

# **ADDRESSING CHANGE IN THE NORTH SEA REGION**

ANNUAL REPORT SUMMARY 2019





# Changing the game

The Interreg North Sea Region Programme supports transnational teams of innovators to make the region a smarter, greener and more liveable place for its 60 million citizens.

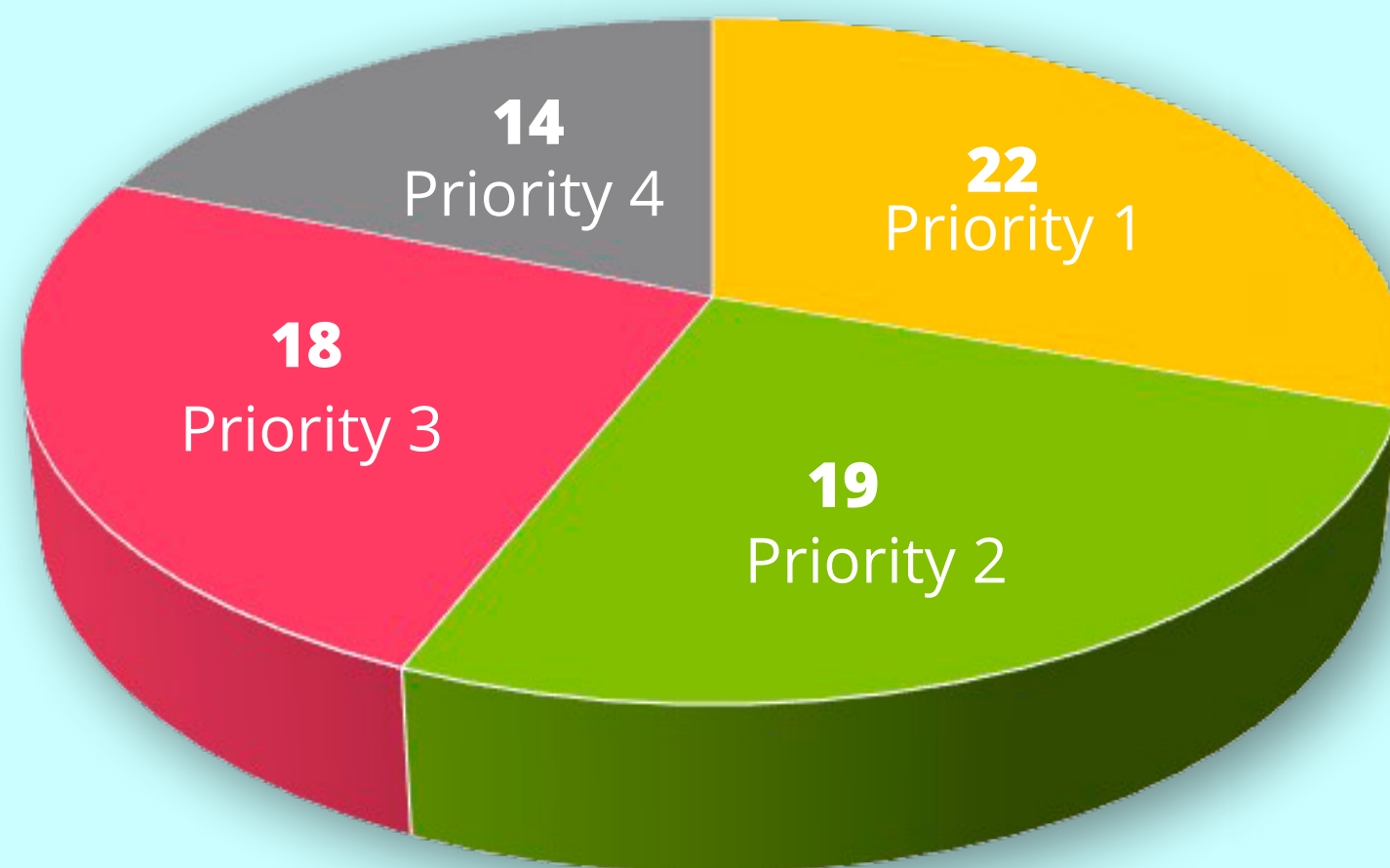
North Sea Region projects respond to changes like global warming, demographic shifts, and the rapid advancement of technology. They seek to create durable impacts by designing smart solutions that contribute to a resilient economy and provide added benefits.

By pilot testing and demonstrating solutions in real-life settings, they act as test beds for new ideas and often inspire changes in policy frameworks.



# Stacking up

Five new projects were approved in December 2019, at which point nearly all funds for the VB programming period had been allocated. The main focus of the Programme is now on supporting projects to implement their activities and capitalise on their project achievements, outputs and results.



