TOWARDS A RESILIENT NORTH SEA REGION

RESULTS AND LESSONS LEARNT

Interreg North Sea Region RIGHT
European Regional Development Fund
EUROPEAN UNION

RIGHT
RIGHT SKILLS FOR THE RIGHT FUTURE

Results and Lessons Learnt

An Interreg North Sea Region Project

RIGHT Project

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Contributions from the RIGHT Partners

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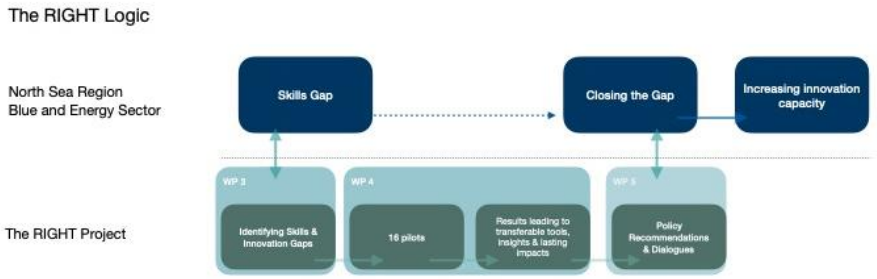
The RIGHT project, part financed by the Interreg North Sea Program, intended to contribute to growth in the North Sea Region by connecting smart specialization strategies to human capital and skills development of the workforce in order to support competitiveness. The purpose of RIGHT has been to address the challenge of bridging the gap between the skills of the workforce and the need from the industry to innovate and raise competitiveness. In the RIGHT project, the focus was specifically on how to bridge this gap in the emerging and fast changing skills environment of the energy and blue sectors, and the need of industries to innovate and raise competitiveness. As RIGHT is a transnational project, the objective has also been to increase collaboration and learning between regions.



RIGHT started out by mapping the challenges of the skills and innovation gaps in the North Sea Region within the framework of the third work package (WP3). The aim was to identify skills, design of education curricula and training systems needed for industrial sectors in transition, both in the present and future, and for Smart Specialization Strategies. WP3 identified gaps in the partner regions through desk research, mapping, interviews and collaboration with business and clusters, Selected SMEs in all partner regions were also asked to identify the challenges they faced and what was needed to innovate. Seven regional reports and a trans-regional report were produced as a result. The regional reports served both as an audit of the region for their key regional actors as well as introductory briefs to the seven participating regions to each other. The reports provide insights on the participating regions in terms of their regional innovation ecosystems, including labour market and education sector, with a specific focus on energy and/or blue sectors. These reports are available on the project website.

Through the regional innovation ecosystem audits, RIGHT partners discovered they faced similar overall challenges despite national or regional borders. This created common interests and stronger partnerships.

The next phase of the project was WP4 which identified and launched local pilot initiatives. Through local cooperation, partners facilitated pilots, courses and workshops aligning initiatives to meet the needs of the business and local communities.

The COVID-19 pandemic was a major shock deeply impacting people, enterprises, public authorities, municipalities, and regions. It impacted the pilots and decimated physical collaborations and meetings both within and across regions. There were therefore delays and adaptations to the pilots. The pandemic highlighted the urgency of upskilling, reskilling, and increasing innovation capacities of individuals, businesses, and regions but also of the interconnectedness of skills, innovation and the resilience agenda. There was a clearer understanding for the need to speed up digital transitions, to address social and economic inequalities and to develop new forms of adaptability to deal with the multiple and new challenges arising. The power of collective efforts was also reinforced during the pandemic and the more recent Ukrainian war.

The final part of the RIGHT project was the policy work package (WP5) in which lessons learnt from the project were drawn up and then captured in this and other documents. The work package 5 also included various regional and transnational seminars and meetings to discuss and reflect on the lessons learnt in the pilot activities and of recent developments. A separate policy document has been developed to discuss in more depth the overall lessons learnt for the partners and the policy implications for the project area.

This report will focus on individual partner regions, their contexts, pilots and lessons learnt in the next chapter.

All regions carried out pilots to meet skills and innovation gaps in collaboration with local stakeholders. Many of these initiatives were facilitated aiming to understand their contribution to skills and innovation development and in the process connect or strengthen collaborations as part of longer-term efforts to solve the skills and innovation challenges.

Inputs for this part of the report has been based on documentation on pilots, evaluation reports, partnership meetings and the regional and transnational report. Partners were also asked for additional inputs and validation.

Antwerp

There is a mismatch in the Antwerp port region between job opportunities and the available workforce, particularly, amongst unemployed young people in the Port of Antwerp area. There is a need to inform, sensitize and enthuse young people to strengthen local support for the port area (maritime, logistics, industry) and spark their interest. A balance between economic development and well-being of employees is an important tenet in initiatives taken. Three pilots were undertaken and are described below.

Pilot: Port Chances

The project developed a gamified mini assessment (also called Port Chances) for students between 16-18 years of age and was played on the premise of the participating companies in the port of Antwerp (maritime, logistics and industry). More specifically competence games linked to the activities that take place in the company. The games were also linked to competence profiles of actual jobs within the company. Different commands had to be fulfilled in line with specific competences needed in the participating company. Reportedly, the games resulted in a working concept that was appreciated by the students, the schools, and the companies. The projects managed to present a method that contextualized learning for the students with links to the company and its specific activities. The companies themselves saw value in the closeness of the game/activity to the company's business and the schools appreciated the fact that the project managed to achieve goals that cannot be obtained in a regular classroom. Consequently, applying the games as a method managed to raise awareness among students about necessary competencies, different study fields, future job opportunities on the labour market, company culture and

specific job needs. One reported outcome of the pilot project was that elements from the game were successful in getting its users to understand a company and its activities, which motivated a similar gamified setup in a follow-up pilot, where an economic card game was used parallel with tailor made company visits.

