enables projects' partnerships to live on beyond the project lifetime and ensure long term effects for the benefits of NWE and Europe as a whole.

Following yet another successful programming period, Interreg North-West Europe is currently designing its next programme (2021-2027). It will promote a green, smart and just transition for all NWE territories and we look forward to presenting you this new programme.

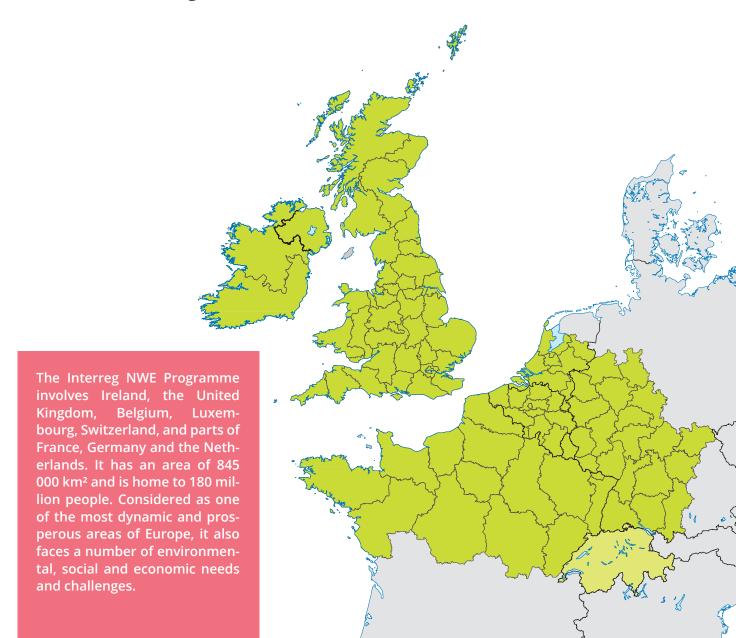
The current pandemic has showed, once more, the need for solidarity and cooperation. Interreg North-West Europe has been facilitating such cooperation for 35 years. I would like to commend all project partners who have kept their projects running with a high level of engagement in these difficult times. The profound fragility and uncertainty related to the COVID crisis and its consequences have clearly demonstrated the need to shape a different way of living. All the projects presented here contribute to this change by improving the way we produce, consume, work, eat, travel. In short, how we live! This year more than ever, we are proud of our stakeholders' achievements and wish you an inspiring read!

Mathieu Mori

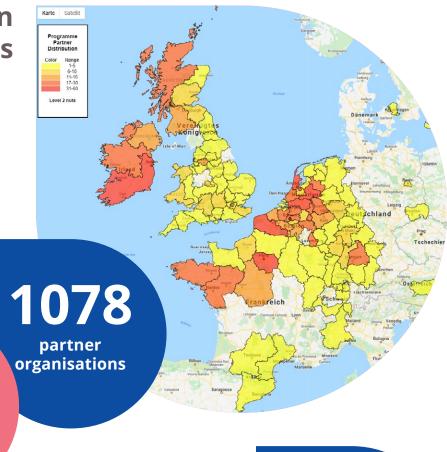
The Interreg North-West Europe Programme 2014-2020

Since 2014, the Interreg North-West Europe Programme supports outstanding ideas that have already made a difference for local communities throughout the area.

This part of Europe is a place of great economic performance and growth in major cities. Yet, surprising discrepancies still exist. Our role is to reduce these differences by supporting cooperation across the borders of eight European countries and tackle common challenges in the area.

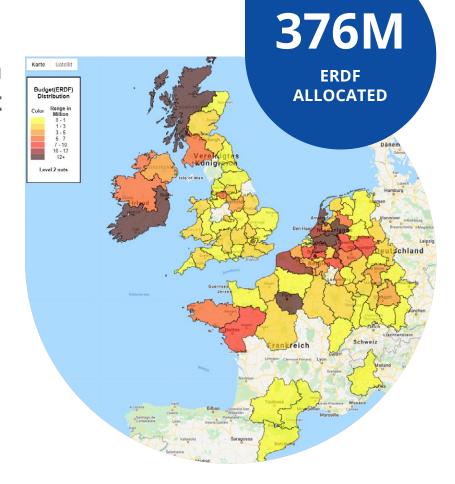


Distribution of partners



Distribution of budget

financed projects



Programme impact on the North-West Europe area



23,124

kWh/year decrease of energy consumption of public buildings



















3,936
enterprises
supported





7,639

households with improved energy classification







55,480
citizens benefiting from social innovation









133,253
tonnes of estimated annual decrease of CO₂ emissions

Interreg NWE projects

2014 - 2020

Innovation

44 projects 128.3 M EUR allocated





European Regional Development Fund

Transform agricultural residues into bioactive compounds



AGRIWASTEVALUE transforms agricultural residues from NWE regions into bioactive compounds in order to use them in key industrial sectors such as the cosmetic and nutraceutical and then in the energy, chemical and agricultural fields.



ACHIEVEMENTS

- Mapping of agricultural waste stream, reaching out to 10 active companies.
- 5 promising molecules / extracts identified to be used by cosmetic and nutraceutic companies.
- Methodology to increase physicochemical properties of identified bioactives through enzymatic modification.
- 5 jobs created.





PUSHING RESULTS ONE STEP FURTHER

In the long run,
AGRIWASTEVALUE
intends to:

- Multiply public events in order to disseminate project results.
- Engage with final users of the key sectors identified for further valorisation of the products.
- Roll-out through the agriwaste value chain of cosmetics, nutraceuticals, biosolvents and fertilizers implemented by NWE producers.

2018-2022

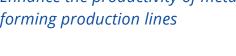
Total Budget

€3.1 M

AgriWasteValue, a valorisation project for agricultural residues of vineyards and some orchards



Enhance the productivity of metal forming production lines





ASPECT aims to bring the productivity of metal forming production lines very close to the theoretical maximum, by model-based prediction and control of the temperature increase on friction.



ACHIEVEMENTS

By addressing the root cause of the technical failures causing production shut down, ASPECT has:

- Enhanced the productivity of the forming processes by 35%.
- Reduced maintenance costs by 23%.
- Saved ~40 million EUR/year in the Automotive and Consumer goods sectors.



PUSHING RESULTS ONE STEP FURTHER

The results will be capitalised in other applications, in particular in high speed forming processes. A public demonstrator line has been allowing the industry to access and test the **ASPECT technologies** and control.





The Life Sciences Hub of NWE





OBJECTIVES

Boost4Health provides support to life sciences small and medium-sized enterprises (SMEs) who wish to explore their international growth potential, by expanding their international network, by finding expertise abroad or by validating products in another market.



ACHIEVEMENTS

B4H has successfully managed to overachieve its initial objectives :

- 482 SMEs were supported (initial objective: 330).
- 519 jobs were created (io: 100).
- 328 SMEs received a voucher.

B4H has launched a new voucher scheme to help more than 200 SMEs with coaching and matchmaking, and award 110 vouchers.



The B4H partners are also members of the CEBR, a network of life science clusters across Europe. The CEBR has taken interest in the B4H method and will help scale up the success of B4H to more clusters in more EU regions.



A B4H matchmaking event to foster SMEs' collaborations in Europe



Building an Ecosystem to Generate Opportunities in Open Data





OBJECTIVES

BE-GOOD's objective is to generate value from open data and stimulate its use in the development of infrastructure and environment services in North-West European regions.



ACHIEVEMENTS

- 11 new data-centred services, for example the air quality and suggestions of alternative routes.
- Development of applications and software for public services.
- Developed services enabling market uptake for 11 SMEs and job creation.
- Improved citizen interaction and new services with increased productivity.





ONE STEP FURTHER

Development of an ecosystem replicating and implementing 6 of its 11 new innovative data driven services in new regions, sectors and addressing new target groups, in order to reduce disparities in North-West Europe.





European Regional Development Fund

Bio-Innovation Support for Entrepreneurs throughout NWE regions



OBJECTIVES

The BioBase4SME project aims to help start-ups and SMEs in the bio-economy sector overcome technological and non-technological barriers to bring their innovations to market.



ACHIEVEMENTS

- More than 40% of services delivered to SMEs across borders.
- Reached out to over 650 SMEs with bio innovation support for entrepreneurs throughout the NWE regions.
- Granted Innovation Coupons to 63 SMEs with a total amount of over € 1.5 M spend on SMEs.
- Decrease of disparities between biobased innovation capacity in NWE.





PUSHING RESULTS ONE STEP FURTHER

BioBase4SME partners are aiming at involving new start-ups or SMEs in the bio-economy sector and at helping them to define their business strategy more precisely.

The project intends to review the pilot and demo infrastructure available in the bioeconomy and identify gaps that must be closed to demonstrate products or processes at a higher scale.



Process technicians at the Bio Base Europe Pilot Plant, BE



Integrated Zero Waste Biorefinery





OBJECTIVES

BioWILL focuses on Integrated "Zero Waste" Biorefinery utilising all fractions of willow feedstock for the production of high to medium based bio-chemicals/materials, renewable energy in the form of bio methane production and natural fertilisers.



ACHIEVEMENTS

- Expected to demonstrate technology innovations in BE, FR, IE and UK.
- Regulations & permitting requirements will be clarified in NWE regions for salicin medical products.
- Policymakers grant supporting willow for biorefining.
- Planning for one commercial salicin anti-inflamatory/antiarthritic product facility.



PUSHING RESULTS ONE STEP FURTHER

- **Rollout of 11** technologies/40
- **Cultivation of** over 1,000 ha of varieties by small
- 2,000 tonnes of willow bio-fibre is in food packaging products in the long term.





Bio-fabrication of Orthopaedics in a New Era



BONE aims to develop cost-effective melt electrowriting strategies for 3D smart implants that provide affordable, curative healthcare solutions for faster recovery of bone fractures.



ACHIEVEMENTS

BONE has successfully developed a new melt electrowriting technology that:

- Created results in hybrid manufacturing of scaffolds containing nano and micro scaled fibres.
- Generated new commercialised fabrication equipment and smart scaffolds, combined with bonespecific cells.





PUSHING RESULTS ONE STEP FURTHER

- Showcasing the capabilities and versatility of the new technology.
- Processing new polymers for other applications.
- Processing high molecular weight and degradable polymer via new melt electrowriting.
- Testing different cell culture conditions and set-ups.

2017-2022

Total Budget €3.4 M

Different microfiber scaffolds produced via melt electrowriting and designed to house stem cells for enhanced bone repair



Blockchain-based applications for SME competitiveness



OBJECTIVES

Blockstart increases SME competitiveness in 3 of NWEs top 5 sectors (health, logistics and agrofood), by developing and testing SME-specific blockchain solutions, which are technologies for storing and transmitting information without a control body.



ACHIEVEMENTS

- 12 SMEs (4 per sector) expected to use 1 of the 4 BSTART solutions with TRL increase to 6 and start processes to fully implement these in their operations.
- Creation of over 20 new jobs and €2M new turnover in the 3 sectors and in ICT.





ONE STEP FURTHER

- **Increased turnover** & decreased cost of over 15000 SMEs via the use of blockchain.
- **Increased** competitiveness of 3 sectors in NEW with 25000 new jobs in the long-term.





Certification of technological products for people with dementia





OBJECTIVES

Certification-D aims to define common European standards to guarantee good quality products, systems and services for people with dementia. Through certification, the project encourages SMEs to focus on this market.



ACHIEVEMENTS

- Development of catalogues for product categories focussing on enabling, safety & security, leisure products and systems.
- 4 Living Labs set up in BE, DE, FR and NL.
- Certification-D process draft tested.
- 18 SMEs and 19 products selected for voucher scheme wave 1.





ONE STEP FURTHER

- **Creating a NWE Dementia Living Labs Alliance with** organisations, suppliers and people with dementia.
- **Establishing** a competitive
- **Developing a** training programme to disseminate certification and products.





Innovation towards a circular future for NWE textiles



OBJECTIVES

CircTex focuses on the development of recycling and production technologies in a closed-loop process chain for PET (polyester-type polymer) workwear, decreasing non-renewable input materials and the ecological impact of NWE textiles.



ACHIEVEMENTS

- Development of recycled polyester yarns.
- Depolymerisation of fabrics with and without PU coating to check the influence of the polyurethane in the recycling process.
- Innovative performance of 11 SMEs to be increased.
- 2.000 kg of PET workwear collected and recycled.
- 50 jobs to be created in NWE.

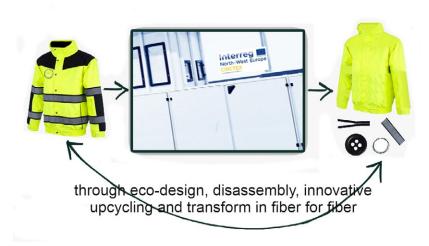




PUSHING RESULTS ONE STEP FURTHER

- **Further exploiting** the mechanical recycled yarn production.
- Adapting the chemical recycling process to a bigger scale.
- **Stronger** collaboration between waste companies and chemical partners.
- **Promote the** CircTex digital monitoring platform to global clothing manufacturers and retailers.