**Approved projects**

**1** North Sea

**7** countries

**11** calls

**73** projects

**957** beneficiaries

**169** million Euro allocated  
(161 million ERDF | 8 million Norwegian funds)

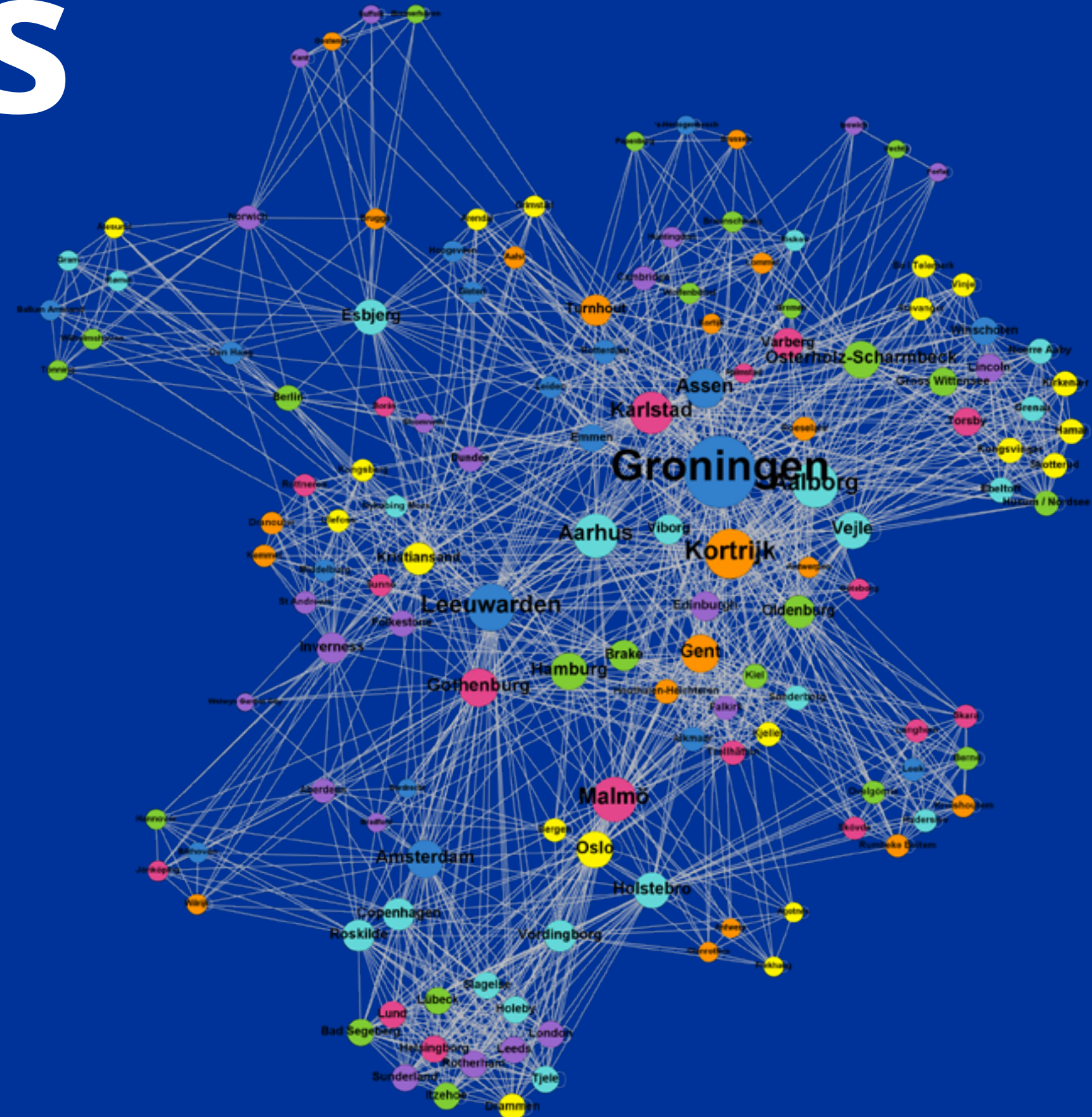


# Hotspots

For each priority, the Joint Secretariat mapped the locations of beneficiaries and the links between them in terms of project partnerships.

The resulting maps showed that:

- North Sea Region projects foster extensive co-operation between organisations across the entire region.
- Each priority has different geographic strongholds, reflecting the priorities and strengths of the participating countries.
- In addition to large cities, many smaller cities are involved. This confirms the Programme's role in fostering cohesion in the North Sea Region.



## Priority 1: Links between beneficiaries

*The size of each dot reflects the number of beneficiaries in each location as of November 2019.*



## BIOCAS bridge awarded

In 2019, the Ritsumasyt Biobridge designed by the BIOCAS project won the Dutch Circular Award and the Lighthouse Award. It was also nominated for the Infratech Innovation Award and the Dutch Building Prize.