Pilot: Port introduction game, Port Pro/Port Academy

With the pilot Port introduction game (economic card game Cardgo), young people became aware of job opportunities or study fields that lead to jobs in the POA area. The result of the pilot created an economic card game, Cardo, accompanied by a website www.cardgo.be with learning materials, instructions for teachers (how to play the game and how to make use of the material in the lessons/curriculum) and a web-based application http://spel.cardgo.be. Cardo was used in parallel to tailor made company visits. Due to Covid-19, it was released as a stand-alone game and not as an introductory lesson package prior to a port excursion.

The game methodology was applied to develop a business model that innovates the learning process where students get to know a company and its activities. It has also served to adapt the role of the supervisors in a meaningful way. Games as a methodological framework in the two pilots, provided valuable pedagogical content. This, in turn, has caused a reciprocal commitment and enthusiasm for the purpose of the game and, in extending the pilot project. This highlights the usefulness of gaming methodologies in the context of developing business models for skills.

Pilot: Triple E (Entrepreneurs – Education – Empowerment)

There is a lack of technical skilled staff in the region of Antwerp and the Port of Antwerp. The purpose of the pilot was to train everyone who was interested/motivated and willing to work as a mechanic/electromechanics (vocational training, level 3 – end secondary school). The goal was to provide an accustomed curriculum, tailored to the learner (start with intake: needing basic skills, specializations, learning guidance, learning on the work floor, in need of qualification of secondary education, during daytime and/or in evenings). Within the framework of the pilot, a centre for adult education under the authority of Antwerp delivered the adult education programme. Here, hybrid learning was implemented to provide employees with certifications,

which lead to increased ability to innovate and the opportunity to recruit and retain certain skills.

Lessons learnt for the region

It is important to show young people jobs and the necessary skills to perform the jobs, by letting them do activities linked to the jobs and skills. It works far better than telling them about it or showing them a film or other materials. It can be done by rebranding education, making it closer to workplace and make learning more attractive. It is also important to remain in touch with the need of teachers and the real life on the work floor in every educational centre. The pilot results show the importance of promoting technical fields of education and working in technological environments, by focusing on innovative, dynamic, and problem-solving character of technical profiles, instead of focusing on the nature of the education.

Partnerships and collaborations with SMEs are important for more insights into skills gaps because companies can explain which skills are really needed in the workplace. The results suggest stimulating enterprises to invest in dual learning in collaboration with adult education in order to offer opportunities to their own personnel, reorient their own personnel within their company, acquire the necessary recruitment of personnel, and be able to innovate.

Vestland

The skills gaps that were identified at the regional basis correspond with the future plans of regions' SMEs. Digitalization and ICT skills are often cited as lacking in the current and future workforce and amongst school leavers. The challenge is to be able to educate the workforce and school leavers quickly enough and in the right numbers in order to meet the immediate and future challenges industry is facing. In addition, there is a need to develop mixed skills sets amongst employees. Companies need employees who can be adaptable and flexible so that they can carry out different tasks in different parts of the organization in order to prepare workers for both structural and cyclical economic changes.

The lack of a culture of entrepreneurship is also seen as a barrier for future regional growth. This kind of culture-building needs to be nurtured and introduced at early education phases with continued focus throughout schooling. There is also currently a

specific need for certain technological services and skills connected to fast-moving innovation within aquaculture. In addition, there is a need to keep a continuous focus on innovation and technological development. The region has recent experience with the need to turn around its industrial focus and create technology crossovers during the recent swings in the oil price which had a negative effect on the industry base in Vestland. It is important to use this experience and to examine which mechanisms have worked best and how they can be adjusted to the current climate, in order to build a robust industrial base.

Mongstad

The Mongstad pilot mapped adaptability and motivation skills of employees and management in SMEs in the oil and gas sector in the green transition process. Together with already completed mapping and analyses of which specific green and blue forms of energy the oil refinery should focus on, a focus on competence development will complete the knowledge base in relation to the ongoing restructuring process.

The analysis shows at a general level that the management will need to strengthen their adaptability and innovation competences in order to be able to better meet the external and internal requirements when adjusting to a green shift. In several of the companies, employees showed clearer qualities and motivation in these areas than the management team.

This is the first pilot project with focus on mapping adaptability and motivation skills of employees and leaders in the oil and gas sector in the green transition process. Analysing these factors will be just as important as deciding which green production areas the clusters will focus on. The desire for this pilot has been based on the need to complement the existing knowledge base and scenario analyzes for the county, region, municipality and for the Mongstad cluster, Vestland, with its focus on employees' willingness and skills to meet the green shift.