CircTex provides a closed textile chain



2019-2022

Total Budget €4.0 M



European Regional Development Fund

Braided textiles for composite materials reinforcement



OBJECTIVES

COBRACOMP aims to develop, test and validate a new automated textile braiding process for the production of preforms for composite materials reinforcement.



ACHIEVEMENTS

- 2 braiding machines to manufacture innovative multilayer 3D triaxial braids.
- 2 demonstrators (automotive and aerospace) to showcase and test the technology in relevant conditions.
- Workshops to support companies and foster the use of braiding for composites.





PUSHING RESULTS ONE STEP FURTHER

- Creation of a workgroup within a cluster dedicated to braided composites.
- An investigation of other potential applications and sectors for 3D triaxial braids.



An overbraiding machine



European Regional Development Fund

Improve healthcare by Companion diagnostics (Cdx) development



OBJECTIVES

Codex4SMEs plans to support SMEs along the value chain of Companion diagnostics (Cdx) development, which are tools that allow tests to determine the molecular causes of a disease before treatment has started. Thus improving healthcare by enhanced adoption of Personalized Medicine.



ACHIEVEMENTS

As of today:

- 245 SMEs have joined the Codex4SMEs network so far.
- 31 biobanking services have been provided to SMEs.
- Codex4SMEs has collaborated with other EU projects such as B4H, BiC and Celis, therefore showcasing the importance and the benefits of a strong transnational cooperation.





PUSHING RESULTS

Codex4SMEs network will be enlarged to further NWE & European regions by the involvement of further partners within the capitalisation initiative. The original support scheme for SMEs will be modified into a new Fast-Track Programme to further expedite the time-to-market of novel diagnostic solutions and to be applied for a broadened sector of diagnostics in general with a special focus on COVID-19 diagnostics.



2017-2023

Total Budget €3.1 M



Increased COmpetitiveness Through Efficient MAn & Machine Collaboration



COTEMACO aims to tackle current low sectorial awareness and knowledge gaps between SMEs from the automotive and food sectors by supporting regional field labs and working towards implementing collaborative robotics (cobots) through transnational cooperation.



ACHIEVEMENTS

As of today:

- 5 SMEs have completed the support programme and are close to integrating a Cobot solution with the help of external funding.
- 26 SMEs are currently participating: some are still at the feasibility study stage, while others are discussing their business case.





COTEMACO is now planning on extending its existing network of field labs beyond the project lifetime and some additional field

lab spots have already

been identified.



Operator and cobot assembling together an air compressor



Curcumin based sustainable Colours





OBJECTIVES

CurCol aims to demonstrate the economic potential for the production chains of regionally produced plants to colourants in packaging, focusing on the yellow natural colourant Curcumine.



ACHIEVEMENTS

Since its start, CurCol has been working on:

- Valorising biobased colours in biodegradable packaging.
- Introducing a valuable crop in the greenhouse industry.
- Identifying new supply chains.
- Promoting economic activities and the creation of 90 jobs in the long term.



PUSHING RESULTS ONE STEP FURTHER

In the long term, CurCol plans on:

- Exploring new knowledge around the transition to a circular and biobased economy.
- Developing new transnational partnerships.
- Reaching new economic sectors, such as textiles and cosmetics.

2020-2023

Total Budget **€2.6 M**

Interreg ... North-West Europe **Digital Deconstruction**

Digital Solutions Supporting Reuse and Recycling of Building Materials





OBJECTIVES

Digital Deconstruction (DDC) aims to develop an innovative digital decision support system, integrating various digital tools that help to define the most sustainable and economical deconstruction and reuse strategy for buildings.



ACHIEVEMENTS

So far the project has:

- Reached the phase of system development where 5 pilot sites are defined for demonstration and testing in BE, FR, LU and NL.
- Defined a concept for the project's DDC platform architecture and web interface, which will enable users make informed decisions on deconstruction and reuse strategies for their projects.



- ONE STEP FURTHER
- The project has 5 pilot sites which will be used to demonstrate its integrated system.
- **The Regional Innovation Hubs aim** possible including from other European





e-mental health innovation and transnational implementation platform





OBJECTIVES

eMen aims to promote more affordable, accessible, effective and empowering e-mental health (eMH) products by operationalising a transnational cooperation platform for eMH product innovation, development, testing, implementation and knowledge exchange.



ACHIEVEMENTS

- Development, test and implementation of 7 e-mental health applications through multidisciplinary cooperation and co-creation, being 2 for depression, 2 for anxiety and 3 for Post-traumatic stress disorder.
- Promotion of e-mental health implementation policies.





PUSHING RESULTS

- **Development and** health training for service providers in NWE.
- **Cooperation with** the 'eHealth Hub Platform' and the 'Boost4health'
- the impact form





European Regional Development Fund

Entrepreneurship Hubs for Recognized Refugee Re-starters



Enter to Transform addresses recognised refugees with a background in business management and helps them, through mentoring, adapt to the NWE economy, by increasing their entrepreneurship capacity and by strengthening and tailoring the existing business support infrastructure.



ACHIEVEMENTS

Enter to Transform has been:

- Developing mentoring and support tools that will be used in the pilot hub.
- Establishing 1 common entrepreneurial hub replicated in 4 regions (DE, FR, IR and NL).
- Increasing the entrepreneurial capacity of 500 recognised refugees restarters.





PUSHING RESULTS

- The project's next step consists in the selection of recognised refugees restarters for the pilot project.
- The partnership will also test the jointly developed mentoring and support tools.



The hubs will provide meeting places to all stakeholders working with recognized refugees



Empowering Youth through Entrepreneurial Skills



OBJECTIVES

EYES aims to empower NEETs ('Not in Education, Employment, or Training') aged 15-34 in NWE metropolitan areas to use the regular support schemes offered by their cities so as to (re)enter the labour and education market.



ACHIEVEMENTS

- Development of a transnational coaching concept + tailor-made app.
- Development of training materials for professional and volunteer coaches.
- Guidance for the local implementation of the EYES approach and selected links to local job opportunities.
- Expected to reach 1000 NEETs.





PUSHING RESULTS ONE STEP FURTHER

- Integration of the project approach into the labour market policies of employment agencies and local governments across NWE.
- Adoption of the EYES curriculum and digital tool by other youth entrepreneurship and employment projects.



Co-creating the EYES tool



Delivering tools to monitor cows' welfare





OBJECTIVES

HappyMoo aims to provide dairy farmers, vets and extension workers with tools to monitor cows' welfare and to protect them from diseases, hunger and stress, using the milk midinfrared composition, thus going beyond criteria only related to the cowshed environment.



ACHIEVEMENTS

- Development of a transnational database to store milk data and cows' phenotypes.
- Organisation of workshops with experts in the field of animal welfare and stress.
- Implementation of an animal experiment in Belgium to identify biomarkers of chronic stress.
- Adaptation of a German model to detect mastitis.



PUSHING RESULTS ONE STEP FURTHER

HappyMoo is envisaging collaborations with third parties to share datasets and improve the strength of the existing or future equations.



The HappyMoo project partners







OBJECTIVES

HI-ECOWIRE aims at developing sustainable and competitive magnet wire products and processes to improve electrical motors efficiency while reducing CO₂ footprint.



ACHIEVEMENTS

- Design of new equipment combining enameling and polymer extrusion.
- Comprehensive detailed product technical sheets.
- Expected 90% of reduction of toxic solvents.
- 20% of production expected to be replaced by the new process.



- Liaising with 8 associated partners from different areas and sectors to enhance clustering and dissemination.
- **Production of** several types of different sectors.
- **Constitution of** an advisory board with end-users for large technology 2020-2023 **Total Budget** € 3.9 M



Development of economic viable algae-based value chain



IDEA envisions the development and enrolment of economic viable value chains based on micro-algae in North-West Europe, targeting final compounds for food, feed and cosmetic applications.



ACHIEVEMENTS

So far, IDEA has:

- Selected, cultivated and evaluated sets of algae species in 2 pilot sites.
- Studied the impact of wet preservation on algae biomass immediately after harvest.
- Characterised algae biomass (fractions) towards use in feed, food & cosmetics.





IDEA is planning on:

- **Finalising longer** for algae growth, use, CO, capture and wet preservation.
- Formulating algaebased product.

Designing





North-West Europe



Inclusive Market AGriculture
Incubator in North-West Europe





OBJECTIVES

IMAGINE fights youth unemployment and supports sustainable professional integration of low-skilled NEETS ('Not in Education, Employment, or Training') coming from densely populated core areas of NWE in the horticulture job market.



ACHIEVEMENTS

- 76 NEETs have or are benefitting from the IMAGINE experience in one of the six pilot sites (BE, FR, LU, NL, UK) developed in the project.
- IMAGINE is co-producing tools to support individuals involved in the design, development and delivery of the social incubation models.



PUSHING RESULTS ONE STEP FURTHER

IMAGINE will create a transnational network that gathers local authorities, social and business stakeholders and policy makers interested in social innovation in the horticulture job market. It will help them develop similar approaches in their own region.



Salad crops at Forum pour l'emploi, a project subpartner, in Luxembourg



Managing anxiety via innovative technologies for better mental health



OBJECTIVES

IT4Anxiety aims to cocreate and implement sustainable innovative solutions to reduce the anxiety of patients experiencing neurological disorders or posttraumatic stress disorder.



ACHIEVEMENTS

- 10 innovative solutions that will address the needs of around 3,000 patients.
- Support to 15 start-ups.
- Creation of 45 jobs.
- Training of 1,000 future mental health professionals.
- Creating one "Mental Health and New technologies" NWE Cluster branch.





PUSHING RESULTS ONE STEP FURTHER

- **Collaborating with** relevant Interreg
- **Raising awareness** among public support the adoption of by healthcare facilities.
- **Promoting the** benefits of





Towards the machining shop-floor of the future





OBJECTIVES

Machining 4.0 aims to increase the knowledge and innovation level of the SMEs in the machine industry in NWE to be in line with Industry 4.0 (Fourth Industrial Revolution) which consists in the automation of traditional manufacturing and industrial practices, using modern smart technology.



ACHIEVEMENTS

- Demonstrators have been developed in 7 fieldlabs (BE, CH, DE, FR, IE, NL,UK).
- The project's findings are being used to inspire SME's in the machine industry.
- Machining 4.0 has elaborated several transformation plans for industrial companies through the voucher scheme.



PUSHING RESULTS ONE STEP FURTHER

Machining 4.0 is planning on maximizing its results by stepping up the promotion of the project further in order to encourage more SME's to join the fieldlabs.



Computer gided technologies for Machining 4.0



Boost innovation in advanced MATerials for MEDical applications





UK | DE | NL | BE



OBJECTIVES

MATMED's objective is to create a sustainable NWE cross-regional online-enabled ecosystem bringing innovative solutions closer to the market in the fields of Advanced Materials, Medical Devices and Regenerative Medicine areas.



ACHIEVEMENTS

- 234 out of 600 active stakeholders in NWE in the fields of Advanced Materials, Medical Devices and Regenerative Medicine are registered in MATMED.
- A total of 53 transnational matches have taken place and 16 vouchers have been granted, resulting in a TRL increase of 1-3+ in all the cases supported, which has led to the creation of 40+ jobs.



PUSHING RESULTS ONE STEP FURTHER

- MATMED is exploring joint IT solutions with other health NWE projects and transnational networks.
- This would allow to expand MATMED's influence on stakeholders from new NWE regions (and beyond), as well as to sustain activities after project end.



2018-2022

Total Budget €3.0 M

Developing cross-border partnerships to boost innovatior in advanced MATerials for MEDical applications



Maturing utility-scale Airborne Wind Energy towards commercialization



MegaAWE aims to bring Megawatt Airborne Wind Energy Systems closer to the market in order to unlock new locations for wind energy (incl. floating offshore, rural onshore).



ACHIEVEMENTS

- Test design and materials in the perspective of seeing its aircraft fly by the end of 2021.
- Expected to support 20 enterprises.
- Elaboration of the Megawatt AWES development roadmap and matured the business plan.
- Performed scalability analysis for roll-out.





PUSHING RESULTS ONE STEP FURTHER

- MegaAWE has asked permission to test its aircraft on the site in Co Mayo (West of Ireland) and is expecting the outcome of the planning process shortly.
- The project is also expecting further investment as part of the MegaAWE

 activities



Bringing megawatt airborne wind energy systems closer to the market



Ensuring food safety, animal health and welfare standards



MiteControl will bring together multidisciplinary knowledge and skills to jointly develop, improve and test an innovative automated monitoring technique and promising treatments to help egg farmers deal with poultry red mite infestations.