This circular bicycle bridge is made of 100 % biobased composite material including flax and resin.



# High points in 2019



## SalFar: A royal visit

Princess Victoria of Sweden visited the SalFar project to learn about saline farming. Due to climate change and sea level rise, the ability to grow crops on saline soil is becoming important in coastal areas.



## European spotlight

SHARE-North and PARTRIDGE were both featured in the PANORAMA magazine. PARTRIDGE was also highlighted in a publication marking 40 years of the EU Birds Directive.





## How to build a resilient future

How can the North Sea Region accelerate the energy transition and build its climate resilience? The Climate Conference showcased a wealth of innovative ideas and brought together regional experts, policymakers, and youth representatives in discussions.



## A video to start you up

Inno-Quarter won first place in the North Sea Video Contest for their lively video on startups using festivals to test products and services.



Marstrand, Sweden



# North Sea Climate Conference





## 2imprezs wins the Slam!

Two young “agents of change” won the hearts of the audience at the Interreg Project Slam 2019! This project involves more than 20,000 school kids in slashing 30% of their schools’ energy use.



## It's all about cooperation

The Joint Secretariat teamed up with other Interreg programmes to present and discuss about trans-national cooperation.



# #EURegionsWeek



# Activities & outcomes

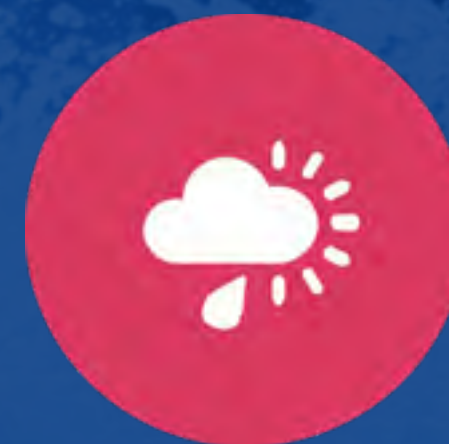
All North Sea Region projects fall within one of the Programme's four priority themes. In the following pages, you can see milestones reached and explore three projects in each priority theme.



**Priority 1**  
Thinking growth



**Priority 2**  
Eco-innovation



**Priority 3**  
Sustainable  
North Sea Region



**Priority 4**  
Green transport  
& mobility



PRIORITY 1: THINKING GROWTH

# **forging ahead together**



Partners form strong networks within selected niches. Together, they build capacities and smart solutions that bring industry and the public sector into the future.



Priority 1

# Milestones reached

**1812**



enterprises cooperating in  
knowledge partnerships

**100**



business support  
measures launched

**91**



innovation support  
measures for public  
service delivery





# PERISCOPE





Forging innovation partnerships for blue growth in the North Sea Region

## THE CHALLENGE

PERISCOPE seeks to establish a permanent innovation ecosystem in the North Sea Region. The aim is to foster transnational innovation partnerships for sustainable business development and exploit emerging blue market opportunities.

## HIGHLIGHTS

- Launched the Ocean Digital Innovation hub Network (ODIN), which will provide scalable and replicable market-driven support to the development of new industrial DigiTech value chains with applications in the blue economy.
- Explored the emerging business opportunities for decarbonising the North Sea through offshore vessel charging stations, digitalisation, smart inspection and maintenance.
- Conducted a survey in the North Sea region's blue economy in order to better understand the climate for business innovation.
- In its new national Ocean Strategy, the Norwegian government highlighted PERISCOPE as an example of best practice.

 15 partners  
 Denmark, Germany, Norway, Sweden, the Netherlands, the UK  
 €4.1 million total budget | €1.5 million ERDF | €550.000 Norwegian funds  
 <https://northsearegion.eu/periscope>







# In For Care





Informal caregivers looking after others provide vital services. But who cares about them?

## THE CHALLENGE

Relatives, neighbours, friends and volunteers: People who care for others are putting in a lot of hard work, yet this is rarely acknowledged. Due to societal trends, pressures on these caregivers are mounting. In For Care supports informal carers and spotlights their role in society.

## HIGHLIGHTS

- Launched the FRIDA app in several Norwegian municipalities, facilitating communication with volunteers.
- Developed VR simulations as a learning tool for volunteers.
- Organised fun activities and free gym subscriptions for informal carers in Hoogeveen, the Netherlands.
- In Aalst, Belgium, a traveling café for informal carers was launched, enabling them to meet and chat. Turnhout trialled ways to foster community, such as “neighbourhood sports”.
- 74 organisations adopted solutions developed by the project.
- Achieved 10 policy changes to better meet the needs of informal carers across the North Sea Region.

 16 partners  
 Belgium, Denmark, Norway, Sweden, the Netherlands, the UK  
 €4.5 million total budget | €1.5 million ERDF | €680.000 Norwegian funds  
 <https://northsearegion.eu/in-for-care>



## Getting to know your neighbour

In Turnhout, Belgium, photos and short personal stories of 50 local citizens were shared on social media and displayed in shop windows. This enabled people in the neighbourhood to start new conversations.



