

Framework Contract: Implementation of an integrated evaluation approach within the framework of a robust North-West Europe evaluation system (Reference 16B007)

## **Annex 4: Impact stories**

# **FINAL IMPACT EVALUATION**

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# 1 What is an Impact Story?

As humans, we tend to respond well to communication and interpersonal connections. **Storytelling** is a powerful way of communicating that we have used throughout history to connect with empathy and through a stronger understanding of each other's experiences. We use **Impact Stories** to spotlight how our users and beneficiaries have applied new knowledge, improved capacities and deployed technologies following the implementation of an Interreg Project. The approach is similar to the one of testimonials or success stories.

Contrary to a case study, the impact story provides perspective from a concrete point of view (individual, community, or organisation) at a specific point of time. Impact stories are an evaluative tool to find the impact of projects or other measures, examining whether individual, organisational or even wider change has taken place.

For the impact evaluation of the Interreg NWE 2014-2020 programme, these stories aim to bring out rich insights to help understand what has changed and how, and the degree to which the changes can be attributed to the learning and innovation experience with Interreg NWE.

## 2 All Impact Stories of NWE 2014-2020

### Fighting old problems with innovative solutions (SO1)

Housing affordability is an issue affecting our continent, especially in mid–large cities, seriously threatening their social and economic sustainability. More than 26 million people across the European Union are living in overcrowded and inadequate properties. This is particularly sensitive for specific target groups normally associated to the ‘more vulnerable’ and therefore in need for social protection schemes. In order to respond promptly to these needs, the city of Lille together with a group of enthusiastic local authorities and civil society organisations joined the efforts aimed at supporting the establishment of more and successful Community Land Trusts (CLTs) in cities across the NWE region, thanks to the SHICC project.

What does a Community Land Trust actually do? CLTs are democratic, non-profit, and community-driven organisations. They create and oversee the management of properties that are affordable to certain types of households as well as other resources that support successful local communities. They take care of these resources over the long term and make sure they are always affordable. This is made possible by processes that make sure any extra value created is kept inside the CLT. For instance, a London-based CLT developed a genuinely and permanently affordable housing project in Sydenham, Lewisham (near Brasted Close), the CLT's first direct development. Home prices are set at rates that are accessible for people on average incomes in Lewisham, and when residents move out, they must sell at a similar price, giving new local families a chance to buy a home they can afford.

Based on the already existing experiences, the partners aimed at defining the social impact of their intervention by developing specific tools to measure it, they enhanced the understanding of the technicalities by providing trainings to local organisations and they finally drafted a guide for establishing and operating a CLT, increasing the opportunities for the CLT movement in the region to gather and exchange information. Over the course of the project, the partnership successfully delivered four CLTs experiences in Lille, Brussels, Ghent and London. Furthermore, the project supported the expansion of the CLT movement into new geographical areas by providing support to local partners in Scotland, Germany, Ireland and the Netherlands.

The project addressed a social challenge through social innovation. It was part of a larger vision regarding the development of cities, involving citizens and public authorities, to develop an affordable housing model that would include low to medium income families and build new communities. In this sense, the project liaised with other relevant interventions in the NWE area aimed at improving the life of citizens through innovative solutions such as NWE Chance and Be-good.

The activities carried out demonstrated how Innovation can improve the competitiveness of enterprises but additionally, when socially targeted, can concretely enhance the wellbeing of parts of the population.

## **Caring about our mental well-being (SO1)**

“Thanks to virtual reality, I’m no longer afraid of spiders.” Sounds bizarre, right? Not according to Anna. Through the use of virtual reality tools made available under the eMEN project, Anna was finally able to treat her arachnophobia and overcome her fear of spiders.

In the EU, about 165 million people, or 38% of the population, experience a mental health disorder like depression or anxiety each year. The economic and societal costs of mental illness are significant and growing for society. Over 600 billion euros are spent annually in the EU on the direct and indirect economic consequences of mental health issues.

At the start of the eMEN project in 2016, the average use of e-mental health products across the Netherlands, France, Germany, UK, Belgium and Ireland was 8%, which is low compared to other healthcare sectors; with the lowest use in FR (less than 1%) and the highest in the Netherlands (15%). Unmet needs were also high, with an EU average of 6.8%. At the end of the project, the average use of e-mental health products has increased by 7%, to 15%.