ACHIEVEMENTS

So far, MiteControl has achieved:

- 3 IPM (Integrated Pest Management) programmes were developed and are being piloted on 11 farms to control PRM and to improve profitability as well as animal health and welfare.
- Automated camera monitoring of the PRM infestation is under development.





PUSHING RESULTS ONE STEP FURTHER

- Application of the IPM programmes for rearing farms in France (19 million birds at 450 farms) and Belgium (3,8 million birds) as well as for breeder farms in Belgium (2,1 million birds at 122 farms) and the Netherlands (5,8 million birds at 230 farms).
- Creation of a knowledge exchange platform between the different sectors.
- Expansion of the network to research centers and stakeholders from other NWE or EU regions.



2018-2023

Total Budget **€2.7** M

Experimental Poultry Centre in Geel. BE



Marine Energy Alliance - Services to accelerate marine energy innovations





OBJECTIVES

MEA helps early-stage marine energy technology companies progress on their technical and commercial maturity level by giving them access to the project partners' worldleading expertise in marine energy development, with the overall goal of reducing the risk of device failure in subsequent demonstration phases.



ACHIEVEMENTS

- MEA has conducted two competitive Calls for Support.
- 41 marine energy SMEs benefited from it. They are receiving a transnational suite of services targeting their technical, organisational, financial and commercialisation challenges.



ONE STEP FURTHER

MEA is now planning on:

- **Preparing marine** energy concept developers for testing and
- **Rolling out the MEA** suite of services
- **Increasing cross**pollination between strategic actors around the ME



2018-2023

Total Budget €6.0 M



Development of eHealth applications for home hospitalisation of heart failure patients





OBJECTIVES

The objective of NWE-Chance is dual-fold: to support hospitals in assessing the feasibility to hospitalise heart failure patients at home instead of the hospital and to support the industry (mainly SMEs) to develop new eHealth tools that enable hospitalisation at home.



ACHIEVEMENTS

- Development of home hospitalisation concept of heart failure (HF) patients to be adopted by 3 hospitals in Hasselt (BE), Maastricht (NL) and Zwolle (NL).
- Development of the home hospitalisation platform.
- Publication of the article "Innovating in Healthcare: Hospital Admissions at Home".
- 10 new expected collaborations between SMEs and hospitals.



PUSHING RESULTS
ONE STEP FURTHER

NWE-Chance will end with the launch of an innovation hub which will ensure continuity and further growth of co-creation between industry and hospitals, for rolling out innovations into tangible and evidence based eHealth products which support hospitalisation at home.



Innovating 'hospital at home' for heart failure patients



Promoting multi-device Ocean Energy (OE) farms



OBJECTIVES

Based on FORESEA's single device OE deployment, Ocean Demo aims to put the first multi-device OE farms on the market by proving its investability, by developing an active supply chain that invests in dedicated OE sub-systems and components and by creating a supportive policy environment for OE.



ACHIEVEMENTS

- Demonstration of OE devices ready to be tested in FR, IE, NL and UK.
- Organisation of three successful calls and a robust pipeline with over 30 technology developers.
- Progress on testing 15 low carbon technologies and one of its Multi Device OE farms.
- 8 deployments are now expected, including a multi-device OE of low carbon technologies.





PUSHING RESULTS ONE STEP FURTHER

OceanDemo will maximise its impact:

- Creating stronger links with Demonstration projects.
- Sharing lessons learnt.
- Broadening the network between test sites as well as technology developers. This work has already started with joint webinars with OPIN project and will continue to build as the project output and objective is realised.

ATRICATE OF THE PROPERTY OF TH

2019-2022

Total Budget €12.9 M

Magallanes Renovables ATIR ocean energy device installation at EMEC's Fall of Warness test site



Open-Innovation Photonics pilot for NWE





OBJECTIVES

OIP4NWE aims to establish an open access pilot line dedicated to the development of generic photonic integration technology which would allow SMEs to benefit from the innovation potential of Photonic Integrated Circuits (PICs) in NWE.



ACHIEVEMENTS

- Call for vouchers open in early 2021 to support SMEs in the fabrication of photonic chips and packaging.
- 7 SMEs to be supported with PICbased products.
- Development of equipment and methods for next generation manufacturing of PICs with the aim to increase technology maturity.



PUSHING RESULTS ONE STEP FURTHER

The OIP4NWE consortium constantly looks for partners of its open innovation framework. Partners may include technical service providers of PIC technology, and also innovation clusters.



Inspection of PICs during manufacturing



Ocean Power Innovation Network





OBJECTIVES

Accelerate the growth of the ocean energy sector and its supply chains across the partner regions of Ireland, UK, Belgium, France, the Netherlands and Germany.



ACHIEVEMENTS

- The network counts more than 400 members from 27 countries.
- Around 20 events since the project was launched in 2019 and support to close to 15 organisations through the Technology Assessment Processes.
- Leading the first Collaborative Innovation Group (CIG) focusing on corrosion monitoring in which close to 10 organisations are participating.



PUSHING RESULTS ONE STEP FURTHER

- In 2020, OPIN held joint webinars with the MEA, TIGER and OceanDEMO projects on themes relating to ocean energy.
- It is planned that the network will be self-supporting after project ends.
- Ten years after the project ends, it is estimated the network will continue to deliver a programme of activities to > 400 member organisations.

2018-2022

Total Budget **€2.6 M**

Accelerating the growth of the ocean energy sector and its supply chains across NWE



PAtient Self-care uSIng eHealth In chrONic Heart Failure









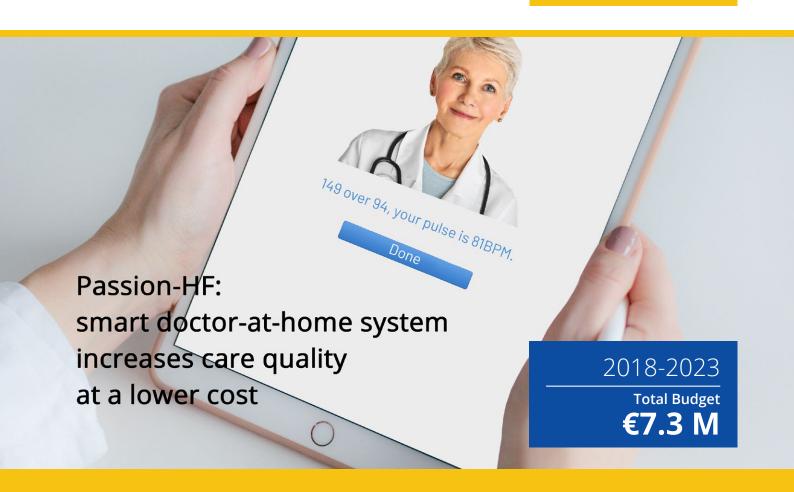
ACHIEVEMENTS

- From April 2021 onwards,
 DoctorME, an interactive
 physician avatar interface, is
 available to be used in clinical
 practice.
- Further testing and improvement will continue until the end of the project to have DoctorME ready for large scale clinical testing and implementation in NWE.





The proof that the self-care of patients including self-prescription of medication supported by DoctorME is superior to standard of care will enable a paradigm shift for care of chronic diseases, changing the care process as a whole.





Real-time "interactive storage" quality control in fresh agro products





OBJECTIVES

QCAP aims to reduce waste in food supply chains by using IoT sensors and Big data technologies for monitoring food quality and supporting rapid decision-making.



ACHIEVEMENTS

- 3 interactive storage system prototypes within a collaboration between 3 enterprises and 4 research institutes.
- Validation of an ISS in commercial conditions in Germany (apples/ blueberries), UK (potatoes) and Belgium (pears).
- Used the H2020 Fast- Trackto-Innovation programme to commercialise its storage system.





PUSHING RESULTS ONE STEP FURTHER

- **Enhance its ISS** (to reach TRL6) control of fruit under controlled
- Go beyond and validate the developed system for cold storage rooms for further uptake in the new vegetable sector (besides potatoes, onions and carrots).
- Extend to 3 new regions (Somme, Upper Bavaria, Soltau-Fallingbostel) part of the endgroups (farmer's cooperatives & storage facilitators).



2016-2020

Total Budget €3.1 M

Long-term storage of fruit under low temperature and low oxygen conditions



Deliver affordable lightweight solutions in auto & aero sectors



OBJECTIVES

RIGHTWEIGHT aims
to increase the
competitiveness of
automotive and aerospace
SMEs by stimulating
and supporting crosssectoral collaboration
in order to deliver new
lightweight solutions that
meet environmental and
affordability targets.



ACHIEVEMENTS

- Generating 10M € in turnover and 100 jobs in 2021.
- Generating 2M € in turnover and 50 jobs in NWE by 2022.
- Supporting 50 SMEs, with 20 lightweight solutions reaching TRL7 in half the time.
- A transnational ecosystem connecting 7 regions with complementary expertise, to be expanded with 3 additional NWE regions.





The cross-sectoral challenge-driven competition format that stands at the core of RIGHTWEIGHT can easily be expanded:

- to new regions within NWE and Europe as a whole
- to other sectors such as railway or maritime transport



Lightweight solutions in auto & aero sectors



Sustainable Housing for Inclusive and Cohesive Cities



OBJECTIVES

SHICC supports the establishment of more sucessful Community Land Trusts (CLT) and Organismes de Foncier Solidaire (OFS) in cities across the NWE region.



ACHIEVEMENTS

- Support to 4 CLT (Community Land Trusts) pilots in Lille, Brussels, London and Ghent, with 87 housing units and more than 300 under study.
- Support to more than 30 nascent CLTs and OFS across NWE.
- Rollout to 4 new areas of the region: Berlin, Amsterdam, Scotland and Ireland.
- Won the 2020's REGIOSTARS edition.





PUSHING RESULTS ONE STEP FURTHER

In the near future, SHICC would like to:

- Establish a European CLT network and make the CLT/ OFS model go mainstream in all Europe;
- Tackle new issues: access to land, non-housing components, sustainable construction materials, energy performance;
- Capitalise on the experience in other urban contexts in Ireland, Scotland, the Netherlands and Germany;
- Secure the financial models of CLT (Community Land Trusts) and make funds at the EU level available for CLTs/ OFS.

2017-2021

Total Budget **€3.7 M**



Visit of London's first 23 CLT homes on 8 November 2019 at St Clements. UP



STorage of Energy & Power Systems in NWE





OBJECTIVES

STEPS aims to support SMEs from NWE in developing innovative medium-scale energy storage solutions tailored to the needs of local market segments including, e.g. housing providers, energy cooperatives and business parks.



ACHIEVEMENTS

- Implementation of a business support programme.
- Of which 56 SMEs from NWE responded to the 1st call for applications.
- 20 of these will be selected for knowlegde partner support in voucher 1 and 10 will continue to test their product at a real-life testbed (voucher 2).



PUSHING RESULTS ONE STEP FURTHER

STEPS brings energy storage SMEs closer to market through:

- Product enhancement.
- State-of-the-art knowledge on technology and regulation.
- Access to testbeds.
- Lessons learnt will be dissiminated to help SMEs get their energy storage solution marketready.

• Less be of help enersolution and the second secon

2020-2023

Total Budget **€5.1 M**

Renewable energy power system



Support Network for Social Entrepreneurs





OBJECTIVES

SuNSE aims to develop a network of social entrepreneurship hubs across North-West Europe, to act as local points for stimulating community driven economic activity in disadvantaged regions.



ACHIEVEMENTS

So far, SuNSE has:

- Complemented its "place-based" network of social entrepreneurship with 'online-based'.
- Created an online development toolkit, support, events and activities.
- Progress towards the establishment of a network of 10 regions & 8 social innovation hubs.



PUSHING RESULTS ONE STEP FURTHER

- Applying and using the SuNSE model and approach to all NWE regions, since they both are fully scalable and adaptable at very little cost.
- Regularly update the content and infrastructure of its online platform beyond the project to ensure it remains available



Inspiring individuals to develop and grow their own social business ideas



Charcoal value chains to promote a Circular Carbon economy



OBJECTIVES

Based on the Interreg
North-West Europe
project RE-DIRECT,
THREE C aims at
the development
and introduction of
economically viable value
chains based on charcoal
raw materials from waste
biomass in NWE.



ACHIEVEMENTS

So far, THREE C has:

- Started modular counselling & a capacity building course, adressing various stakeholders at different stages of biochar based business plans and product development.
- Generated valuable interdisciplinary knowledge by researchers and practitioners.