## Pilot gardening

In one of the pilots, residents from four neighbourhoods come together in one area to do joint gardening and get to know each other.





# Inn2POWER

Supporting SMEs to innovate and drive the expansion of offshore wind energy

## ■ THE CHALLENGE

The North Sea offers vast resources for expanding offshore wind power as part of the green energy transition. However, large-scale expansion requires the industry to collaborate and innovate at unprecedented levels. Inn2POWER brings together offshore wind clusters in the North Sea Region to build innovation capacity and facilitate SMEs to enter offshore wind supply chains.

## ■ HIGHLIGHTS

- Mapped 2,000+ companies for the Inn2POWER Directory.
- Organised a series of 12 B2B matchmaking events with over 1,000 participants including 500 SMEs.
- Launched a Networking Tool for offshore wind cluster managers; the tool has so far identified 2000+ collaboration opportunities in the North Sea Region wind industry supply chains.
- Launched the Offshore Wind MBA designed for SMEs in offshore wind energy supply chains. 75 students participated in the pilot.
- 1000+ youngsters participated in the Offshore Wind Escape Room. This led 50 organisations to join forces transnationally.



12 partners



Belgium, Denmark, Germany, the Netherlands, the UK



€5.6 million total budget | €2.8million ERDF



<https://northsearegion.eu/inn2power>



The networking tool is really good at identifying potential partners for us. And the crucial thing is that we meet the relevant partners in real life.

- Sales manager M. Winther Møller, BIC Electric





## PRIORITY 2: ECO-INNOVATION



# **green means business**

Resource efficiency, circular concepts and low-carbon products: Partnerships help enterprises and local communities to join the green economy value chains and bring down carbon emissions.



Priority 2

# Milestones reached

**156** 

green services, processes  
& products piloted







# INDU-ZERO

A smart factory blueprint for cost-effective energy renovation of buildings

## THE CHALLENGE

Energy efficiency of buildings is key to meeting the EU climate goals - a staggering 40% of European carbon emissions come from buildings.

In the North Sea Region, 22 million houses built between 1950 and 1985 are causing 79 Mtonnes CO<sub>2</sub> emissions per year. However, energy renovation is currently too expensive to be rolled out for the majority of the relevant buildings.

INDU-ZERO is taking a bold approach to tackling this challenge: The project is preparing a blueprint for smart factories delivering net zero energy renovation packages at industrial scale and at half the cost. The goal is to quickly provide sufficient capacity to realise affordable energy renovation at scale.

- 15 partners
- Belgium, Germany, Norway, the Netherlands, Sweden, the UK
- €4.4 million total budget | €2.0 million ERDF | €125,000 Norwegian funds
- <https://northsearegion.eu/indu-zero>

## HIGHLIGHTS

- Developed concepts for the production of walls, roofs, logistics, and factory industrial processes. The solution includes the ability to choose customised cladding.
- Selected three renovation packages covering terraced houses, detached houses, and apartment buildings.
- The Dutch housing association Domijn is set to trial and showcase the first renovation packages in 2020, followed by similar trials in the partner countries.
- INDU-ZERO met great interest at European conferences including Housing Europe and Sustainable Built Environment (SBE). They joined a meeting of the EU Thematic Group 1 on Construction in November 2019.
- In 2019, the project website had 15,000 page visits, indicating a high level of stakeholder interest.







# Carbon Farming

Agricultural soils can store huge amounts of carbon. The challenge is to make it profitable.




## THE CHALLENGE

Healthy soils can hold vast amounts of carbon. Special farming techniques, such as no tillage, support carbon sequestration (CS). However, farmers need incentives to use them.

Carbon Farming validates viable business cases for CS and explores options for third parties to compensate their CO<sub>2</sub> footprint. The pilots are expected to improve soils and lock 10,000 tonnes of CO<sub>2</sub> in farmland soil.

## HIGHLIGHTS

- Over 500 farmers took part in a survey to gauge their knowledge.
- Produced a fact sheet explaining four business models for farmers using CS techniques.
- Presented the project at numerous events. At the world's leading trade fair for agricultural technology, AGRITECHNICA, the project hosted a highly popular conference attracting 150+ participants eager to learn about climate-friendly farming.

 7 partners  
 Belgium, Denmark, Norway, the Netherlands  
 €3.1 million total budget | €1.3 million ERDF | €205,000 Norwegian funds  
 <https://northsearegion.eu/carbon-farming>



**It is good to see that our fertile soil in Zeeland also provides a breeding ground for innovation and climate solutions -**

Jo-Annes Bat, board member province of Zeeland and Joris Baecke, farmer and board member ZLTO







# COBEN


Unlocking the power of civic energy is key to accelerating the green energy transition.