RAS (Recirculating aquaculture systems)

The dual objective of sustainable aquaculture, i.e., to produce food while sustaining natural resources is achieved only when production systems with a minimum ecological impact are used. RAS technology provides opportunities to reduce water usage and to improve waste management and nutrient recycling. The target of this pilot was mainly small and medium sized

businesses which have a skills gap in RAS-technology, and the expected outcome was a higher level and multilevel set of skills in this new technology for the fish farming industry. The goal was to reduce the skills gap within the aquaculture sector through developing and implementing a flexible educational program for RAS-technology.

The pilot met the need for competencies which are in high demand. The analysis of the results showed an upskilling of employees working in the seafood industry in relation to new technology (Recirculating aquaculture systems). It can be difficult for SMEs to facilitate further education for employees, and the pilot made it possible for SMEs to upskill employees in combination with work. The modules were accredited by NOKUT, The Norwegian Agency for Quality Assurance in Education, as part of the pilot.

Lessons learnt for the region

Vestland clusters are focused on the blue and energy sectors. Skills are a high priority for the clusters and there is cooperation with the regional government on skills at technical vocational level as well as at higher education levels. Competence will be a key factor in the green shift. There will probably be a shortage of relevant competence in the future. High wage costs and lack of competence and motivation, insecurity and instability will be major risk factors for the companies in the uncertain time they are in. Therefore, companies must ensure that they get the employees on the team by giving them competence development, security, and trust. Lifelong Learning as part of the skills policy needs to be part of regional strategic agenda.

The results point to the need to support higher VET providers in developing shorter courses and to focus on higher competence in science for pupils in lower VET.

Skåne

In 2019, Skåne developed a new innovation strategy, Skåne's innovation strategy for sustainable growth, which clearly focuses on advanced materials and the manufacturing industry. This is an area of strength in Skåne, but the strategy also highlights the lack of competence as a major, future challenge. The manufacturing industry is in an ongoing transition from unskilled to skilled qualified jobs. The number of employees is decreasing even as companies in the industries are looking to

hire. An important explanation is that companies purchase various services from external companies. At the same time, many companies are investing in various forms of robotization, automation and digitization, and are hiring people with new types of skills. There are indications that companies have problems attracting and recruiting to the industry and the need for people with technical training will increase in these companies. When the lack of competence also risks hampering the innovative power in companies within an area of strength that is important to Skåne, there is every reason to try to identify ways to work more strategically with business development, innovation, and the future supply of skills.

Throughout participation in the Interreg project, the region Skåne has worked with two closely connected pilots, with the potential of narrowing the gap between SMEs and the existing system of education and training.

Mind the Gap

The purpose has been to develop a method of mapping skills needs and a digital tool that can make it easier for SMEs in the manufacturing industry to manage their long-term skills needs. Mind the Gap is a workshop tool, a material that will address the skill gaps facing SME manufactory companies in a long-term perspective.

Mind the Gap has been a support for companies that want to develop their business and get a clearer picture of what skills are needed along the way. It is a digital tool, based on a simple and user-friendly method, connecting the company's business strategy and the need for the right skills in the short and long term.

Inventory of Competence

The purpose of the pilot has been to test an inventory of competence through validation (baseline measurement) as a way to highlight the lack of skills and ensure the future skills of employees in industrial SMEs. The pilot involves looking at a group of people at a company, conducting a validation of this group, mapping what skills they have and comparing it to the future needs that the companies have.

A new value chain of actors has been created through the pilot, which has contributed to new ways of working with inventory of competence through validation in Skåne. This can later be scaled

up and disseminated nationally and internationally. They tested whether the validation test could be more attractive by using an already existing infrastructure in local learning centres and, even with certain challenges, it has proved to be a viable way.

As part of a new way of working and a new business model at the regional level, this pilot has been brought together with the other Scanian pilot Mind the Gap. Separately, these are important tools to use, but together in a chain, it becomes much stronger and more attractive.

Lessons learnt for the region

The project owners for the pilots realized that if the pilots where to be intertwined and working with the tools from a binary symbiotic logic, it would emanate in an even more efficient business model that is transferable. Thus, realizing the complementary approach of helping a company to identify its competence needs based on its business goals, combined with support in the continued work of finding the right competence resulted in a partnership that creates favourable synergies. They learnt from a steppingstone approach. Each stakeholder has their own learning process. This will take time, but also offers the opportunity to learn from one project and bring that to other projects that are started. So, benefits are far from limited to this project and expand beyond.

The pilot projects Mind the Gap and Competence Inventory have together strengthened and accelerated the development process of a new partnership in Scanian industry. It has also contributed to a new regional approach when it comes to small Scanian industrial companies' needs assessment and strategic competence supply. New partnerships, new ways of working and initiatives that strengthen employers' ability to adapt lead to important conclusions that will have a significant impact when the Smart Specialization Strategy is revised.

The project owners recommend that the new partnership in Scanian industry continues to use Mind the Gap and actively work with skills inventory. They also recommend that other industry and cluster organizations add support in the use of Mind the Gap as a new offer to their members and that they in various ways continuously try to work with skills inventory. Finally, they recommend that other regions in Sweden and Europe test the digital tool Mind the Gap.

The findings and learnings from the pilot will lead to new recommendations in the region's revised smart specialization strategy. Mapping the skills gap of SMEs must be based on their

strategic business plans, not on projections based on present skills needs.