THREE C is reaching:

- New beneficiaries, seeing its network grow.
- New application areas such as urban farming joining in.
- Potential participants to join the THREE C sustainable "Circular Carbon Economy"



SMEs and start-ups will get access to services like co-working, counseling, training, and networking



Innovative UV-robotics to improve existing IPM strategies



OBJECTIVES

UV-ROBOT aims to encourage the use of UV-C light as a sustainable alternative for intensive pesticide used to counter mildew by developing robots for autonomous mildew control, by integrating UV-C in current IPM (Integrated Pest Management) strategies and by helping the growers to implement the innovation.



ACHIEVEMENTS

As of now, UV-ROBOT has:

- Reached the final stage of the development of a fully autonomous UV-C robot.
- Developed effective UV-C IPM strategy to control mildew in strawberry, tomato and cucumber.
- Expected reduction of treatments against mildew to 1 to 5 in combination with UV-C.





- **UV-ROBOT** has the amibition to:
- **Reduce chemical** treatments used for protecting by involving a new target group: strawberry plant breeders.
- **Demonstrate its UV-C - IPM strategies** in new geographical areas in the Netherlands and in
- **Increase the** potential of the UV-C application to other diseases and pests.



2017-2023

Total Budget €2.9 M



Optimizing the farming and the processing of insects for food products



ValuSect plans on introducing insect-based food products by optimizing the farming and the processing of insects and by encouraging consumer acceptance, through transnational cooperation and joint exploitation of research on insects as resources for the development of (semi) finished food products.



ACHIEVEMENTS

As of today, ValuSect has:

- Launched a successful voucher scheme to support SMEs.
- Created a SOP (Standard operating procedure) to optimize insect rearing, to determine the impact of the substrate and to test nutritional quality and functionalities.
- 10 additional insect based marketable food products expected.





In the long run, ValuSect intends to create an international ValuSect **Knowledge Platform** and Accelerator Program in order to:

- **Support companies** planning to invest in insect-based food products.
- **Inform consumers** about the opportunities and products have to





Virtual Reality for Rehabilitation





OBJECTIVES

The VR4REHAB specifically focuses on enabling the co-creation of VR (virtual reality)-based and AR (Augmented Reality)-based rehabilitation tools by identifying and combining forces from SMEs active in the field of VR, Research Institutes, Clinics, and patients.



ACHIEVEMENTS

- Development of an Open Innovation Network.
- Numerous events: hackathons game jams and challenge meetings.
- 8 VR/AR-based rehabilitation applications currently being tested on patients from BE, DE, FR, NL and UK.
- Dissemination in ISVR, ERCIM News and E.N.T.E.R.



VR4REHAB is planning on extending its network and has already received attention from numerous entities working in the rehabilitation sector through the use of VR/AR for potential collaborations.



Participant during the VR4REHAB Hackathon in the Netherlands



Transnational water network of testing facilities for SMEs



The Water Test
Network establishes a
transnational network
of testing facilities which
can be used by SMEs to
test, demonstrate and
develop new products
for the water sector.



ACHIEVEMENTS

Since its launch, Water Test Network has:

- Trialled 24 innovations through its network of 14 testing facilities, accelerating their introduction to the market.
- Developed a strong European transnational collaboration, sharing knowledge and supporting water sector innovations across regions.





As the project plans its sustainable business model for the future, it is thinking about how to extend its network to:

- New testing facilities.
- New economic sectors which are intensive water users (e.g. food & drink and manufacturing)



Transnational collaboration to support water innovation outside one of their new testing facilities

Low Carbon

35 projects 165.3 M EUR allocated





Accelerating Condominium Energy Retrofitting





OBJECTIVES

ACE-retrofitting increases the number of shared energy retrofitting measures in privately owned condominium building blocks thanks to a governance arrangement linking demand and supply, facilitated by local authorities.



ACHIEVEMENTS

- Facilitation methods for the retrofitting of condominiums.
- An online platform adapted to local contexts in the 6 pilot cities (Paris, Aberdeen, Maastricht, Liège, Antwerp, Frankfurt).
- Almost 6000 households with improved Energy class resulting in over 9500 tonnes of CO₂ savings per annum.
- A guide to boost retrofits and policy recommendations.



PUSHING RESULTS ONE STEP FURTHER

- **An ACE charter** to attract other **European cities** working with condominiums and who want to learn and share their experience beyond NWE (e.g. In Spain, Denmark, Czech Republic).
- **Synergies with** similar projects such as INNOVATE (H2020) or collaboration with UK based - Low Carbon Home.



Accelerating Condominium Energy Retrofitting -Facilitation methods for local authorities



Offshore Wind Technology





OBJECTIVES

AFLOWT will accelerate market uptake of floating offshore wind by engaging project developers and investors on floating offshore wind technology maturity and investability and stimulating favourable policy environment.



ACHIEVEMENTS

- Deployment of a TRL 8 high survivability cost competitive floating offshore wind platform in a site with 9m/s windspeed and 30 m HS wave height.
- Engagement with local authorities in Ireland and investors.
- Expected 2 MW of additional energy.
- 1,040 CO₂ equivalent decrease of GHG emissions.





PUSHING RESULTS ONE STEP FURTHER

- **Demonstrate the** approach and promote commercial uptake of solution on 5 sites.
- **Expected 2000** megawatt additional capacity of floating offshore wind energy production in the long-term.
- 1,040,000 CO₂ equivalent decrease of GHG emissions in the long-term.



2018-2023

Total Budget €31.1 M

SAIPEM turbine & floating platform



Climate Active Neighbourhoods



GHG reduction in residential buildings of deprived neighbourhood thanks to local authorities implementing climate action strategies more effectively, involving residents.



ACHIEVEMENTS

- 1922 households with improved energy standards.
- 2 669t GHG savings.
- €13.5 M funding leveraged.
- Energy savings and health benefits for NWE citizens.





PUSHING RESULTS ONE STEP FURTHER

Disseminate the project results to more than 1800 Climate Alliance members - municipalities and regions - in 27 European countries.



Toit par toi - Event at the Capucins on 21/10/2017 in Brest, FR



Restoring the carbon storage capacity of peatlands



Reduce carbon emissions and restore the carbon storage capacity of different types of peatlands.



ACHIEVEMENTS

As of today, Care-Peat has:

- Raised awareness on restoring peatlands and on existing strategies in all 5 involved countries.
- Prevented about 7,808 of tonnes of CO₂ per year from losses, stored in its 5 pilot sites (BE, FR, IE, NL, UK, in total approx 630 ha).





Increase cooperation with peatland organisations across NWE, other Interreg or LIFE projects, and (local) governments for more peatlands to be restored



Valley of the Black Creek, BE



Promoting sustainable low carbon alternative practices



OBJECTIVES

Carbon Connects aims to change traditional high GHG emitting land management practices to sustainable low carbon alternative practices in the main peatland containing regions of NWE: NL, DE, FR, UK, BE, and IE.



ACHIEVEMENTS

- CConnects models will be scaled through a Farmer-2-Farmer learning programme in which innovative farmers can showcase the benefits of the alternative land management approach.
- Expected reduction of 2500 tonnes of CO₂ emissions for all 10 pilots.
- Investigation of blue and carbon credit schemes to allow farmers to earn credits for CO₂ storage and ecosystems services.





PUSHING RESULTS
ONE STEP FURTHER

- Rollout on new pilot sites to upscale the effect and reduce emissions supported by the development of clear guidelines and the farmer-2-farmer learning programme.
- Influence regional and national policy frameworks and instruments to stimulate the uptake of wet agriculture reducing CO₂ emissions.
- Cooperation with other Interreg NWE projects and stakeholders to share knowledge and experiences, raise awareness.

2018-2023

Total Budget **€4.5** M



Wet agriculture in Kamp, DE

North-West Europe CHIPS

European Regional Development Fund

Cycle Highways Innovation for People Transport and Spatial Planning



CHIPS aimed at developing existing and planned bicycle highways into a high quality, transnational mobility product used by ever more commuters as their best transport option.

OBJECTIVES



ACHIEVEMENTS

- Estimated CO₂ reduction of 5000 tonnes through the modal shift linked to increased use of cycle highways.
- CHIPS inspired planning of new cycle highways in DE, BE, NL and the UK.
- The first transnational standards regarding planning, building, marketing and evaluation of cycle highways.





PUSHING RESULTS ONE STEP FURTHER

- Continuous work on expanding and improving the cycle highway network in Europe.
- New regions

 are welcome to
 join the Cycle
 Highway Alliance
 and exchange
 experiences.
- The partnership looks for new venues for its Cycle Highway Academies, events where experts, policy makers and companies discuss technological innovation, new challenges and alternative approaches.



2016-2019

Total Budget

€4.4 M

A cycle highway in North-West Europe



Clean Mobility and Energy for Cities





OBJECTIVES

CleanMobilEnergy intends to significantly reduce CO_2 emissions in cities by integrating various renewable energy systems, storage devices, electric vehicles & optimise energy usage via an innovative Energy Management System (iEMS) in Arnhem (NL), London & Nottingam (UK) and Schwäbisch Gmünd (DE).



ACHIEVEMENTS

- 18 cruise ship diesel generators replaced by shore power (>1600 tonnes of CO₂/yr reduced).
- 12 megawatt solar farm at the Arnhem Harbour to supply public EV chargers.
- Installed 36 V2G vans and 138 kWp solar PV in Nottingham council depot.
- Developed Smart LEV solar charging stations in Schwäbisch Gmünd.



PUSHING RESULTS ONE STEP FURTHER

- Synergy with other EU projects (Interreg NWE eHubs, Interreg Europe EV Energy).
- Broadening the iEMS application via shared mobility services, fleet management and policy measures.



CleanMobilEnergy combines various RES, storage devices, EVs and controlled energy consumption through one unique smart energy management system

North-West Europe cVPP

European Regional Development Fund

Community-based Virtual Power Plant





OBJECTIVES

Joint testing of the concept of a cVPP, which offers a community the opportunity to provide to its energy needs with small-scale, distributed low-carbon technologies with participation from individual consumers, local energy companies or SMEs.



ACHIEVEMENTS

- Joint conceptualisation & testing of the cVPP concept in 3 different markets.
- Implementation in neighbourhoods of Ghent (BE), Loenen (NL) and Nenagh (IE).
- Replication process in
 9 communities in BE, IE and NL.
- Expected reduction of 2600 tonnes of CO₂ emissions



PUSHING RESULTS ONE STEP FURTHER

Combining insights from other Interreg NWE projects and take the next step in the decarbonisation process by means of

- Upscaling of the frontrunner cVPPs.
- Replicating the insights to follower community energy initiatives.
- Preparing newcomer communities for the potential deployment of cVPP.



2017-2022

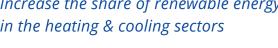
Total Budget

€7.1 M

cVPP, a novel model of radical decarbonisation

Interreg 🔼 North-West Europe **D2Grids**

Increase the share of renewable energy in the heating & cooling sectors





OBJECTIVES

D2Grids aims to increase the share of renewable energy in the NWE heating and cooling sector by accelerating the roll-out of demand-driven smart grids delivering low-temperature heating and cooling to cities.



ACHIEVEMENTS

- Pilot investment completed in Brunssum (NL).
- Demonstrattion of 5th generation district heating at the pilot sites in Paris-Saclay (FR), Bochum (DE), Brunssum (NL), Glasgow and Nottingham (UK).
- Promotion of 5th generation district heating & cooling network standards towards the industry and attracting investors, public authorities and project developers.





PUSHING RESULTS ONE STEP FURTHER

- **Networking with** other EU projects and international policymakers at workshops the midterm event, planned to be linked to COP26 in Glasgow.
- 10 years after the project's end, increase of share of renewable energy sources (RES) used for heating and



Test drilling at the Brunssum site of the D2Grids project



Roll-out of Deep Geothermal Energy in NWE





OBJECTIVES

DGE-ROLLOUT aims to reduce CO₂ emissions by replacing fossil fuels with an increased use of Deep Geothermal Energy (DGE) for large-scale infrastructures requiring high-temperature heat supplies to cover their basic energy loads.

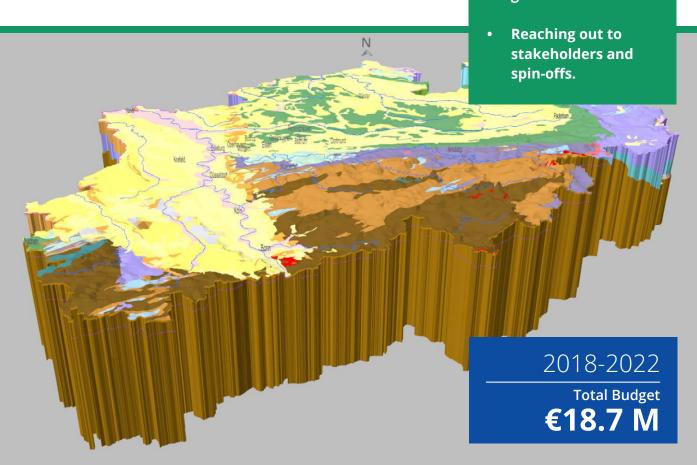


ACHIEVEMENTS

- Acquiring of 200 km of 2D-seismic surveys.
- Drilling of two 200 m deep boreholes into the Dinantian in BE, DE, FR and NL.
- Creation of a 3D-model of the subsurface of the Weisweiler power plant.
- Building a preliminary 3D-model of the Dinantian geothermal reservoir.