## THE CHALLENGE

Local communities and businesses can become the key drivers of energy transition if they choose to engage in and benefit from locally produced green power. COBEN has developed the Civic Energy Cycle to build community-driven energy supply chains.

## HIGHLIGHTS

- Inspired the Regional Energy Strategy of the province of Drenthe and community-led Local Energy Plans in Scotland.
- Dutch Emmen Municipality adopted a spatial planning directive stipulating 20% citizens' ownership of new solar installations.
- The COBEN business models generated interest with third parties beyond the pilot initiatives.
- In Landkreis Osnabrück, Germany, three new district heating networks were built enabling SMEs to market surplus heat. The Eeklo Heat Network in East Flanders is projected.
- 429 home energy renovation schemes adopted in Ringkjøbing-Skjern, Denmark. Savings are projected at 9.4 GWH/year.
- Helped 58 communities reduce CO<sub>2</sub> emissions. In Østfold alone, 16.4 million kWh/year of fossil energy has been replaced.

 11 partners  
 Belgium, Denmark, Germany, the Netherlands, Norway, Sweden, the UK  
 €7.5 million total budget | €3.5million ERDF | €226,000 Norwegian funds  
 <https://northsearegion.eu/coben>



## 3,000 STAKEHOLDERS

By demonstrating workable and flexible solutions, COBEN has built a strong network of over 3,000 stakeholders engaged in civic energy.



## PRIORITY 3: SUSTAINABLE NSR



# **a liveable place for all**

Pollution, climate change, biodiversity decline:  
Innovators are involving citizens to tackle  
environmental risk and enhance liveability.



Priority 3

# Milestones reached

**24** 

Climate adaptation  
solutions demonstrated



**48**

Sites managed using  
new solutions





# NorthSEE

Transnational cooperation and knowledge sharing improve joint spatial planning in the North Sea.





## ■ THE CHALLENGE

With its large fish stocks, energy resources, and blooming tourism and trade, the North Sea holds a vast potential for blue growth.

However, using space for one purpose may preclude another. In addition, the North Sea is home to a wealth of marine wildlife which is under pressure from human activity. Reconciling all the interests is a complex puzzle that requires thorough analyses, smart planning and cooperation between the countries sharing the North Sea.

NorthSEE brings together governmental and regional agencies, academic institutions, and other key stakeholders of maritime spatial planning (MSP) in the North Sea.

The aim is to jointly explore and align on sustainable future pathways concerning three core topics: Shipping, energy and the environment.

-  14 partners
-  Denmark, Belgium, Germany, Norway, Sweden, the Netherlands, the UK
-  €4 million total budget | €1.9 million ERDF | €67.000 Norwegian funds
-  <https://northsearegion.eu/northsee>

## ■ HIGHLIGHTS

- Published almost 20 reports providing analysis and recommendations on transnational spatial planning, shipping trends and routes, energy policy trends and infrastructure, connectivity of **marine protected areas**, and more.
- **Topics explored in 2019** include e.g. a comparative analysis of spatial planning designations in the North Sea; offshore grids and electricity interconnectors linked to the growth in offshore windpower; and the role of regions in MSP.
- Organised the Connecting Seas Conference in Hamburg together with the Baltic Sea Region project BaltLines, attended by 250 delegates.
- Established collaboration with other EU-funded projects, e.g. Baltic LINES (on MSP in the Baltic Sea) and SEANSE (on Strategic Environmental Assessments in the North Sea).





# FRAMES

A layered approach to managing flood risk and keeping communities safe

## THE CHALLENGE

The effects of floods increase every year in the North Sea Region, threatening multiple core functions of society. There will never be enough resources to protect every single citizen from flooding, but if we combine resilience measures smartly, we can minimise impact. No single organisation or country has the knowledge to develop sustainable solutions for these challenges alone.

## HIGHLIGHTS

- Applied the Multilayer Safety approach in 15 pilot sites across the North Sea Region.
- Raised awareness of decision makers and authorities about the need to minimise the effects of floods.
- Developed policy recommendations to implement the Multilayer Safety approach.
- Presented policy recommendations to the EU Floods Directive Working Group.
- Produced tools for community resilience self-assessment.
- Produced risk and hazard maps for emergency planning.
- Produced education packages for schools and stakeholders.



17 partners



Denmark, Belgium, Germany, the Netherlands, the UK



€6.9 million total budget | €3.4million ERDF



<https://northsearegion.eu/frames>

LAYER 1

Flood prevention



LAYER 2

Spatial adaptation



LAYER 3

Emergency response



LAYER 4

Resilient recovery







# Sullied Sediments

On guard: Watching out for EU Watchlist chemicals in our waterways

## THE CHALLENGE

Emerging pollutants found in waterways may threaten the health of people and ecosystems. Yet little is known about them. The project develops tools to assess, treat and prevent contamination of aquatic sediments, while volunteers are trained to gather data.