Vordingborg

There is little to very low technological orientation in the municipality and few companies that operate in the IT field. There are also few people with higher technical education or university level education. There is also the sentiment that the region is not proactive and somewhat conservative in this field particularly in wind and blue energy sectors. Another issue is that there seems to be a lack of interest in the field of blue energy or windmills from the local population due to either the work type or hours. This is also compounded by the good welfare system that makes the jobs available not as attractive and some companies have resorted to employing foreign individuals.

As the municipality does not have a university, it is difficult to pinpoint their engagement, but there is need for more engagement with students. There is also a need for up-skilling current staff in SMEs to be able to support the offshore windmill park. This includes embracing new innovations in technology and perhaps leveraging the municipality to become more proactive and change the current perception of having “vague” policies and not being first movers. This has the potential to encourage other start-ups and SMEs to potentially build a thriving support industry or cluster to service the Krieger’s Flak offshore windmill park.

Skill Mill

The purpose of this pilot was to attract an offshore training operator in Vordingborg to cater for burgeoning offshore wind service industry and upskill local SMEs for offshore service industry.

At the end the pilot was able to help in the establishment of an offshore training school and to upskill local SMEs and assist in the attainment of 30 offshore safety certificates. The analysis showed a competitive advantage identification for the energy transition, supporting new industry through providing peripheral activities by using labour market transformation models and stated training facilities for local and international organizations.

Lessons learnt for the region

The pilot showed how important it is to include SMEs in the energy transition as they will service the industry. It is necessary to make upskilling funding readily available for the energy transition and provide incentives for green transition. The pilot project achieved its goals. This was also an opportunity to better understand the local labour market, how it is changing and how it will look in the future. It highlighted that the green transition could be more difficult for some SMEs. The transition may in some instances have a high investment and opportunity cost and low returns. Therefore, projects like the Right project are necessary in order to lessen the burden for SMEs whilst having the opportunity to influence policy to build better support frameworks for small to medium enterprises.

Groningen

As a regional government the province of Groningen is the authority responsible for the development of the regional economy. The Energy sector (transition to a greener society) is one of their main priorities. They foresee a problem when it comes to having a future proof workforce which can be beneficial to the economic growth.

The natural gas extraction in Groningen had unfortunately resulted in earthquakes. Stopping gas extraction as soon as possible, replacing and preventing earthquake damages are currently a prominent policy issue that has created a significant tension between the regional population and the national government. The transition from natural gas to renewable energy (RE) is a regional choice as is the emerging digital sector as an important focus sector. There is a lot of knowledge in the Gas-sector, which can be used to make the transition toward renewable energy also due to the close proximity of Eems harbour. Abundant higher education students contributed to the latter development and helped attract Google and IBM. A remaining weakness is the involvement of SMEs; and that knowledge is not always accessible. Potential threats are:

Capacity problems: there are bottlenecks due to fragmented policy dimensions (e.g., policy for generating power and policy for transmission and storage are not always compatible).

Growing resistance within a part of the population to climate change mitigation works and against energy transition developments. A challenge in resources allocation: conflicting policy directions may hinder development/choice.

RIF Gas 2.0

RIF Gas 2.0, which was a public-private partnership to future-proof vocational education, to create connectedness through public-private partnerships and to contribute to the ambitions of sustainable energy generation in the North of the Netherlands. One important cluster for the pilot project was the "Energy College" (a cooperation between seven existing institutions for vocational education, about fifty companies and the government in the north of the Netherlands). The "Energy College" wanted to establish itself as the place where MBO (middelbaar beroepsonderwijs, or middle-level applied education) energy education is developed, shared, and disseminated, so that students and professionals could increase their knowledge and skills online and offline. The main goal of RIF Gas 2.0 was to develop energy education for MBO students and incumbent staff through public-private cooperation and to share this knowledge widely to promote the energy transition. The project is part of a larger development to spearhead energy transition in general in the region and helps partners to develop this as a joint effort.

A learning module for hydrogen has been developed and more modules will follow soon.

Green Hydrogen Booster

The purpose of the pilot was to connect SMEs to emerging green hydrogen value chains and to support the innovations needed. The Green Hydrogen Booster intended to accelerate Green Hydrogen production, distribution, storage and applications for end users whilst exploring grid balancing issues and infrastructures. A second part of the pilot was to develop and implement regional/sustainable key performance indicators (KPI) by EnTranCe-Centre of Expertise Energy and participating organizations, EnTranCe is an energy innovation hub at the Hanzehogeschool Groningen with facilities, technology, and the best possible networks to stimulate the energy transition. Through this pilot KPIs have been incorporated in the strategic vision of EnTranCe. The regional/sustainable key performance indicators (KPI) tool can be further developed and adapted by other organizations and the Green Hydrogen Booster methodology can be replicated.

International Business Office Supporting SMEs(iBOSS)

iBOSS aims to help SMEs focused on exploring international markets, innovation and value chains by creating a “helpdesk” manned by students from Hanze UAS, and to give insights on the challenges whilst offering practical advice and knowledge. Area-cooperatives and innovation workplaces involved focus on business and community support in the rural areas of Groningen. These organizations are part of the Regional Innovation Framework that connect students and educational institutions to networks of local organizations in order to facilitate and articulate innovation needs and to join forces to solve local and regional challenges as part of supporting resilient regions.

IBOSS acted as an additional service that focused on creating functional internationalization ecosystems by connecting and facilitating intermediaries, students, start-ups and SMEs in the region. iBOSS is a one-stop shop for SMEs in their local areas for help with business development. In the long term, identifying SME needs in the region would create projects of common interest, for internationalization or other topics, thereby creating clusters and networks of SMEs in innovation ecosystems.