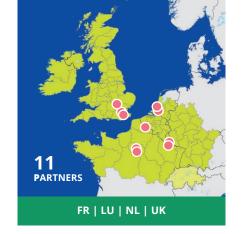
- Undertaking further 2D-seismic campaigns.
- Drilling a 1,500 m deep borehole at Weisweiler.
- Provision of DGE solutions for existing power plant heating grids.



3D model of North Rhine-Westphalia, DE



Desirable, warm, affordable homes for life





OBJECTIVES

E=0 addresses poor energy performance of residential buildings (houses) by generating a new mass market for net zero energy retrofits across NWE, through the successful Dutch Energiesprong approach.



ACHIEVEMENTS

4 pilots completed:
12 houses in Longueau, 10 in
Hem (FR); 17 in Nottingham,
5 in Maldon (UK), proving
the feasability of long-term
performance guaranteed
net zero energy retrofits of
residential houses through the
EnergieSprong approach.



PUSHING RESULTS ONE STEP FURTHER

- Replication of the concept to new markets.
- Potential of 11 200 E=0 retrofits across NWE.
- 5 types of E=0
 retrofit solutions
 270 GWh/yr primary
 energy saved 50
 GWh/yr renewable
 energy.



Pilot houses in Longueau, FR

North-West Europe ECCO

European Regional Development Fund

Creating new local Energy Community Co-Operatives



OBJECTIVES

The ECCO project will build an ECCO Accelerator Network to transnationally rally knowledge, experiences and expertise to develop energy community cooperatives (ECCOs).



ACHIEVEMENTS

- Development of a prototype of an open electronic one-stopshop facilitating a do-it-yourself development in the first stages of the ECCO life cycle.
- 192 new ECCOs supported,
 26 already in exploitation.
- Green Energy production:
 +/- 52000 MWh/year.
- CO₂ emissions reduction:
 +/- 7500 tonnes/year.





PUSHING RESULTS ONE STEP FURTHER

The EU directives from the "EU Clean Energy Package" provide new concepts and citizens' rights regarding energy communities. The ECCO project could have a bigger concrete impact in the NWE countries when it is supported in the field by new laws and policies that remove the barriers for Community Energy and open the market for it.



Creating new energy community cooperatives



Smart Shared Green Mobility Hubs





OBJECTIVES

Create a critical mass of shared mobility options of light electric vehicles (LEVs) and EVs, leading to behaviour change and contributing to less congestion and CO₂ emissions in cities.



ACHIEVEMENTS

- eHUBS are available in most of the pilot cities (BE, DE, FR, NL, UK), with a mix of shared electric bikes, cargobikes and cars. In many cases, they can be accessed with a Mobility as a Service app.
- The eHUBS concept is also applied in new cities outside the consortium.



PUSHING RESULTS ONE STEP FURTHER

- Increasing largescale uptake and the use of the eHUBS by making available eHUBS in Mobility as a Service-apps.
- Dissemination of all experiences in a project blueprint will help other cities to implement similar solutions.



An eHUB pillar prototype showcased at the car-free Sunday in Leuven, BE



Functional AgroBiodiversity to reduce the use of natural resources



OBJECTIVES

ENERGE aims to engage schools to mitigate their energy consumption and GHG (greenhouse gas) emissions by developing a new web-based platform tailored to different stakeholders within the school ecosystem.



ACHIEVEMENTS

- Inital beta version interactive "ENERGE Platform".
- Transnational Energy Literacy Modules for schools.
- **ENERGE** Committee Network, linking each Project school.
- A system of sustainable energy use in schools, expected to achieve 15% reduction in total energy consumption at the demo schools.





PUSHING RESULTS ONE STEP FURTHER

- **Development of** business scenarios/ long-term strategies with the broader educational stakeholders.
- Connections to related EU funded projects (e.g. 2Impresz from the North Sea Programme).



Reducing GHG emissions, it's my concern!

North-West Europe FCCP

European Regional Development Fund

Fuel Cell Cargo Pedelecs





OBJECTIVES

Replacing combustion engine vehicles in urban freight transport through all seasons by emission-free fuel cell cargo pedelecs in the partner cities. Support urbanites and local authorities to reduce CO₂ emissions and traffic jams.



ACHIEVEMENTS

- Development of a fuel cell stack (500 W - 1 kW, liquidcooled, metallic bipolar plates).
- Development of preheater for liquid cooled and air-cooled fuel cell stacks.
- Fuel cell with preheater on two FCCPs tested at temperatures up to -15C.
- Each FCCP expected to save an annual 5,5 tonnes of CO₂.



PUSHING RESULTS ONE STEP FURTHER

- Demonstrate the technology in the participating cities.
- Cooperation
 with cargo bike
 manufactures to
 integrate fuel cell
 cargo pedelecs in
 their array of product.
- off for the production off for the production of fuel cells and fuel cell systems for applications in the power range of few hundred W to 1 kW incl. cargo pedelecs.
- Improve of the infrastructure for cargo bikes into cities to accelerate the substitution of light vans by cargo bikes.



2018-2021

Total Budget **€8.3** M

Engineer Dr. Jörg Weigl from Unicorn Energy during the first test drive under subzero conditions



through Strategic European Action





OBJECTIVES

FORESEA facilitates realsea testing activity in the ocean energy sector to harness the expertise and knowledge of each test site benefitting from European funding.



ACHIEVEMENTS

- A collaborative partnership, a legacy that continues to add value.
- 28 ocean energy technologies deployed across 4 test centres.
- Over €64M leveraged into EU economy.
- Orbital Marine Power, pioneering floating tidal turbine generated over 3GWH of energy.





PUSHING RESULTS ONE STEP FURTHER

- **Share lessons** learnt from real sea deployments between test centres and technology developers.
- Leveraging existing test sites to share data will create the right momentum for the industry.



SR2000 device testing at EMEC's Fall of Warness test site

North-West Europe GenComm

European Regional Development Fund

GENerating energy secure COMMunities through Smart Renewable Hydrogen



GENCOMM will technically and financially validate and model the renewable hydrogen value chain and adapt it to a Decision Support Tool (DST) that leads NWE communities into sustainable, local and autonomous energy matrixes.



ACHIEVEMENTS

- Bio to H2 plant in Stornoway (UK) complete and operational.
- Installation of the solar operated HRS at the Saarbrücken (DE) side.
- Decision Support Tool (DST) operational.
- H2 refueling station in Belfast (UK), new H2 buses launched in Belfast.
- 20 new H2 buses ordered for use by Translink Northern Ireland.





PUSHING RESULTS
ONE STEP FURTHER

- Release of a white paper for policy makers throughout NWE to open opportunities for collaboration.
- Establishment of Hydrogen Ireland, a new national association.
- Hydrogen Triple
 Alliance linking and collaborating across
 3 projects.
- Creating and developing the Community Hydrogen Forum (CH2F).
- 8 stage crisis management plan.



2017-2023

Total Budget **€9.3** M

Hydrogen bus launch at Stormont



Greener Waterway Infrastructure





OBJECTIVES

Green WIN carries out laboratory and site trials and demonstrates new low carbon water pumping technologies, systems and processes that Waterway Management Organisations (WMO's) can adopt to reduce their energy use and CO₂ emissions.



ACHIEVEMENTS

As of today, Green WIN has built a test tank at Université de Liège which:

- Enables testing of innovative pump equipment, controls, and configurations.
- Will provide data that should confirm the project's predicted reduction of 1105 tonnes of CO₂ and annual 778.000 KWh energy savings.



PUSHING RESULTS ONE STEP FURTHER

Green WIN will:

- Team up with 'waterway related' projects and other organisations to promote its achievements.
- Implement findings at other sites.
- Set up a Greener
 Waterways Network
 to promote and
 sustain the findings
 from Green WIN long
 in to the future.



2018-2022

Total Budget

€2.4 M

Green WIN will test its strongest solutions across the UK, Ireland and France in real operational conditions



Greenhouses to reduce CO, on Roofs





OBJECTIVES

This cross-sectoral project aims to combine skills of construction and agricultural sector to jointly reduce CO₂ emissions and energy waste by creating a European market for integrated rooftop greenhouses.



ACHIEVEMENTS

- Implementation of 4 rooftop greenhouses in Bettembourg (LU), Bürstadt (DE), Paris (FR) and Gembloux, (BE), with a CO₂ emission reduction purpose.
- Coaching of 10 project leaders into the design and implementation.
- Production of practical guidelines to focus on critical points of rooftop greenhouses implementation.



PUSHING RESULTS ONE STEP FURTHER

- New targeted coaching based on our constant learning.
- Raising awareness among stakeholders on rooftop greenhouse implementation.
- Extend the influence in UK, Ireland, The Netherlands.



Greenhouses to reduce CO₂ on roofs



Hydrogen Solutions for Heavy-duty transport





OBJECTIVES

Facilitate the development of a market for low-carbon heavy-duty vehicles on hydrogen for logistic applications.



ACHIEVEMENTS

- 27-t rigid hydrogen truck developed and built
- Hydrogen mobile refueler developed and built
- Demonstration of the truck and the mobile refueller at Breytner in cooperation with Vlot Logistics - in Schelluinen (NL), ABC-Logistics in Düsseldorf (D) and Geldhauser bus company in München (D).



PUSHING RESULTS ONE STEP FURTHER

- Continuous outreach efforts to stakeholders in other NWE regions.
- Invite shippers/ logistic operators to demo events and discuss learnings and next development steps.



Refuelling the hydrogen truck at the mobile refueler during the first demo at Breytner in the Netherlands



System-Based Solutions for H2-Fuelled Water Transport





H2SHIPS fosters the creation of a H2 (hydrogen) supply chain for water transport in NWE, spurs behavioral change, highlights opportunities for industry stakeholders, and ensures public acceptance.



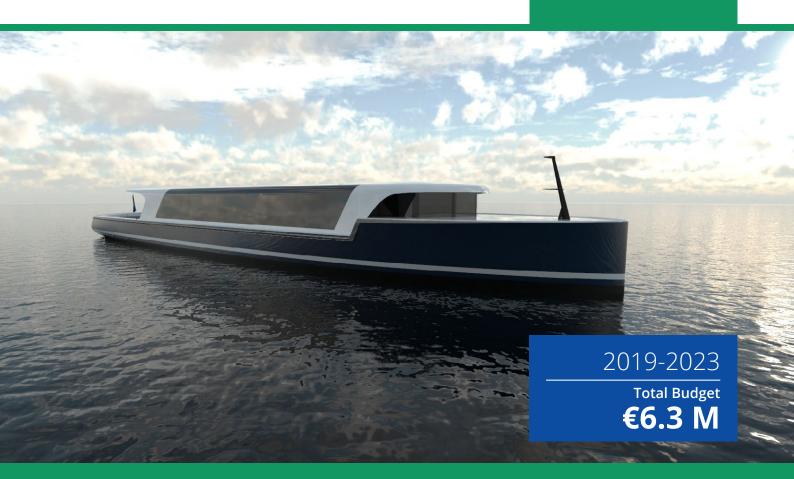
ACHIEVEMENTS

- Feasibility of the innovative hydrogen storage solution has been confirmed, and a group of stakeholders has been created around this technology.
- Expected hydrogen passenger ship in Amsterdam
- A demonstrator of maritime H2 bunkering in Ostend.





- **PUSHING RESULTS** ONE STEP FURTHER
- **Close collaboration** with other projects dealing with shipping, ports, hydrogen within NWE.
- Strong potential to maximise the impact by adding activities dedicated to the Rhine corridor.



Green inland port vessel with hydrogen in North-West Europe

Interreg European unit North-West Europe Housing 4.0 Energy

Affordable digital technologies for near-zero energy homes (NZEHs)



OBJECTIVES

Housing 4.0 Energy (H4.0E) aims to develop a market for small, affordable near-zero energy homes (NZEHs) by adapting and applying new digital technologies, thus stimulating both consumer and supplier interest.



ACHIEVEMENTS

- 6 pilots started in BE, NL, DE & IE where 54 affordable lowcarbon demonstration houses will be built.
- Reduction of CO₂/m² by 60% emissions for embodied CO₂.
- Smart combination of affordable techniques & materials and integration of digital design & production will lead to a cost reduction of 5% compared to NWE average.





PUSHING RESULTS ONE STEP FURTHER

- **Increasing** communication efforts to reach the social housing sector, building sector and selfbuilders.
- Replication/ adaptation of demonstration houses.
- **Updated** and **H4.0E** building platform.