## HIGHLIGHTS

- Completed extensive sampling across the North Sea Region.
- Introduced a 'dipstick' for volunteers to measure phosphate levels in fresh water, and the RiverDip app transferring the data to an online map.
- Launched tools helping water managers to better understand the effects of pollution and select the best techniques for treating polluted sediments.
- The BBC featured the project's volunteer sampling campaign.
- The project's ground-breaking use of low-cost pollen and spores technology to clean contaminated water was presented at the American Chemical Society and featured in Forbes Magazine.



13 partners



Belgium, Germany, the Netherlands, the UK



€4.0 million total budget | €2.0million ERDF



<https://northsearegion.eu/sullied-sediments>





## PRIORITY 4: GREEN MOBILITY

# **moves towards carbon zero**



Transport stands for roughly 25% of carbon emissions in Europe. How fast can we move towards net zero carbon? Experts and professionals from across the region are jointly putting ideas to the test.



Priority 4

# Milestones reached

**95**   
New/improved  
transport solutions







# HyTrEc2

Transnational teamwork to build a green hydrogen transport economy in the North Sea Region

## THE CHALLENGE

Transport accounts for around 25% of Europe's greenhouse gas emissions. More than 90% of all transport is oil-based. Switching to clean transport fuels is therefore key to meeting the goals of the European Green Deal.

Green hydrogen - produced from renewable energy sources like wind or solar power - is a promising alternative. However, expanding the green hydrogen sector requires technological development, supply side skills and storage methods.

HyTrEc2 explores how to produce, store and distribute renewable energy based hydrogen for fuelling innovative hydrogen vehicles, including vans and waste trucks. By offering training for businesses interested in entering the hydrogen supply chain, the project is stimulating the hydrogen economy.



8 partners



Germany, Norway, Sweden, the Netherlands, the UK



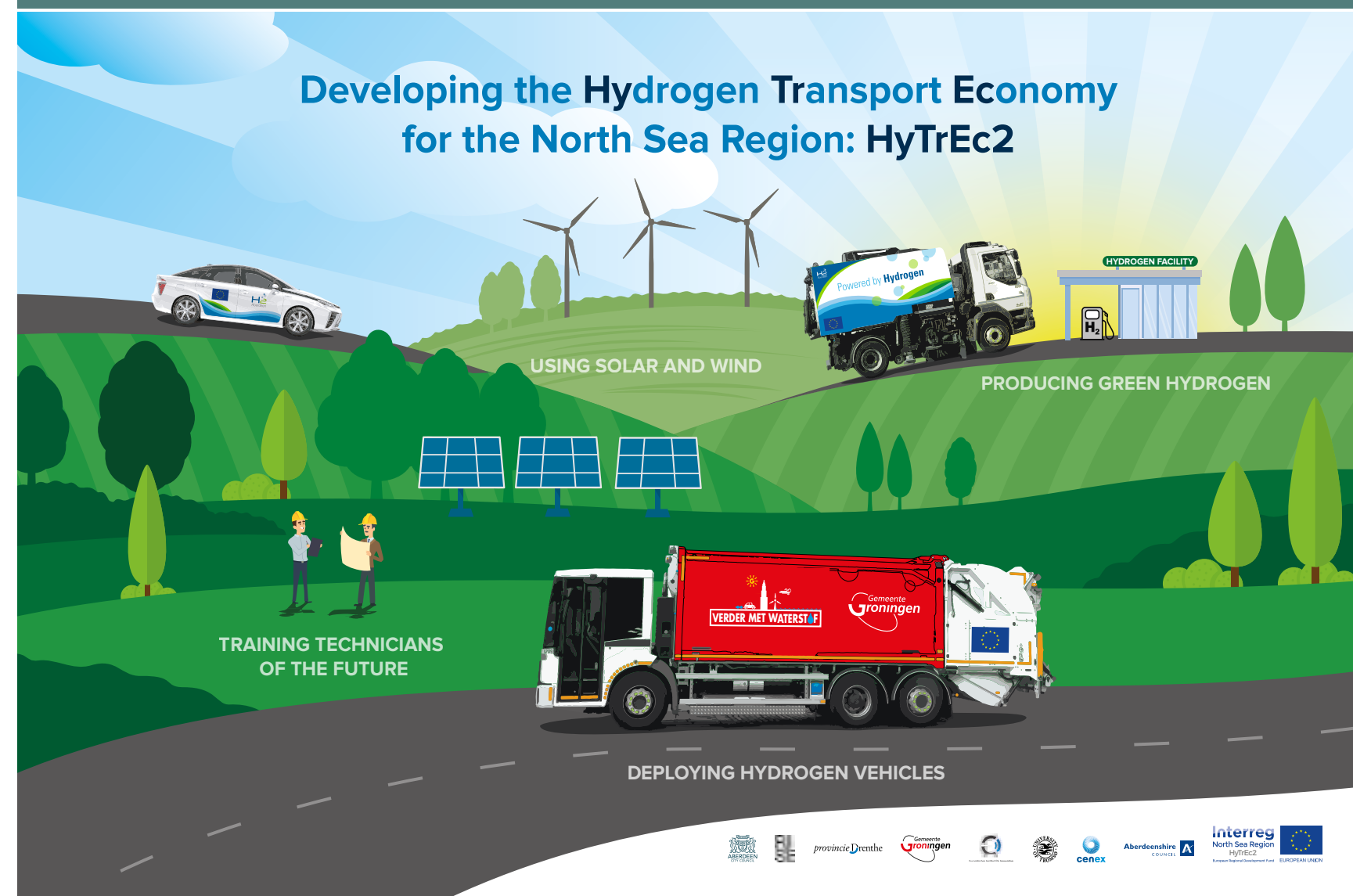
€5.2 million total budget | €2.2 million ERDF