The iBOSS concept, uses students as innovation drivers and builds on the underlying regional innovation framework concept.

Lessons learnt for the region

The pilot and project activities carried out in the project supported deeper collaborations amongst different stakeholders: in Gas 2.0, a programmatic approach was key to solve the major skills gaps for the future beyond natural gas economy. The decision to brand the Northern Netherlands as the ‘Hydrogen Valley’ has accelerated investments, value chain developments and skills training programmes to this end. Hydrogen is one of the modules developed in the Gas 2.0 project. The Green Hydrogen Booster has also become important in its work in developing networks that connect SMEs to the green hydrogen chains. Student involvement in the Green Hydrogen Booster has also the potential to attract new talent pools for this value chain. Similarly, iBOSS connects students to rural businesses (SMEs) giving students the opportunity to develop networks and future jobs in the region or to start their own businesses. Students are an important innovation boost to regional SMEs providing them new insights and business models. Bringing students to rural areas is important to create low thresholds for SME engagement in developing international competences and intelligence through student support.

Connecting schools in alliances to serve upskilling and reskilling needs for the renewable energy and other sectors is important. A systems approach to major transitions is common practice in the Netherlands and this is reflected in the pilots.

The policy challenges described in the regional analysis were not addressed due to COVID-19 developments but close liaison with the provincial government on energy and skills agenda will continue after the project ends.

Ghent

During the Covid-pandemic, the idea came up to create an online transnational pilot that could be carried out despite the restrictions during the pandemic. This transnational pilot was led by Ghent University, in close collaboration with Fife Council and Hanze university of applied sciences.

Marine Training Pilot (MTP)

The MTP focuses on education and training for current and new employees in the blue and energy sector. Currently trainings in the blue and energy sector are difficult to find. Each region has its own training offers spread over different providers. This lack of a central location where SMEs and learners can easily find trainings relevant for the blue and energy sector was an incentive to start mapping blue and energy courses available in the RIGHT partner regions.

Reportedly, a catalogue containing 136 short trainings and 68 programs in the RIGHT regions relevant for the blue and energy sector was produced, as well as a story map to present the RIGHT project and the MTP pilot. The catalogue is a searchable catalogue containing blue and energy courses and programs.

The MTP resulted in a tool: a collection of blue and energy trainings. The purpose of the tool is mapping of training opportunities in the blue and energy sector in the RIGHT partner regions. By collecting these trainings on a single platform, people who are interested in working in the blue and energy sector or are already working in one of these sectors and want to expand their knowledge can find the courses that suit their needs. In addition, the collection of many courses on a single platform allows for easy evaluation of the skills gap in the sector. For each course or programme, the skills were identified and added in a standardized way.

Lessons learnt for the region

Creation of blue & energy trainings/courses (in the region) overview, facilitating mobility and sharing resources and expertise are needed in order to bridge the skills gap. It is also recommended to look into contacting the course providers for supplying their course information in a specific format. This way, MTP would aid the promotion of their trainings, while it is easier to keep the information on MTP up to date. The MTP also allows companies to comment on trainings that are suitable for work in their company. This way, the trainees get an idea of the relevance of the courses they are thinking of following.

Fife

Fife faces economically challenging times overlaid on the decline of the traditional local industries. The maritime location provides some core engineering skills, but technical skills need supplementing with an understanding how to enter new market areas. Some work has been done on supply chains for renewable sectors but are not yet well developed.

New and emerging technologies associated with the green shift and Energy transition will require a range of new jobs or at the very least, new skills for old jobs. It is recognized through the RIGHT research and more widely that skills, or the lack of the right competencies may become a significant barrier as companies seek to transition into emerging markets or keep pace with new trends and shifts towards digitization. At the same time as we encounter these complex challenges, we see a requirement for better understanding and engagement amongst the various actors involved in developing the skills for the region and a better joining up of the approach to skills planning - the triple helix approach to innovation.

The Blue Consortium

This pilot used a quadruple helix model (an ecosystem approach focusing on four aspects of the surrounding environment of firms: Civil society, academia, other firms in the industry and government and the public sector) to develop the "system" for skills upgrading and job development. The project owners that make the helix model used a coordinated and cohesive approach to tackle the recruitment challenges for specific sectors and to facilitate funding through collaboration amongst members. By

bringing together business, academia, Fife council and politicians, they were actively trying to find ways to increase innovation and capability for skills development. In part, this was due to established linkages between companies, training providers and academic institutions and in part, it was due to a platform provided by the project owners (the quadruple helix) for the companies and other stakeholders. This platform made it possible for said companies and stakeholders to suggest better ways of working and how the funding processes can be streamlined. An additional platform was also established by the helix members to underscore and strengthen the transnational elements of the pilot, creating connection points with Groningen, Gent, Denmark, Vordingborg and Hamburg. Results of this pilot:

- CESSCON skills Academy was initiated in November 2021 and aims to bring low skilled or unemployed individuals to an academy to gain skills within Decommissioning
- Skills Development Scotland meeting with Oceaneering to discuss Modern Apprenticeship program.
- St Andrews University Research grants to enable students and businesses to link for Student Research
- Funding support to place unemployed graduates in consortia companies.
- A number of educational STEM spin offs, School windfarm construction project - The Nautilus project are all a legacy of RIGHT and the Blue consortium.