Construction of the first Dutch Wikihouse in Almere Poort

North-West Europe HeatNet NWE

European Regional Development Fund

Transition strategies for delivering low carbon district heat



OBJECTIVES

HeatNet NWE aims to overcome the barriers to 4th generation District Heating (DH) in NWE using a transnational approach to create pathways and policy to overcome economic, social, technical and political barriers to DH.



ACHIEVEMENTS

- Completion of 6 pilot investments in Scotland, England, Ireland, France, Netherlands and Belgium.
- The 6 combined systems expected to save more than the original 15,000 tonnes of CO₂ target by project end.
- Policy, technical and planning guidance documents developed.





PUSHING RESULTS
ONE STEP FURTHER

 The HeatNet NWE platform will help decisions to start feasibilities region with no district heating.

(see: https://guidetodistrictheating.eu/)

There is a huge opportunity here for further Interreg projects and for municipalities aiming to expand their district heating network.



Mijnwater (NL), a HeatNet NWE pilot



Hydrogen Waste Collection Vehicles to reduce road transport emissions



HECTOR aims to demonstrate that fuel cell (electrochemical cell that converts hydrogen and oxygen into electricity) garbage trucks provide an effective solution to reduce emissions from road transport.



ACHIEVEMENTS

- 7 pilot vehicles have been ordered in Duisburg (DE) and are currently being built by the manufacturers.
- Expected 400 t of CO₂ emissions saved for 7 trucks.
- 13 companies expected to invest in the development of fuel cell garbage trucks in NWE.





PUSHING RESULTS ONE STEP FURTHER

- A cooperation agreement was signed between 3 waste truck projects
 HECTOR, Revive (FCH JU) & Life N Grab Hy (LIFE).
- Cooperation
 continues between
 these projects to
 maximise the impact
 of the project's
 deliverables.
- A series of webinars to inform a follower group made up of the next wave of potential waste truck customers.



2019-2023

Total Budget **€9.2 M**

Launch of the first HECTOR fuel cell waste truck in Duisburg, Germany, Dec 2020



European Regional Development Fund

Increase the capacity of Renewable Energies (RE) in Farms in the North West Europe Region by using Solar Thermal Energy (ICaRE4Farms)



OBJECTIVES

Increase the use of Solar Thermal Energy in farming in the NWE regions, increase the share of renewable energy and decrease of GHG emissions in agriculture



ACHIEVEMENTS

- Analysis of the solar thermal electricity Market and agricultural applications in NWE.
- 21 next generation STE systems will be implemented and will save 481 tonnes of CO₂ per year (23 tonnes of CO₂/system/ year) equivalent to 0,01% of CO₂ emissions in agriculture in NWE (Eurostat, 2016).





PUSHING RESULTS ONE STEP FURTHER

Potential collaboration with STE system installers and develop a network of distributors around NWE. Clustering with other innovative energy generating solutions to offer the most impactful and appropriate solution to the farmers.



Solar thermal energy panels



European Regional Development Fund

Integrating Tidal energy into the European Grid





OBJECTIVES

ITEG's objective is to develop and validate an integrated tidal energy and hydrogen production solution for clean energy generation in remote areas, therefore tackling grid export limitations faced in remote communities.



ACHIEVEMENTS

The project has supported the development of Orbital's O2 tidal turbine:

- Rated at 2 megawatts: the world's most powerful tidal turbine delivered entirely with a pan-European supply chain.
- Once deployed, the O2 turbine will be integrated with hydrogen production
- A whole energy systems model of the Orkney Islands has also been developed to assess impact and replicability of the ITEG solution



Replication of
ITEG's solution and
development of
a systems model
approach in other
remote areas across
NWE and beyond, where
grid constraints are an
issue and a renewable
resource is present.



Orbital O2 turbine build outside TEXO

Interreg ... North-West Europe **MUSTBEO**

Affordable Net-Zero energy (NZE)





MUSTBE0 addresses poor energy performance of residential buildings (apartments) by generating a new mass market for Net-Zero Energy retrofits across NWE.



ACHIEVEMENTS

- Expected to provide affordable, comfortable, future proof homes that people love to live in.
- Retrofits expected to achieve 7.9 GWh/yr of primary energy savings (and 1505 tonnes CO₂ /yr), and average investment costs drop 15% from today's ±€1100/m2.





PUSHING RESULTS ONE STEP FURTHER

Many other actors are now collaborating together to scale up the approach and improve pre-industrialised solutions: DE has joined MUSTBE0 to test the approach on apartment buildings; in FR, 100+ actors have signed a volume deal to collectively retrofit 6,600 homes: **NL** continues to scale up the solution with



Pilot project Hameln (DE)

ed and - O open

North-West Europe PowerVIBES

European Regional Development Fund

Sustainable solution for the festival market delivering reliable power by a decentralized hybrid solar & wind energy system



OBJECTIVES

Reduce CO₂ emissions at festivals by developing an eye-catching tower that generates power from renewable sources only (wind and solar) to provide safe and reliable energy to replace diesel powered generators.



ACHIEVEMENTS

- Development of a hybrid, easily foldable tower made of attractive colourful solar panels, with a wind turbine on top.
- The tower already has attracted international media attention.
- Expected reduction of 9.3 tonnes of CO₂ emissions.





PUSHING RESULTS ONE STEP FURTHER

The potential of off-grid energy from renewable sources is being recognized by more and more festivals.



The GEM-tower at the Vismarkt in Groningen (January 2020) (photo by Jorn Baars)



Rethink Electricity Distribution





RED Wolf aims to reduce CO₂ from NWE homes via a smart hybrid storage system (HSS: batteries + thermal storage) exploiting domestic photovoltaic & lowcarbon Grid electricity.



ACHIEVEMENTS

- The hybrid storage system has been designed, proved with peer reviewed computer simulations and so far installed in 43 houses in 3 pilot sites in UK and FR.
- Tenants moved in. HSS is working in "simplified mode". Full system testing is starting in 2021.





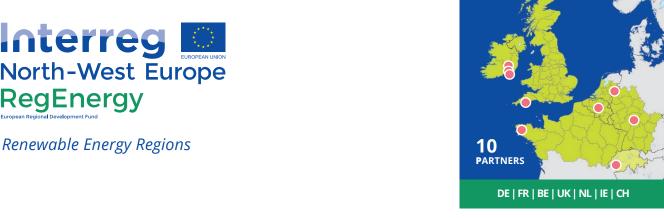
PUSHING RESULTS ONE STEP FURTHER

- **Results are serving** as a basis for funding applications for further development and make it ready for market uptake.
- The consortium is being extended to other territories and partners, and the system evolved to meet demand.



Pilot flats fitted with the Project's Hybrid Storage System built by RED WoLF's Partner First Choice Homes Oldham (Greater Manchester, UK)







OBJECTIVES

RegEnergy reduces GHG emissions by increasing the use of renewable energy through creating demandsupply partnerships between urbanized and surrounding rural territories.



ACHIEVEMENTS

- A preliminary strategy to set up urban-rural partnerships on increased use of RE has been developed and will be further refined.
- Viable models will be developed to match RE supply and demand in urban-rural areas.
- Regional RE demand and supply partnerships will be established.
- 44200 tonnes of annual CO₂ emissions expected to be saved.



Engaging with the Climate Alliance network of around 1,850 member municipalities and districts from 26 **European countries** to disseminate the experience of the RegEnergy project partners beyond the borders of NWE.



Plymouth City Council working with an energy community, UK

Interreg North-West Europe RIVER

European Regional Development Fund

Non-Carbon River Boat Powered by Combustion Engines



OBJECTIVES

RIVER reduces or eliminates vessel engines pollutants by applying an oxyfuel combustion technology for diesel engines that eliminates NOx so as to capture, store and transform CO₂ into biosolvent.



ACHIEVEMENTS

- Production of gel and other molecules from vessels fumes.
- 3D modeling of the equipments to be received by the narrowboat.
- Four business cases and 3 factsheets.
- Oxyfuel combustion results in simulation by saving at least 20 tons of CO₂ from the narrowboat.
- Six scientific publications (oxyfuel combustion), 2 publications in CO₂ transformation and 2 regional publications.



9 PARTNERS

PUSHING RESULTS ONE STEP FURTHER

FR | UK | NL | LU | DE

- Potential collaboration with companies related to medications and cosmetics and authorities of inland navigation.
- Results could be replicated for heavy trucks of more than 30 tones.
- Collaboration
 with University
 of Technology of
 Brno, University of
 The West England,
 University of Lincoln,
 University of Ghent
 and institutions
 through the cluster
 NWE regarding
 oxyfuel combustion.



2017-2021

Total Budget €3.2 M

Zero carbone emission for future inland waterway barges



Smart Sustainable Public Spaces





OBJECTIVES

Facilitate the uptake of smart public lighting with high energy-saving potential in mid and small size municipalities to move towards energyefficient, sustainable and demand-oriented municipalities across NWE.



ACHIEVEMENTS

- A desk study on best practices in smart lighting.
- Expected reduction of 452 tonnes of CO₂.
- A framework for a smart lighting system functional requirements and a SMART-SPACE Knowledge Center.
- Installation of a smart light system in the 4 pilot cities: Tipperary (IE), Middelburg (NL), Sint- Niklaas and Oostende(BE).



PUSHING RESULTS ONE STEP FURTHER

- A transition roadmap and accompanying implementation toolbox will be produced.
- The 4 municipalities have set out goals that are also priorities to other municipalities which will be integrated in the outcome of the project.
- **Communication** actions are planned to reach the target groups.



Intelligent lighting systems contribute to increasing energy efficiency in cities

Interreg 🖸 North-West Europe ST4W

Smart Track 4 Waterway





OBJECTIVES

Smart Track 4 Waterway facilitates pallets transport modal shift from road to waterway thanks to IT tools interconnection enabling an end-to-end seamless visibility between supply chain actors.



ACHIEVEMENTS

Pilot activities are ensuring the connection between multimodal supply chain actors. So far:

- The barges made 16 trips (= 600 trucks),
- For a modal transfer of 1.8 million t.km from road to waterway (target final result: 6 million), including multi-products, multistops and multi-clients journeys.



PUSHING RESULTS ONE STEP FURTHER

In the near future, ST4W aims to:

- **Capitalise on its** results together with other Interreg projects IWTS 2.0 (Interreg North Sea), **CCP 21 (Interreg** NWE).
- **Better connect** inland waterway transport with multimodal last-mile city logistics firstly digitally thanks to ST4W tools and secondly physically thanks to innovative transhipment.



2017-2022

Total Budget

€3.8 M

ST4W pallets on a barge with its on-board crane



Urban and Public Buildings in Straw





OBJECTIVES

UP-STRAW aims to upscale the use of straw for new buildings and to retrofit existing ones, with a particular focus on urban and public buildings.



ACHIEVEMENTS

- Technical support and tools for professionals to facilitate the use of straw as a building material.
- Integration of straw specification into Building Information Modeling (BIM).
- Massive Online Open Course (MOOC) with 3970 registered users.
- Several TV broadcastings and large media coverage on straw buildings.
- 5 exemplary buildings in straw in UK, NL, BE, DE and FR.



PUSHING RESULTS ONE STEP FURTHER

- Developing stronger partnerships of national straw bale building networks at European level.
- Market development strategy for boosting demand and SMEs' ability to serve this demand.
- Increasing the public building activity with straw bale building by publishing a guide for public procurement with straw.



2017-2022

Total Budget **€6.3 M**

Exemplary buildings in straw in UK, NL, BE, DE and FR

Resource and materials efficiency

23 projects 82 M EUR allocated





Adhesive-Free Timber Buildings





OBJECTIVES

AFTB aims to create the required conditions for increased uptake of adhesive free Engineered Wood Products by the construction industry.



ACHIEVEMENTS

- Expected 200 m³ of produced adhesive free timber Engineered Wood Products (EWPs).
- 1200 kg of adhesives savings.
- Further involvement of 4 EWP manufacturers, 4 construction end user companies, 2 architectural designing companies and 2 structural design firms as a proxy measure of the move towards more production of adhesive free EWPs in the future.



PUSHING RESULTS ONE STEP FURTHER

- Expected production of one million m3 of adhesive free products in the long-term.
- Reduction of the use of adhesives by 6,000 tonnes.
- Reduction in landfilling or incineration of 0.5 million tonnes at end of life.



All-natural, load-bearing dowel laminated timber panels



Optimise the reuse of resources from waste





OBJECTIVES

ALG-AD develops technologies to optimise the reuse of resources by growing high value algae using food and farm waste, therefore creating a genuine circular economy in the process.