In order to achieve this goal, a first-of-its-kind, EU-wide cooperation platform for e-mental health innovation and implementation was established by private and public partners in Northwest Europe. Specific trainings were delivered demonstrating that, for instance, therapy through videoconferencing is effective, acceptable and practical health care. Even equally effective as classic face-to-face therapy. With easy access and in the comfort of their own home, patients can find it easier to reveal certain information. They also experience less anxiety, because they do not have to travel to the clinic or face people in the waiting room.

The interest and concreteness of these activities were very much enhanced by the COVID-19. The pandemic has increased demand even more and is altering how healthcare is provided. Implementing cutting-edge, high-quality e-mental health solutions has been demonstrated crucial in addressing this societal issue and aids in the creation of effective healthcare systems.

The project has directly contributed to facilitating innovation in SMEs through the co-creation, development and piloting of eMH products in cooperation with SMEs, end-users, mental health service providers and researchers / universities; and SME support services, which focused on helping SMEs with developing better eMH products and finding new markets.

### **...and renewables for all! (SO2)**

Imagine a future in which you are not a plain passive consumer but you generate your own energy from renewable resources. You become a prosumer. Imagine a future in which you are not only producing your own energy but you become 'smart' enough to consume your own production as much as you can, joining a community that is sharing values going beyond the energy. This future is now and it is forged by a concrete example named Community-based Virtual Power Plant (cVPP).

A socio-technical concept of a cVPP was developed and tested in 3 communities in Ireland, the Netherlands and Belgium in the first years, from 2017 to 2019. These three communities represent three different narratives: one in Loenen, a small rural village in the Province of Gelderland (Netherlands) that won a sustainability competition requiring solutions to make villages energy neutral; one in Sint-Amandsberg-Dampoort, a residential area of heavily crowded Ghent (Belgium) where residents wanted to manage and share solar energy locally, and looked into the idea of a community battery to store all the generated energy locally; lastly, one on the Templederry Wind Farm, Ireland's first community-owned wind farm. Community Power, Ireland's first community-owned electricity provider, was established as a result of partnerships between this community project and other community energy organizations from the Irish regions of Tipperary, Limerick, Galway, Mayo, and Dublin. Following the successful experiences of the 3 communities the partner organisations developed a Mobilisation and Replication (MoRe) model to help 9 other communities develop their own cVPPs. Basically, once understood how to do it, they prepared a clear guidance offering the possibility for other communities to do the same!

The second phase, implemented in the following years, enlarged the use of cVPP replicating the model, doing more of the same, and upscaling, taking cVPP to the next level. Specifically, this phase focused on both technical upscaling and social upscaling of the business cases through connection of new target groups such as SMEs, industries and rental sector, and territories. The MoRe model is now picked up by Rescoop, a European federation of over 1500 cooperatives, and using insights from cVPP upscaling and the transposition of the Winter Package model is getting upgraded.

cVPP was a unique research project. It gave a very rare opportunity to put real innovations into practice and study them in the process. This is very different from usual research routines, when studied innovations are initiated by others and happened in the past. Given the current sustainability challenges and the urgency to act, this is the right way to go. The project sought to empower prosumers and energy communities and its efforts have been rewarded with winning the EU Sustainable Energy Citizens Award 2020 and the IE&IS Valorization Prize 2020.

The need for the project and its relevance even increased during the course of the project because of the publication of the Clean Energy for all Europeans Package (CEP) in 2019 which places citizens and energy communities central in the energy transition. As such the CEP and its transposition into national law opened doors for increased community participation in the electricity markets, by legally defining renewable / citizen energy communities, alleviating institutional barriers, acknowledging new market roles for communities etc.

cVPP built strong synergies with another Interreg NWE project (ECCO) enhancing the democratisation and inclusive dimensions in energy production and distribution processes.

## **District heating for a greener future (SO2)**

There is a growing concern and understanding that all efforts are necessary and useful if directed to reduce the CO2 emissions of our activities or our way of life. This is important for the single individual, but it is even more relevant when it is achieved by means of a concrete common action. These are all thoughts that have come to the people of Leiedal in Belgium - the intercommunal association for regional development in South-West Flanders founded in 1960 at the initiative of the municipalities of the Kortrijk district – when they decided to join forces with other communities in UK, Ireland, France and the Netherlands to kick off a transnational project called HeatNet NWE.