<https://northsearegion.eu/hytrec2>

## HIGHLIGHTS

- The project's work on green hydrogen generated interest among national energy suppliers in Scotland, resulting in a spin-off project with the UK government.
- Carried out simulations of an innovative forklift.
- Deployed and trialed several hydrogen cars and vans in different parts of the region. Groningen's HyTrEc2 electric hydrogen waste trucks have already been replicated for another Interreg project.
- Initiated hydrogen training for supply chain companies and car mechanics.
- Based on their work within HyTrEc2, Aberdeen City Council won the 2019 Scottish green energy awards and was also selected as Local Authority Fleet Operator of the Year.
- HyTrEc2 partners Groningen and Drenthe entered into partnership with the EU identifying Northern Netherlands as a Hydrogen Valley to be delivered by 2025.







# SURFLOGH

Getting there: Less trucks on city roads through smart urban logistics

## ■ THE CHALLENGE

Urban residents need many goods delivered from outside the city. But diesel trucks cause noise, congestion, traffic danger, air pollution, and - not least - carbon emissions. To tackle this problem, SURFLOGH is setting up smart hubs, from where goods are brought into the city via low-carbon transport methods.

## ■ HIGHLIGHTS

- Launched a large-scale test combining a city hub with cargo bike B2B and B2C package delivery in the Dutch city of Groningen.
- Introduced the Good Goods concept in Borås, Sweden. This involves a terminal coupled with an electric delivery van.
- In Mechelen, Belgium, a locker system was installed for 24/7 pickup in response to growing e-commerce.
- Conducted research for business modelling applicable to sustainable logistics.
- Piloted e-cargo bike delivery concepts in Edinburgh, Scotland.
- Organised hackathons in all partner cities where students developed innovative ideas for green city logistics.



6 partners



Belgium, Sweden, the Netherlands, the UK



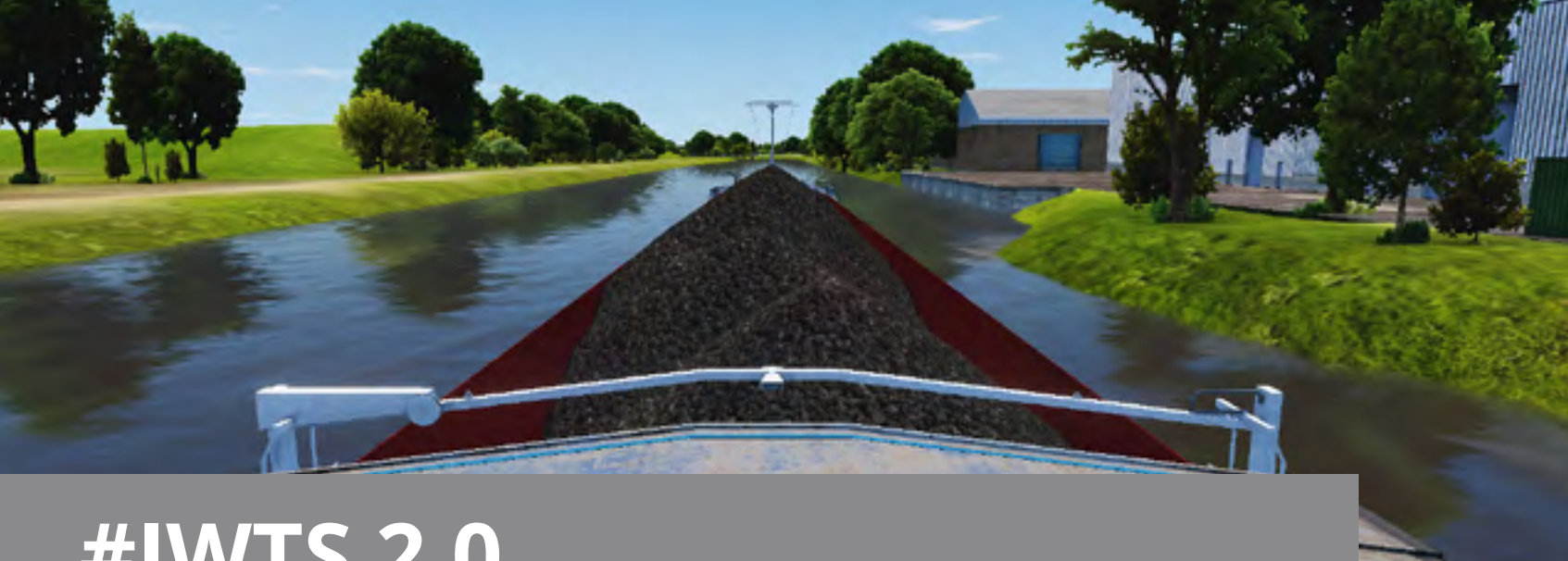
€2.7 million total budget | €1.35 million ERDF