ACHIEVEMENTS

- 3 pilot investments (BE, FR, UK)
 have been constructed and
 have been used to cultivate
 algal biomass using digestate.
 Cultivated biomass will now be
 used in animal feed trials.
- Algae cultivated on digestate contains higher levels of protein compared with that grown on commercial media and indicates no harmful pathogens.



PUSHING RESULTS ONE STEP FURTHER

Further value from algal biomass could make the technology more attractive to end users. Collaborations are required to resolve policy and regulation challenges, and to support ongoing long term dissemination activities.



Reactor installation at Langage, Devon, UK



Circular Economy for the Data Centre Industry





OBJECTIVES

CEDaCI builds a Circular Economy for the Data Centre Industry in NWE by reducing the impact of redundant equipment, increasing materials recovery and reducing the use of virgin materials.



ACHIEVEMENTS

So far, CEDaCI has:

- Dissambled 80 units of data centre equipment
- Upgraded some of its units for reuse.
- Recycled and reclaimed materials and other components.
- The project will reclaim 3.8kg of Critical Raw Material by the end of activities and 309 t/y after ten years.



PUSHING RESULTS

Aims to extend its support geographically and to new target groups in Belgium, Ireland and Luxemburg where there are 130+DCs and predicted sectoral investment of €5bn+ by 2025 to develop hyper-scale and SME sites.



Server disassembly and shredded components



Circular Housing Asset Renovation & Management





OBJECTIVES

CHARM aims to optimise the (re)use of material and natural resources and to demonstrate innovative approaches for housing renovation and asset management that prevent downcy.



ACHIEVEMENTS

- Adoption of the circular building strategies will lead to an average of 36% of materials being prevented from downcycling in new construction and renovation projects carried out by the 4 SHOs.
- This will lead to an equivalent material recovery of 40000 tonnes per year for the annual new construction and renovation activities carried out by the four SHOs.



PUSHING RESULTS ONE STEP FURTHER

- Further development can lead to a 60% recovery rate.
- Encourage
 the adoption
 of the project
 approach by 10%
 of social housing
 organisations
 (SHOs) leading to an
 increase of 850.000
 tonnes of material
 recovery per year.



The partners of CHARM during a project meeting in Paris, FR



for public Places





OBJECTIVES

Cirmap aims to develop a circular economy loop with the manufacture of customisable urban furniture by 3D printing of cement mortar made with Recycled Fine Aggregates (RFA).



ACHIEVEMENTS

- Development of characterization methods and formulation of 3D printing mortars made with Recycled Fine Aggregates.
- Development of design methodologies.
- Development of an integrated 3DP mobile unit with a master control command.
- 3D printing expected to recycle 25 tonnes of RFA.





PUSHING RESULTS ONE STEP FURTHER

- The Cirmap Network will share the project results with all potential stakeholders.
- Members of the **Network will share** their views on 3DP and on the potential product/market combinations that could be developed to help creating the



Example of 3D printed urban furniture



Digital Circular Economy for the Plastics Industry





OBJECTIVES

Di-Plast develops, applies and transfers digital tools to enable high value plastics recycling and an increased uptake of plastics recyclate.



ACHIEVEMENTS

- 1st version of a toolkit developed.
- Pilot phase for refinement started.
- Expected 4 pilots enabling 12 companies (3 per pilot) of the plastics supply chain to improve recycled plastic materials uptake.
- Digital technologies to enhance quality control and supply chain processes, increasing rPM uptake by 4kt lowering raw material use correspondingly.
- Expected uptake by 90 companies.



PUSHING RESULTS ONE STEP FURTHER

- **Include companies** from further sectors beyond packaging and construction.
- **Collaboration with Interreg 2 Seas** PlastiCity.
- **Contacts with** French companies.
- **Integration of** information in product data sheets.
- **Full supply chain**

integration.

2018-2022

Total Budget €4.2 M

Recycled plastic - a valuable resource



European Regional Development Fund

Functional AgroBiodiversity to reduce the use of natural resources



FABulous Farmers supports farmers in the transition to more agro-ecological practices on their farms by reducing their reliance on external inputs, like chemical fertilisers and pesticides, and by encouraging the use of methods and interventions that increase the farm's Functional AgroBiodiversity (FAB).



ACHIEVEMENTS

- In 12 pilot regions a FAB action plan was made up.
- 10 FAB measures are developed in a region-oriented manner, tested and demonstrated across 100 farms.
- Expected improvement of agro-ecosystems resulting in an average 30% decrease of chemical input on 315 farms covering 25000 ha.





PUSHING RESULTS ONE STEP FURTHER

- Improve the uptake of FAB measures by farmers in NWE.
- Expansion of project operations towards new areas in Germany and the United Kingdom.
- Engagement with new economic sectors.



Farmers exchange experiences during a field visit



Facilitating the circulation of reclaimed building elements





OBJECTIVES

Increase by +50% the amount of reclaimed building materials being circulated in the NWE territory by 2032. Setup of an transnational partnership of specialised organisations.



ACHIEVEMENTS

- 36 on-going pilot operations in real-life construction projects, assisting stakeholders to reclaim building materials and specify reuse products.
- Estimated circulation of 360 t of reclaimed building materials across NWE.





PUSHING RESULTS ONE STEP FURTHER

- Uptake of the initial project results in new NWE countries.
- **Engage construction** trades in implementing reuse practices.
- Set a framework for insuring reused materials.



Heap of reclaimed bricks being cleaned and sorted to be reused



Closing the loop in the textiles industry





OBJECTIVES

The project realizes implementation of FIBERSORT technology as the new industry standard to enable development and growth of the market for high value recycling of low-grade recyclable post-consumer textiles in NWE.



ACHIEVEMENTS

- An operational technology sorting textiles based on their composition able to sort based on colours as well, and operate continuously using an automated feed-in system.
- 40 jobs expected to be created.



PUSHING RESULTS ONE STEP FURTHER

Policy recommendations formulated showing the legislative, economic and soft instruments policy makers have at their disposal to allow automated sorting technologies to live up to their full potential.



The Fibersort technology, sorting used textiles based on their composition and colour



Improving resource efficiency to reduce food waste





Food Heroes aims to reduce food waste in the first parts of the food chain in 3 sectors (fish, meat and fruit & vegetables) by developing, testing and implementing 15 innovative solutions.



ACHIEVEMENTS

- 19 joint solutions delivering at least 4 500 tons food waste reduction and reducing needless killing of male chicks and goats by at least half a million.
- 76 candidates for the Food Heroes Awards and 3 inspiring winners.



PUSHING RESULTS ONE STEP FURTHER

- Interest raised among high-level policy makers (EU Health and Food Safety Commissioner).
- relevant national networks to maximise impact, roll out and scale up our developed solutions.
- Share our solutions with businesses, advisory services and policy level for further uptake.





2016-2021

Total Budget **€5.7 M**

Food products from oyster mushroom stalks



Increase the reuse of metallic raw materials, soils and land resources





BE | DE | FR | UK



OBJECTIVES

NWE-REGENERATIS aims to increase the reuse of raw material from Past Metallurgical Sites and Deposits reducing the volume of waste generated in NWE by providing knowledge & tools to screen sites and optimize processes for the recovery of resources.



ACHIEVEMENTS

- A new economic model with a harmonized inventory structure for metallurgical sites and deposits.
- Implementation of a new cost-effective geophysical characterisation method at 3 pilot sites.
- SMARTIX, a decision-support tool implemented at 9 pilot sites in NWE.
- 800 tonnes of materials recovered.
- 20 enterprises supported.



PUSHING RESULTS ONE STEP FURTHER

- Improvement of the institutional and political framework in the resourcerecovery and soil remediation sectors in NWE;
- Roll-out of the SMARTIX tool to other target groups;
- Business cases: recovery of raw materials and other resources (land, soil) replicated on the whole NWE area.



2019-2023

Total Budget **€7.1** M



Recover Phosphorus from waste





OBJECTIVES

Phos4You focuses on phosphorus recovery from municipal waste water to contribute to food security in NWE by reducing EU's dependence from imported phosphate rock.



ACHIEVEMENTS

- Scaling-up of 7 technologies to recover phosphorus from wastewater.
- Recycling pathways of the recovered materials identified under the revised EU Fertilising Products Regulation 2019/1009.
- Wide quality assessment of recovered materials for the evaluation of the fertiliser value.
- Addressing regulatory challenges in recycling nutrients.





PUSHING RESULTS ONE STEP FURTHER

- **Further scale**up of selected technologies (e.g. joint plant to produce phosphoric acid in a region having large amount of sewage sludge ashes available).
- The collaborations between the stakeholders of the value chains of recovered phophorus need to be further strengthened (joint planning/ contracting/



EuPhoRe plant, producing phosphorus rich ashes usable for fertilisers



Supporting a new circular economy for RAW materials recovered from landFILLs





OBJECTIVES

RAWFILL provides knowledge & tools to screen landfills to select profitable landfill mining projects, thus recovering huge amounts of dormant raw materials, energy carriers & land resources, or to identify interim use projects to be developed.



ACHIEVEMENTS

- An inventory structure to assess the economic potential of landfills
- 2 Decisions support tools for smart decision making, for landfill mining and interim use activities
- A cost-effective characterisation method tested on 8 pilot sites in BE, DE, FR and UK.



PUSHING RESULTS ONE STEP FURTHER

- Train RAWFILL ambassadors on how to use the project results and to replicate them in other regions.
- Identify the biogas migration in landfills.
- Prepare a Policy brief indicating changes needed in the EU "Waste Directive".



Supporting a new circular economy for RAW materials recovered from landFILLs



Agribusiness supply chains





OBJECTIVES

REAMIT aims to reduce waste in food supply chains by using Internet of Things (IoT) sensors and Big data technologies for monitoring food quality and supporting rapid decision-making.



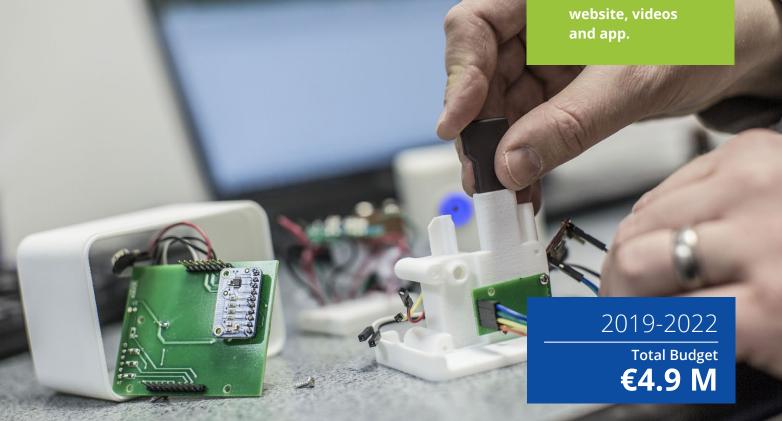
ACHIEVEMENTS

- A total of 7 REAMIT prototypes (against the target of 5) are being co-developed by 5 food enterprises, helping them reduce food waste in their supply chains.
- A big data infrastructure and a Smartphone app have been developed for data analytics.



PUSHING RESULTS ONE STEP FURTHER

- Replication of the **REAMIT** approach in new regions in Belgium and Luxembourg, and more varieties of companies (including dairies and liquid egg producers) in NWE.
- **Adoption of REAMIT** tool-box will be accelerated via website, videos



IoT Sensor technology to track food quality



REgional Development and Integration of





RE-DIRECT uses residual low value and waste biomasses in order to convert them into carbon products for the use in filtration treatment and environmental management.



ACHIEVEMENTS

- One large-scale pyrolysis plant in DE and one farm-scale pyrolysis plant in UK.
- Demonstration of the feasibility of the conversion technology.
- Product and sustainable value chains based on biochar from residual biomass.
- Regional development plans in each region.





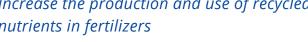
- **Further** development towards a circular carbon economy based on sustainable carbon feedstock, producing innovative applications and products by biochar.
- **New link to urban** farming as a new and attractive way to contribute to climate change mitigation.



Enabling circular economy in NWE through clever use of low value biomass resources for new products



Increase the production and use of recycled nutrients in fertilizers





ReNu2Farm aims to increase the production, use and trade of recycled Nitrogen, Phosphorus and Potassium, which are considered to be the three major nutrients vital for plant life, in fertilizer by NWE farmers, policy makers & producers.



ACHIEVEMENTS

- Mapping nutrient demand & potential recycling-derived fertilizers (RDF) use in NWE.
- RDF production, efficiency evaluation & innovative field trials. Policy recommendations & market introduction for RDFs.
- Progress at reducing NWE mineral fertilizer use by 1% and increasing the use of recyclingderived fertilizer to 1.5%.





PUSHING RESULTS ONE STEP FURTHER

- **Collaboration with** other projects focussing at other recycling-derived fertilizers or new target groups for these products.
- Strengthening exchange between research & policy to address barriers for RDF market uptake.