District heating, also known as a heat network, is a system that uses a singular central heat source to distribute hot water through a network of insulated pipes to multiple individual dwellings. The structure is usually used to fulfil heating and hot water requirements in apartment complexes. However, as innovation develops, we are seeing the solution be adopted in large-scale buildings associated with educational and commercial operations.

District Heating and Cooling facilitates energy efficiency, less CO2 emissions and a greener economy. HeatNet NWE addresses the need to reduce the carbon footprint and to increase the uptake of renewable energy in North West Europe, through the creation of an integrated transnational approach to the supply of renewable and low carbon heat (including waste heat) to residential and commercial buildings.

The project focused on 4th generation District Heating and Cooling (4DHC) with minimised heat loss, integrated energy storage and supply to multiple low energy buildings. Specifically, the project enhanced the existing knowledge base, limited to a restricted circle of users, creating a transferrable model for implementing 4DHC schemes in NWE, organising six living labs that test and demonstrate the HeatNet model through investments in order to widen the interest and the opportunities to gain benefits from its application.

The project prepared the guide to the HeatNet model and, thanks to the pilots, the total amount leveraged by partners is more than 43 million EUR from non-commercial sources, compared to the 8 million EUR initially planned. The high amount shows the increased interest in the subject of DHC and is in part due to the additional funding provided by the Irish government thanks to the HeatNet project investment in South Dublin.

The project had a positive impact on inclusion through the provision of affordable warmth for groups excluded or at risk of exclusion from society through economic deprivation. As a matter of fact, three of the pilots supply heat to social housing. In fact, HeatNet managed to impact the policy level more than it initially planned: the project partners were able to demonstrate to policy makers on the ground what District Heating could look like and the benefit it could bring to society.



### **Power from waves (SO3)**

Monday, 24<sup>th</sup> September 2018, 8.00 am. It is a windy day on Eday, one of the islands of Orkney located to the north of the Scottish mainland. The waves are over 2 metres high and crash over the CorPower Ocean's C3 half-scale wave device. Today, the conditions are ideal for producing electricity from waves.

CorPower Ocean's C3 half-scale wave device was installed at the European Marine Energy Center (EMEC) in January and has demonstrated in the past 9 months both its survivability and reliability. Within the NWE Interreg project FORESEA, the device was connected to EMEC's floating microgrid, enabling it to behave as if it were grid connected. It weathered heavy storms with waves up to 4m and consistently exceeded expectations in terms of electricity production. The testing campaign also provided key learnings for installation and disconnection operations, logistics, maintenance, and control systems. With this knowledge the next prototype (CorPower Ocean's C4) could be designed. The Technology Readiness Level (TRL) could be increased from 4 (Prototype) to 6 (precommercial level). Almost EUR 12 million of funds to be invested in the upcoming development phases could be leveraged. Following the completion of the testing period at EMEC, CorPower received strong customer interest for wave energy. In addition to securing a contract with an oil and gas company, they were contacted by two major utilities developing offshore wind farms to explore the potential of combining wind and wave.

Coming back to the stormy North Sea near Eday Island. Tomorrow the test phase of the C3 half-scale wave device will come to an end. The technology case was selected in a competitive call for gaining free access to open-sea test centres. Three test centers are involved as partners in this project: EMEC, the Dutch Marine Energy Centre (Alkmaar, Netherlands) and SmartBay in Galway (Ireland). Together with Ecole Centrale de Nantes (France) and Ocean Energy Europe, the largest network of ocean energy professionals in Europe and in the world, they try to capitalise on the new knowledge generated by the project.

Overall, the FORESEA project (2016-2019) has been successful in deploying 33 low carbon technologies, more than any other project before. It helped developers leverage nearly EUR 70 million, all of it injected directly into the ocean energy sector. The project tested new technology under real sea conditions and made a clear contribution to offshore renewable energy technology development. A follow-up project OCEAN DEMO was launched in January 2019 and followed in FORESEA's footsteps. It went one step further towards industrial rollout by focusing specifically on multi-machine ocean energy installations. The project BLUE GIFT in Southern Europe was inspired by FORESEA and allowed to implement the same methodology in Southern European countries.