Environmental Industrial Access Academy

(This pilot was previously designed as Core Engineering Skills Academy. The Engineering academy pilot had a number of challenges that prevented it from implementation.)

The purpose of the pilot has been to assist in meeting the recruitment challenges for the renewables sector, rope access, safety courses and creation of 8x new jobs supporting growth of local small businesses, improving outcomes for Fife residents, targeted bespoke employer relevant training co- developed with employer and blue consortium members. The pilot owners tried to prove concept embedding themes such as the circular economy, sustainability, and waste management into employability delivery in line with local and national plans. One of the other goals of the pilot has been to assist people to re-enter employment and the labor market.

The potential to create a bridging course allowed candidates who have been unsuccessful in education to have a second chance to enter their desired career and assisted the local authority in meeting its objectives in terms of inclusive growth.

Through this pilot, 8 vacancies for modern apprenticeships and opportunity for further full-time roles following the apprenticeship became available.

The results show development of environmental and net zero concepts, they have been used in training programs within the council for first time.

"Race to Zero" Innovation Game

Race to Zero pilot aims to achieve zero greenhouse gases within the Blue Economy. In this context, a game application was introduced to high school students between 12-16 years. The game highlights innovation and achieving net zero by focusing on enterprise skills, net zero and renewable energy sources. In addition, the contents of the game underscores awareness about the blue and energy sectors, about job and training opportunities, how innovation can be used for the purpose of commercialization as well as sustainable growth and development.

Lessons learnt for the region

- It is important to highlight the strength of the blue consortium model in skills planning. The Consortium gives a platform providing guidance and support for companies and organizations to improve their net zero strategies and they hope to add to the council's net zero strategy. There is a suggested recommendation review of how the council uses protocols for employer engagement.
- It is recommended to set up Knowledge transfer hubs and have shared data resources to improve research and planning going forward, possible shared data collaboration knowledge base.
- It is important to use more net zero and sustainability learning within the training of council lead initiatives such as Fife Job Contract, Employability Fund, No One Left Behind and etc. Circular economy also needs to be put higher up the skills planning agenda within the council and by demonstrating this, the council is hoping to inspire others to do the same thing

- More educational focus on the circular economy and net zero through curriculum of excellence and Developing the Young Workforce Activity.
- Assisting and embedding entrepreneurial skills into the curriculum of excellence, using the social community as bottom-up approach, focusing upon skills should be considered.
- It is recommended to have better awareness within education of the local labor markets and emerging and new trends within that market, and have better collaborations between employers, pupils, education, and community.
- There needs to be more recognition of skills challenges by regional government and how these are a barrier to economic growth and innovations at the company level. Over the project, the voices from Industry have become louder and more unified in this but we do not see this reflected in our organizations economic planning. Perhaps the outputs and learnings of RIGHT will go some way to influencing a change.

Hamburg

Two thousand and eighteen (2018) saw a significant and painful consolidation within the maritime and energy industry with rising pressure on all stakeholders, and the employment is not rising anymore; smaller and bigger companies have to struggle with financial problems. There are nearly no producers of solar panels in Germany anymore. The installation of new inshore and offshore wind farms and the renewal of existing systems came to a virtual standstill, which is still the case today.

Digitalization as a general 'megatrend' and as the main topic of the Hamburg RIGHT offer was widely discussed in business and society, but while during the first part of the project often hi-tech aspects (like autonomous vehicles or machine learning) have been discussed in public, COVID-19 shifted the focus to the use of online collaborating tools,

Generally, the political discussion addressed the topic of the energy shift during the COVID phase from spring 2020 until spring 2022 less than other topics, especially aspects of civil rights, rising prices for houses and apartments and the economic problems of the COVID crisis. This changed in spring 2022 with the war between Russia and Ukraine, but this was after planning and running the RIGHT pilots.

From the start, the RIGHT project in Northern Germany was implemented in close cooperation with the maritime industry associations and networks. Several industry representatives took part in the regional kick-off event, where they presented their concepts and working methods and put them up for discussion.

During the term of the project, the work of the networks and clusters was accompanied by various working methods. For example, bilateral expert discussions were held on an ongoing basis, publications (website, studies, newsletters) and external evaluations were studied, and several events were followed.

The work at the regional level finally culminated in a transnational workshop in which representatives of the German as well as the Swedish and Norwegian partners presented their networks and forms of promotion of the maritime economy, thus enabling an intensive transnational exchange of experience. Representatives from all RIGHT partner countries took part.

Lessons learnt for the region

Higher Educations Institutions & government in Germany are changing the circumstances for co-operation and transfer, but this process needs a lot of time. By planning trainings inside companies already existing contacts with a lot of trust should be used. In Germany the board of the employees and workers (Betriebsrat) is influential at many companies, e.g., the public administration, metal-industry, car-manufacturer and shipyards. Training-providers which are run by the unions, chambers or employer-organizations can be partners with such contacts.

It is important to develop training-units fitting to the learning-experiences and skills of the target-groups. For example: worker with low (formal) skills prefer small-scale learning units, for example one or two hours added to the daily work. The implementation of trainings inside of companies needs time and trust, in many cases the management wants to have their own coaching in advance.

The trainings should be financed mainly by public bodies, for example, the city, region, or the Public Employment Service (PES). The management (application of the funds, reporting, etc.) should be done by an external body, for example, the training-provider.