<https://northsearegion.eu/surflogh>







## #IWTS 2.0

Making the green choice easier: Identifying and overcoming barriers to river transport of goods

### ■ THE CHALLENGE

Transport of goods happens mainly via trucks travelling highways and roads, a transport mode with a heavy carbon footprint. Meanwhile, smaller inland waterways remain under-utilised although transport by barge is a far more climate-friendly option.

Challenges to realise a major shift in freight shipping from roads to waterways include a lack of know-how in the logistics chain, specific problems of transshipment (moving the goods from one mode to another), and smaller waterways lacking formal classification that would allow standard vessels to use them.

#IWTS 2.0 promotes a modal shift of freight transport from roads to inland waterways by building capacities and exploring solutions to the main technical and administrative issues.



10 partners



Belgium, Germany, Sweden, the Netherlands, the UK



€3.4 million total budget | €1.7 million ERDF



<https://northsearegion.eu/iwts20>

### ■ HIGHLIGHTS

- Published the #IWTS Transshipment Manual providing guidance on switching from other transport modes to inland waterways. The manual was received with great interest in the logistics community.
- Thanks to targeted stakeholder meetings within the port of Drachten area, freight owners discovered inland waterway transport as an opportunity leading to a modal shift from road to water.
- Euro Class II standard barges cannot sail on the Aire & Calder, Bullholme Lock sizes prevents this. A feasibility design study for the extension of Bullholme Lock is in progress; the lock was drained, and laser, ground, chamber surveys of the lock are done.
- Curriculums for students are developed and piloted in vocational training at operator and management level, especially for navigating on smaller waterways.
- The Full Mission Simulator in Harlingen is used to simulate potential modal shifts in the city of Leeuwarden to identify opportunities and hindrances.



**Modal shift is a mind shift**  
- Dr Lars Stemmler, bremenports





# North Sea Region projects

## PRIORITY 1

BLING | CORA | CC  
COM<sup>3</sup> | CUPIDO  
EXSKALLERATE | FBD  
Growin 4.0 | In For  
Care | Inn2POWER | I2I  
Inno-Quarter | Lean  
Landing | Northern  
Connections |  
NorthTick | Like!  
PERISCOPE | PROWAD  
LINK | REFRAME  
RIGHT | SCORE  
SHINE



## PRIORITY 2

2imprezs | ACCESS  
BIOCAS | Carbon  
Farming | Circ-  
NSR | COBEN  
DecomTools | DUAL  
Ports | EMPOWER 2.0  
| INDU-ZERO | NON  
STOP | OESA | ProCirc  
Salfar | SCALE-UP  
SOILCOM  
SMARTGREEN  
Stronghouse | WASP



## PRIORITY 3

BEESPOKE | BEGIN  
BWN | C5a  
CANAPE | CATCH  
FAIR | FRAMES  
GEANS | IMMERSE  
Jomopans | NorthSEE  
NSW | NuReDrain  
PARTRIDGE | Sullied  
Sediments | TOPSOIL  
WaterCOG



## PRIORITY 4

#IWTS 2.0 | ART-  
Forum | AVATAR  
BITS | G-PaTRA  
HyTrEc2 | MOVE  
North Sea CONNECT  
PAV | SHARE-North  
SURFLOGH  
SEEV4City | Stronger  
Combined | ZEM  
Ports NS



*To learn more, find the project websites at [northsearegion.eu](http://northsearegion.eu)*



# Join us for the journey

Follow our Programme and the North Sea Region projects as they gain momentum and deliver exciting results:

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Help us shape the next North Sea Region Programme! Your inputs are highly appreciated. You can follow the process on our website, newsletter and social media.

**>> Join our Stakeholder Exchange Group on LinkedIn**

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