Different Interreg NWE projects (FORESEA, OCEAN-DEMO, MEA, ITEG and OPIN) built up an important competence in ocean energy in NWE. They have demonstrated that the promotion of ocean energy development has also economic effects on the coastal regions. For example, nascent ocean energy economic clusters have already formed in each of the FORESEA participating regions. The size and weight of ocean energy devices mean that much manufacturing and assembly will take place close to where the machines will be installed. By 2050 the ocean energy sector is expected to be worth € 53 billion a year globally. This will require 400,000 jobs in Europe – many of which will be located in coastal regions. The competitiveness of ocean energy test facilities in the area will be an important competitive advantage for North-West Europe.

## **Driving Change (SO4)**

H2Share was on a mission to develop and test low-carbon transport solutions, with a focus on a 27-ton rigid truck powered by hydrogen – the first of its kind in Europe. Additionally, they had created a flexible low-energy mobile refueller. The region of North-West Europe was grappling with high traffic density and logistics activity, resulting in elevated CO<sub>2</sub>, SO<sub>x</sub>, and NO<sub>x</sub> emissions. The project held the promise of a greener and more sustainable future. H2Share's partners, including VDL, Wystrach, Colruyt, DHL, and Breytner, worked together to pioneer this hydrogen-powered truck and refueller. They were supported by partners like Hydrogen Europe, Automotive, TNO, and WaterstofNet, all of whom sought to learn and implement the project's results in future visions and plans.

On a morning in Schelluinen, the Netherlands, excitement filled the air as a 27-tonne hydrogen fuel cell rigid truck, built by VDL, prepared for its ground-breaking journey. On 1<sup>st</sup> April 2020 Breytner, a zero-emission transport provider, took the wheel. What made this event truly remarkable was not just the hydrogen truck itself but the innovative partnership which had created a low-energy mobile hydrogen refueller to accompany the truck on its journey. For three months, the truck was used in retail logistics, from restocking stores to serving as a feeder line for last-mile solutions. This collaboration was a game-changer, providing a practical solution for refuelling the truck even in areas lacking hydrogen refuelling stations.

But this was just the beginning. The H2-Share project's ambitious plan was to demonstrate the truck and mobile refuelling station at six locations across Germany, the Netherlands, Belgium, and France. The mobile refuelling station, developed by Wystrach, offered flexibility and independence from traditional refuelling infrastructure, paving the way for broader adoption. H2Share project was a catalyst for hydrogen technology projects across North-West Europe. Follow-up initiatives like H2Haul and HyTrucks aimed to scale up the use of hydrogen-powered trucks and transition from research to commercial deployment. These projects were building on the knowledge and experience gained from H2Share, furthering the cause of sustainable transport. In addition, the Interreg NWE Europe has supported seven different projects that are working on the development of new hydrogen solutions.

## **BuurtHubs – the urban mobility revolution (SO4)**

e-Mobility hubs, or eHUBS, were envisioned as on-street locations where citizens could access a diverse range of shared electric mobility options, from e-bikes and e-scooters to e-cars. These hubs were designed to offer a real alternative to private car ownership, reducing congestion, air pollution, and carbon emissions.

The city of Amsterdam, in collaboration with its partners, embarked on a journey to implement eHUBs across the city. Over the past four years, the city has witnessed the emergence of 17 BuurtHubs, neighbourhood hubs that have revolutionised urban mobility in the heart of the Netherlands. It brought innovation to Amsterdam's streets, offering green, electric alternatives to privately-owned vehicles. It supported residents to make eco-friendly choices for their daily commute. Amsterdam's eHUB project was not just about changing how people moved, but it was also about changing lives and the environment for the better. By embracing eHUBs, Amsterdam transformed its streets into cleaner, more accessible spaces, setting the stage for a sustainable future where shared and electric mobility dominated. The eHUBS project also underscored the significance of community involvement. Neighbourhood meetings became a platform for residents to share ideas and influence the locations of these hubs. This participatory approach led to greater support and engagement from the community.

The impact of Amsterdam's Buurt Hubs extended far beyond the city's borders. The eHUBS project's successes contributed to the Interreg NWE program's broader objectives. It exemplified the potential of station-based shared mobility, community engagement, and environmentally friendly transportation solutions. The eHUBS project provided a blueprint for other European cities seeking to emulate this transformative approach to urban mobility. It showcased how shared mobility hubs can thrive even in areas with limited public transport options, leading to reduced car ownership and a more efficient transportation system.