Currently, both sectors - the maritime industry and renewable energies - are facing challenges of digitalization. New business models need to be developed - and internal processes redesigned. Especially for the energy branch, digitalization was

assessed as a highly important factor for innovation. As HAW Hamburg was engaged in the project 'Norddeutsche Energiewende' (North German Energy Shift) with the participation of several North German Federal States and the German'Competence Center for SMEs', the project goal seemed to be achievable.

As stated in the pilot report, due to COVID-19, things developed different than expected. This still leads to relevant results for the overall goal of the RIGHT project - enhancing innovation. The situation during COVID-19 shows how organizations dealt with crisis and uncertainty as well as with digitalization. These results are embedded in a multi project situation, in that the Hamburg project partners can add contributions from other projects of their project portfolio to a multi perspective report.

This chapter moves away from the regional level to describe the findings of 'lessons learnt' as a project. The regional and transregional reports set the stage to identity skills and innovation gaps for the regions and provided an understanding of their regional contexts and common challenges. The pilots captured specific aspects of the skills and innovation challenges and how these were perceived, addressed and what changes they brought about as described in the previous chapter. Reflection on project activities and outcomes in various transnational meetings and reports provided inputs to analyse more general lessons learnt across the project area. This chapter captures them below. The lessons learnt also appear in the policy document report.

Partners validated the lessons learnt during the last meeting in Bergen and agreed on the need to frame such lessons to identify and offer recommendations for policy making.

The overarching consensus of partners through their experience of the RIGHT project is the need to support deeper transformations to become more resilient as individuals, businesses, and regions. All regions are dealing with the shifts to become green, digital, and more sustainable whilst creating inclusive societies for their citizens. However, it is clear that transition processes are perceived and acted upon differently, with different speeds of change, related to feelings of sense of urgency, inertia and other barriers to change, lack of capacities and, or ability to change, etc. However, transitions are taking place, and many are willing but needing support. The diversity of needs and abilities to deal with these transitions underlines the core of the lessons learnt. Five areas of lessons learnt are described.

Regions in transition

All regions are facing transitions due to fast changing and unpredictable challenges and EU directives and agenda. The key being green, digital and inclusive strategies are needed to meet climate goals whilst promoting and maintaining a European way of life and values. Regions are increasingly facing the need to wean off (dominant) traditional industries, dependence on fossil fuel industries and boosting uptake of new technologies by businesses. The dominance of energy and marine economies that need to be decarbonized in these regions and a shortage of skills for new emerging industries means a need to review existing skills and knowledge base and infrastructures. A major task for all EU regions is the challenge of re- and upskilling 60%

of current work force. There is an urgent need to also attract new businesses and workforce as well as explore cross-border and interregional connections and a review of Smart Specialization Strategies is needed to deal with the onslaught of complex challenges and external shocks through rethinking their skills and innovation agenda.

Business in transitions (SMEs)

Businesses know that they need to change but there are differences in their sense of urgency to do so. More importantly, there is a need to support SMEs to understand the need to innovate and to be able to articulate their skills and innovation needs. Various pilots were focused on this aspect and showed that there is a need to support SMEs in ways that work for them (Mind the Gap, Hamburg's Marine and Energy Sector, RAS, Fife's ENV Industry Access). Diversity of needs of businesses in transition means that flexibility and customization are essential. SMEs, in particular, have difficulty to connect to new horizontal value chains and need guidance in this too (Skill Mill, Triple E, Green Hydrogen Booster, iBOSS) and they also need to embrace lifelong learning as part of business development (Skill Mill, Mongstad, Race to Zero, Gas 2.0).

Another important insight from the project is the all-important funding gap that is hindering SMEs to go 'green/blue/digital'. (Fiscal) incentives and support are therefore important considerations. One of the challenges of businesses is to deal with shortage of skilled workers and redundant workers (Race to Zero, Skill Mill, Blue Growth Consortium). Supporting choices to re- or up-skill their personnel would be a preferred alternative to retrenchment measures. In addition, connecting to new horizontal value chains and emerging industries are often complex processes for SMEs and they need coordinated and favorable framework conditions to do so.

Business and education divide

Differences between education and businesses in culture, time horizons, agenda, and priorities (Blue Growth Consortium) and the need to bridge the gap (Port Chances/Pro Academy, Mongstad) were common themes in pilots. The need to change skills and training delivery and offer both in initial and continual education was desirable whilst the value of formal and informal learning needed to be reviewed. Collaborations between businesses and educational institutions were important to

identify skills needs and workable delivery options for more flexible pathways (Gas 2.0, Port Chances, Vestland Skills Forum).

Business models of shorter and flexible training, hybrid models, small group workplace classes; industry-education collaborations to customize skills offer (RAS, Gas 2.0, Hamburg's Marine and Energy Sector) were also important. Challenges related to funding and finding a balance between public versus private (business/individual) funding were other important insights seeing as how labour shortages, in part due to lagging education systems, are issues of the public domain.

From Fife's Pathway to Apprenticeships, we have learnt that exploring good practices is important to attract and create new pathways of learning and skills developments. In addition, decentralizing campuses to rural areas to support lifelong learning and connecting students to rural businesses and communities to boost innovation capacities is necessary (Norway, Netherlands' iBOSS/RIF-N). A final consideration is the concept of business counselling by intermediary agencies next to career counselling services were also discussed and worthy of exploration.

Innovation and skills gaps

After analysing the results of the pilots, it is clear that innovation support is broader than skills gap and that skills agenda needs to be integrated into business development strategies and support. The challenges faced in skills and innovation competences need to be addressed collectively by public and private sector and in a coherent manner. Motivation, work ethos and attitudes are also part of the skills and competences continuum that need to be considered. The lack of guarantees of jobs for individuals after skills development and the fear of management to lose workers after re- and upskilling are also issues that deter uptake of skills development. Therefore, motivation to upskill or reskill needs to be incentivized both for individuals and businesses. Experiences from the Mongstad project shows that labour mobility across sectors is desirable but needs coordination. Clusters have an important role to support SMEs and identify skills and innovation gaps (Skåne, Mongstad) since they already are in business networks and have good relationships with SMEs. In addition, a programmatic approach for systemic change in skills development is desirable where there are major industrial transitions taking place (Gas 2.0, Mongstad).

An important issue is funding to solve innovation and skills gaps. It raises various questions such as who is paying for broadening

the skills? Is salary paid? Is skills development happening during work time or after work? What about older workers, do we re-skill or retrench them? Another question regarding funding is, who is responsible for funding upscaling/mainstreaming new training initiatives? Innovation vouchers, a common policy instrument, are often limited and key barriers for upscaling new business models is access to credit (Green Hydrogen Booster). Even as regional differences to skills and innovation funding are present, the skills and innovation gaps need to be addressed.

There is a general shortage of workforce in Vestland but also in other European regions due to retirement and local unattractiveness of specific (technical) jobs, location and, competition from other areas or sectors (all partner regions). Training could be made available beyond regional and national markets to increase offer greater trainings/education options but also to facilitate regional labour mobility. An example of this is the Marine Training pilot that provides information on energy courses from the partner regions. This initiative needs to be further developed for greater impact

Developing ecosystems

The results of the projects show that support for individual, business and industry, sector alone was inadequate and that it is important to facilitate ecosystem development, particularly in emerging industries and sub-sectors (Green Hydrogen Booster, Gas 2.0. and Groningen's Hydrogen Valley developments, Blue Growth Consortium, Skåne's Mind your Gap, Mongstad). Ecosystems leveraging clusters and other intermediaries bring regional actors interested in the same developments together but also support building trust and distribution of knowledge (RAS, Triple E, Blue Growth Consortium, Skåne's IUSyd, iBOSS/RIF-N). It was also suggested that other actors such as business representatives, trade and worker representatives, public agencies involved in skills and innovation support could also play a role in supporting and developing ecosystems around emerging industries. Such ecosystems would include triple or quadruple helix (business, education/research and government, and civic organisations/citizens). For more information, see the Transnational and Value Chain Reports.

Policy gaps

The project identified policy gaps that need to be addressed to ensure that skills and innovation capacities of the regions are facilitated. Fragmentations and a lack of coordination of policy domains and mandates are the key issues. The framing of skills and innovation in policy interventions and the need to collaborate with industry are also highlights of lessons learnt in this area. The need for closer collaboration in supporting emerging industries and opportunities for growth through better intelligence and alignment of interests and resources were other aspects that surfaced. A more concerted effort to look beyond regional boundaries and to learn and connect with other regions with similar challenges and interests and the advantages of interregional collaborations were key lessons from the RIGHT project in preparing for RIGHT futures.

The legacy of the RIGHT project can be summarized by the interregional collaboration and learning that it has afforded. It offered impulses and renewed commitments of partners to continue with their collaborations and to jointly develop new pathways to ensure that RIGHT skills for the RIGHT "Resilient Future" builds on the strengths of these partnerships and lessons learnt. The project has already leveraged cross-border initiatives and adapted pilots and good practices. The interregional context of the pilot offered audience and new dimensions to the dialogues and narratives that the partners wanted to convey.

Some examples of the RIGHT legacy are

- The Marine Training Platform and the overview of programmes in energy and marine sectors
- Exploration of partnerships of the ports of the region and connecting common developments (Hydrogen, LNG, alternative shipping fuels) as well as connecting networks of economics/logistics educators to explore port centres as a new focal point
- The port centre's products have caught the interest of publishers working on educational materials
- Swedish regions and national authorities have shown interest in the business model of Mind the Gap and are planning to use the methodology; It has been translated to Danish and is being further developed in an Interreg project
- A twin digital seminar on the topics of regional food production, public procurement, and self-sufficiency of food stuff between Region Skåne and Hanze UAS
- A study-visit to Nordfjord took place as part of an exploration of the use of the Mind the Gap methodology
- Mutual study visits between Antwerp and Fife for learning and connecting have also taken place.
- Development of a Centre of Vocational Excellence application under Eramsus+ between Northern Netherlands and Vestland

The project has generated a legacy of common challenges and the value of interregional collaborations in supporting regional transformations. Improving linkages between educational, training and labour market institutions and developing new value chains and business models are all well-known lessons but at the key to this project, the people factor has been important. Facilitating ecosystems of collaborative partnerships and consortia through well framed programmatic approaches in a spirit of common ambitions has meant a difference to the quality of such processes and outcomes.

TOWARDS A RESILIENT NORTH SEA REGION

RESULTS AND LESSONS LEARNT

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