2017-2023

Total Budget €3.7 M

ReNu2Farm works on a circular economy



Secondary Raw Materials for Concrete
Precast Products



Increase the use of the construction and demolition waste as secondary raw materials for cement and concrete precast products.



ACHIEVEMENTS

- Within SeRaMCo treatment process for construction and demolition waste (CDW) has been significantly improved.
- New cement and concrete mixes have been developed, which enable the use of CDW.
- Various innovative precast concrete products have been designed and produced as well as three pilots projects in BE, DE and FR.





PUSHING RESULTS ONE STEP FURTHER

- Further regulations for the use of natural resources and CDW should be set.
- Changing the behaviour of enterprises, public authorities and builders by using products from recycled materials.



Recycled materials in building constructions



Digital Support Infrastructure for Citizens in the Repair Economy



OBJECTIVES

SHAREPAIR aims to decrease waste from electrical/electronic equipment (WEEE) from consumer products by developing digital tools that stimulate and facilitate citizen repair initiatives.



ACHIEVEMENTS

- Development of an online matching tool connecting citizens and their broken appliances to repairers as a pilot for digital tools for repair.
- Creation of a network of cities, repair movements, consumer organizations and research institutes pushing for more citizen repair.
- Repair capacity to be increased by 6.27 t in 100 pilot repair cafés and 110 t in the pilot cities.





- **Expanding the** network with repair communities, cities, consumer organizations to feed more repair data into the open data platform.
- **Convincing** policymakers of the "right to repair": access to manufacturer information parts) to facilitate citizen repair.



A repair café from the SHAREPAIR project







OBJECTIVES

To promote circular Infrastructure through development and uptake of the Smart Circular Bridge, a circular pedestrian/ cyclist bridge system as an alternative for the traditional infrastructure industry, avoiding the use of fossil raw material and minimizing negative CO₂ impact.



ACHIEVEMENTS

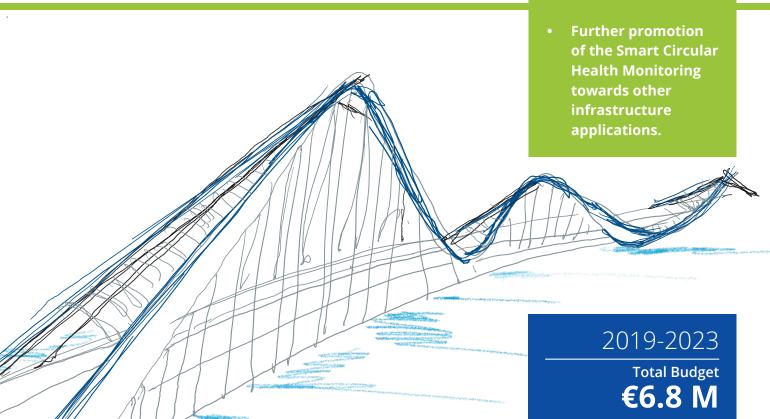
- Development of a fully functioning test set-up for the Structural Health Monitoring (SHM) System.
- Design of the first demonstration/ investment project for the city of Almere, Netherlands.
- Avoiding the use of over 80 tonnes of fossil raw material.





PUSHING RESULTS ONE STEP FURTHER

- Project and bridges will attract wide international industry attention and will greatly enhance awareness on circular building and infrastructure.
- Increased roll-out with the available guidance on SCB tendering.



Preliminary design Smart Circular Bridge for the World Horticulture Expo 2022 in the city of Almere, Netherlands



Sediment Uses as Resources In Circular





Increase sediment reuse for erosion and flood protection, providing authorities, port and waterway managers as well as erosion experts with new large-scale solutions for sediment reuse in NWE ports, waterways and coastlines.



ACHIEVEMENTS

- Reallocation of approx. 254,514 m³ of dredged sediments in the Port of Rotterdam (NL) and 800 m³ at the Lagan (UK) pilot site.
- A mobile sediment treatment plant capable of dehydrating dredged sediment at 60 cu.m per hour.
- Re-use of 20.000t of sediment (saving 20000t raw material).
- Implementation of new dehydratation process to shorten time to market for dredge sediment.





PUSHING RESULTS ONE STEP FURTHER

- **Providing SURICATES** expertise beyond its partnership, with different stakeholders and for various sediment reuse cases.
- **Ensuring the roll-out** of results torwards the Rance tidal powerplant (FR), the **Castle of Chantilly** (FR) and the local stakeholders of the



Baseline monitoring (February 2019) before sediment reallocation in the Port of Rotterdam, NL



European Regional Development Fund

Transform single use plastic waste into feedstock



OBJECTIVES

TRANSFORM-CE aims to transform single use plastic from municipal waste into feedstock to create new products using circular economy principles and Additive Manufacturing (AM) and Intrusion Extrusion Moulding (IEM) technologies, and support business uptake.



ACHIEVEMENTS

- In-depth study of existing single use plastic waste streams across the 4 project countries.
- Development of an Intrusion Extrusion Moulding pilot plant in the Netherlands.
- Engaged businesses to support 20 examples of business uptake.
- Generated insights for a Plastics Circular Economy Roadmap.





PUSHING RESULTS ONE STEP FURTHER

- Engagement with over 200 businesses, as well as other stakeholders, through events, pilot plants visits and knowledge transfer activities to disseminate information on product and business model innovation.
- Creation of a network of informed stakeholders involved in upscaling and replicating the project's circular economy models.



2019-2023

Total Budget **€9.6 M**



By-products for sustainable concrete in the urban environment





URBCON applies byproducts (such as metallurgical slags and combustion ashes) as alternative raw materials to concrete in the urban NWE region.



ACHIEVEMENTS

- Different by-products and aggregates characterised and tested for applicability in concrete.
- URBCON mixtures using alkali activated binders and/or recycled aggregates.
- Web-platform structure developed.
- 54 tons of primary raw material expected to be saved.





New NWE regions where demonstration projects with URBCON concrete can be set up (e.g. urban constructions).



By-products for sustainable concrete in the urban environment



Wider business Opportunities for raw materials from Wastewater



WOW! contributes to the transition towards circular use of raw materials from sewage.



ACHIEVEMENTS

- 3 pilots (DE, FR and NL) up and running for lipids, cellulose and polyhydroxyalkanoates bioplastics.
- Finished market potential study of bioproducts from sewage.
- National legal action plan for NL.
- Insight in critical success factors for valorization routes based on reviews of more than 30 European projects.





PUSHING RESULTS ONE STEP FURTHER

- Getting more waste water treatment operators interested in the circular approach of using sewage water as a source.
- Getting more companies interested to use our raw materials.



WoW! A new business approach for resource recovery from sewage

List of Interreg NWE projects

The Interreg NWE Programme financed a total of 102 projects in the 2014-2020 period.

The 102 projects funded by Interreg NWE

Please see below the full list of projects, which comprises projects from the VB period (2014-2020) that are either closed or currently under implementation.

ACE-Retrofitting

www.nweurope.eu/aceretrofitting

AFLOWT

www.nweurope.eu/aflowt

AFTB

www.nweurope.eu/aftb

AGRIWASTEVALUE

www.nweurope.eu/AGRIWASTEVALUE

ALG-AD

www.nweurope.eu/alg-ad

ASPECT

www.nweurope.eu/aspect

B4H

www.nweurope.eu/b4h

BE-GOOD

www.nweurope.eu/begood

BioBase4SME

www.nweurope.eu/biobase4sme

BioWILL

www.nweurope.eu/biowill

BONE

www.nweurope.eu/bone

BSTART

www.nweurope.eu/bstart

CAN

www.nweurope.eu/can

Care-Peat

www.nweurope.eu/care-peat

CConnects

www.nweurope.eu/cconnects

CEDaCI

www.nweurope.eu/cedaci

Certification-D

www.nweurope.eu/certification-d

CHARM

www.nweurope.eu/charm

CHIPS

www.nweurope.eu/chips

CircTex

www.nweurope.eu/circtex

CIRMAP

www.nweurope.eu/cirmap

CleanMobilEnergy

www.nweurope.eu/cleanmobilenergy

COBRACOMP

www.nweurope.eu/cobracomp

Codex4SMEs

www.nweurope.eu/codex4smes

COTEMACO

www.nweurope.eu/cotemaco

Curcol

www.nweurope.eu/curcol

cVPP

www.nweurope.eu/cvpp

D2Grids

www.nweurope.eu/d2grids

DGE-ROLLOUT

www.nweurope.eu/dge-rollout

Di-Plast

www.nweurope.eu/di-plast

DigitalDeConstruction

www.nweurope.eu/digitaldeconstruction

E=0

www.nweurope.eu/e=0

ECCO

www.nweurope.eu/ecco

eHUBS

www.nweurope.eu/ehubs

eMEN

www.nweurope.eu/emen

ENERGE

www.nweurope.eu/energe

Enter to Transform

www.nweurope.eu/entertotransform

EYES

www.nweurope.eu/eyes

FABulous Farmers

www.nweurope.eu/fabulous-farmers

FCCP

www.nweurope.eu/fccp

FCRBE

www.nweurope.eu/fcrbe

Fibersort

www.nweurope.eu/fibersort

Food Heroes

www.nweurope.eu/foodheroes

FORESEA

www.nweurope.eu/foresea

GenComm

www.nweurope.eu/gencomm

Green WIN

www.nweurope.eu/greenwin

GROOF

www.nweurope.eu/groof

H2Share

www.nweurope.eu/h2share

H2SHIPS

www.nweurope.eu/h2ships

H4.0E

www.nweurope.eu/h40e

HappyMoo

www.nweurope.eu/happymoo

HeatNet NWE

www.nweurope.eu/heatnet

HECTOR

www.nweurope.eu/hector

Hi-ECOWIRE

www.nweurope.eu/hi-ecowire

ICaRE4Farms

www.nweurope.eu/icare4farms

IDEA

www.nweurope.eu/idea

IMAGINE

www.nweurope.eu/imagine

IT4Anxiety

www.nweurope.eu/it4anxiety

ITEG

www.nweurope.eu/iteg

LOGIC

www.nweurope.eu/logic

Machining4.0

www.nweurope.eu/machining40

MATMED

www.nweurope.eu/matmed

MegaAWE

www.nweurope.eu/megaawe

MiteControl

www.nweurope.eu/mitecontrol

MUSTBEO

www.nweurope.eu/mustbe0

NWE - REGENERATIS

www.nweurope.eu/nwe-regeneratis

NWE MEA

www.nweurope.eu/mea

NWE-Chance

www.nweurope.eu/nwe-chance

OceanDEMO

www.nweurope.eu/oceandemo

OIP4NWE

www.nweurope.eu/oip4nwe

OPIN

www.nweurope.eu/opin

PASSION-HF

www.nweurope.eu/passion-hf

Phos4You

www.nweurope.eu/phos4you

PowerVIBES

www.nweurope.eu/powervibes

OCAP

www.nweurope.eu/qcap

RAWFILL

www.nweurope.eu/rawfill

RE-DIRECT

www.nweurope.eu/re-direct

REAMIT

www.nweurope.eu/reamit

RED WoLF

www.nweurope.eu/redwolf

RegEnergy

www.nweurope.eu/regenergy

ReNu2Farm

www.nweurope.eu/renu2farm

RIGHTWEIGHT

www.nweurope.eu/rightweight

RIVER

www.nweurope.eu/river

SeRaMCo

www.nweurope.eu/seramco

SHAREPAIR

www.nweurope.eu/sharepair

SHICC

www.nweurope.eu/shicc

Smart Circular Bridge (SCB)

www.nweurope.eu/smartcircularbridge

SMART TRACK 4 WATERWAY (ST4W)

www.nweurope.eu/st4w

SMART-SPACE

www.nweurope.eu/smart-space

STEPS

www.nweurope.eu/steps

SuNSE

www.nweurope.eu/sunse

SURICATES

www.nweurope.eu/suricates

THREE C

www.nweurope.eu/threec

TRANSFORM-CE

www.nweurope.eu/transform-ce

UNEET

www.nweurope.eu/uneet

UP STRAW

www.nweurope.eu/upstraw

URBCON

www.nweurope.eu/urbcon

UV - ROBOT

www.nweurope.eu/uv-robot

ValuSect

www.nweurope.eu/valusect

VR4REHAB

www.nweurope.eu/vr4rehab

Water Test Network

www.nweurope.eu/water-test-network

WOW!

www.nweurope.eu/wow

NOTES

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Interreg NWE is a European Territorial Cooperation programme with the ambition to make the North-West Europe area a key economic player and an attractive place to work and live, with high levels of innovation, sustainability and cohesion. We encourage public, private, scientific and civil society organisations to cooperate in order to improve the economic, environmental, social and territorial development of NWE regions.

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