## **Closing the Phosphorus Loop (SO5)**

The year was 2016, and the approaching phosphorus (P) challenge had become increasingly evident. The nutrient essential for all life forms, was being used up at an alarming rate. Phosphorus is essential for agriculture, food security and industry, but a critical challenge for water quality and the environment. The European Union had designated phosphate rock as a critical raw material in 2014. It was by now time to explore the potential of secondary raw phosphorus, and this is where the Interreg NWE Phos4You project entered the stage.

Phos4You embarked on a mission that involved rural, urban, and port areas in the North-West Europe territories. The journey began in rural regions, where phosphorus is crucial as a fertiliser and feed additive. It is then transferred through the food chain to urban areas, home to 82% of NWE's population, where it finds its way into sewage water and waste.

In rural areas, partners focused on elimination of phosphorus from small wastewater treatment plant in order to reduce, or prevent, the eutrophication of water bodies receiving WWTP-effluent. To avoid additional waste being generated from any new process, integral solutions were developed and tested. The aim being that recovered phosphorus material would have added value, e.g. fertilising properties, that met the needs of local/regional stakeholders.

In the urban territories, the focus was reduction of the phosphorus losses induced by mono- or co-incineration of sewage sludge. Depending on the technologies applied, one or several materials may be recovered. The integration of these rather new materials to existing value chains required close cooperation, and testing, with potential users, as well as clarification of the related legal aspects. As well as optimising the technologies used to recover phosphorus from sewage sludge (EuPhoRe®, STRUVIA™ coupled with biological acidification, PULSE) and sewage sludge ashes (REMONDIS TetraPhos®, PARFORCE, Phos4Life™) local demonstrations were provided.

Phos4You gave significant importance to interacting with the fertiliser companies to foster the deployment of P-recycling. The ongoing clarification of recent changes in the legal framework was essential and mainly enabled through the cross-sectoral exchanges facilitated by the nutrient platforms at European and national levels.

AMPHORE, a follow-up project involving five water boards and 139 sewage treatment plants in Germany that facilitates a region-wide management approach for sewage sludge, targeted production and treatment of ashes of different qualities.

Based on lessons learned and experiences, the Phos4You partnership proposed recommendations for decision-makers at European and national levels, for example regarding the regulation (EU) 2018/848 on organic farming, the regulation (EU) 2019/1009 on fertilising products, the directive 86/287/EEC on sewage sludge, the Directive 91/271/EEC on Urban Waste Water Treatment and the Common Agricultural Policy. Recommendations regarding the assessment of the quality of recovered P-products targeted the EU standardisation bodies.

## Save the life of male chickens (SO5)

Ladies and gentlemen,

today, we gather not only to rewind a project but to celebrate a remarkable journey of innovation and commitment to sustainability. The Food Heroes project, a participant of the established Interreg North-West Europe programme 2014-2020, stands as a source of inspiration for all those who believe in the power of collaboration, creativity, and a shared vision for a more viable and attractive North-West Europe.

A visionary undertaking - Food Heroes was not only a project; it was a vision brought to life collaboratively. It was initiated by the partnership organisations from Belgium, France, Germany and the Netherlands, organisations, all devoted to a singular cause – the reduction of food waste in the production sector of the value chain.

For example, the project contributed to save the life of half a million one day old male chicks.

Cheers to the whole project partnership of Food Heroes that implemented and tested 17 efficient natural and material resources solutions, saved tons of fish, fruits and vegetables from being wasted, increased the value uses of 15,000 male chickens and 3,250 male goats, showcasing the path towards a more ethical and responsible food industry.

Through the successful participation in the EIP-Agri Focus Group 'Reducing Food Loss on the Farm' the initiative had also a strong impact at the EU level.

But now, let us honour the achievements and winners behind, who transformed ideas into action: One of the hallmarks of Food Heroes was its internal recognition of through the organisation of the Food Heroes Award in 2019. Nine finalists were selected from 76 nominees that came up with new market products and novel techniques in three categories. The team *Ovo* won in the category *Male Animals* with their fast-screening machine to sort one day male chicks in the egg, and *Mussella* won in the sector *Fish & Seafood* with its frozen (steam shelled) mussel products.

On this day of reliving the Food Heroes project, let's keep in mind that its impact goes beyond its closure date and this moment. It has raised awareness about the possibility to make our food value chain more efficient by reducing waste and losses in the initial phase – the production – and has thus integrated farmers and other producers in the shift towards a more circular, efficient and value-driven food sector.

Congratulations, Food Heroes, on your well-deserved recognition as an Interreg North-West Europe project: