



RIGHT
RIGHT SKILLS FOR
THE RIGHT FUTURE

RIGHT PILOT REPORT

The Blue Consortium

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Content

1.0 Introduction	2
2.0 Regional/ Strategic Context	3
3.0 About the Pilot.....	6
3.1 Description.....	6
3.2 Methodology	7
3.3 Results/Outputs.....	8
3.4 Case Studies/Examples/Stories.....	9
4.0 Conclusions.....	14
4.1 Challenges.....	14
4.2 Opportunities.....	14
5.3 Next Steps.....	15
5.0 Outputs for new strategy and policy for Skills education and SME innovation	16
6.0 Potential for upscaling/learning Transfer/Internationalization.....	18
7.0 Footnotes.....	19
8.0 Annex.....	20

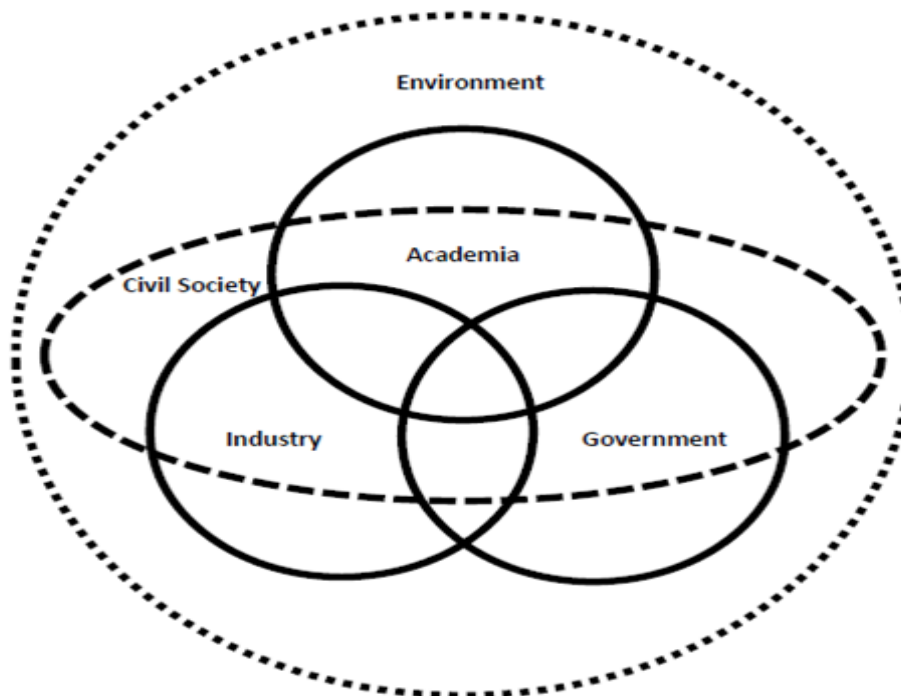


1.0 Introduction

A Platform for Engagement

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 provides a platform for SMEs to engage with Academia, Government, Sector agencies and crucially, the community to encourage greater cooperation to meet the challenges as our economies transition. Operating on the concepts of collaboration and knowledge sharing, the consortium, a cross sectoral coalition of the willing has brought together a number of partners within academia, research institutions, local government and the business community that seek to improve the knowledge base and launch interventions that are targeted and relevant to identified problems and barriers to innovation.



2.0 Regional Strategic Context

Realizing the potential for Blue growth

The concept of Blue Economy which refers to all cross sectoral maritime, ocean and coastal related economic activities is widely recognized as a potential key driver for economic growth and innovation in new and emerging technologies.

Although the name and concept may be relatively new terminology, The Blue economy has long been significant to Fife and it will remain so as we move through the energy transition in the coming years. Traditional industries such as Fishing and Shipbuilding, A strong heavy engineering base, particularly in subsea technologies, specialist manufacturers servicing of the Oil and Gas, a growing coastal tourism and cultural industry are all important to Fife's Blue economy which cuts across many industries and many key sectors. Four of the Five key sectors as described by [Invest Fife](#): Food and drink, Tourism, Energy Industry and Manufacturing and Engineering are all relevant to the overall Economy of the region, It is for this reason that we try to adopt a cross sectoral approach with our Blue consortium where we aim to enhance the overall Innovation ecosystem by improving the relationships and interactions within the system.

The Region has experienced a transition before. The closure of the coal industries in the 1980s had a huge impact on the coal mining communities of central + west fife and Levenmouth and the pain of this is still being felt in many ways. The [SMID](#) highlights the strong correlation between the former mining communities and high levels of deprivation. An effect we still see some 40 years later. This highlights the necessity for a Just transition within the region. To help achieve this we aim to create a coordinated effort to developing the new skills. An approach from the bottom up involving all stakeholders within the economy. Where we can, through our actions influence the necessary policy changes that will be required to support our industries and communities through this change. The [Plan4fife](#) sets out the ambitions of; Opportunities for All, Thriving Places, Community led Services and Inclusive growth and these sit at the heart of what we are trying to achieve with the Consortium as we try to widen the range of opportunities by providing key stakeholders a platform for better engagement, ultimately leading to more opportunities and quality, highly skilled jobs.

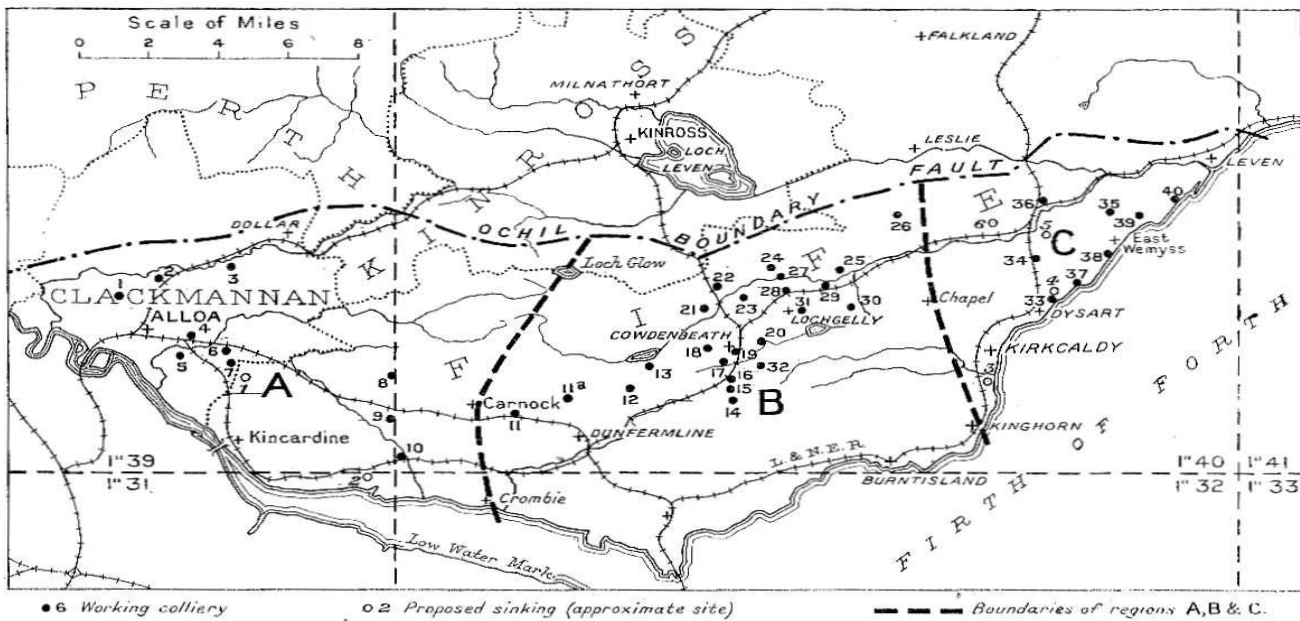
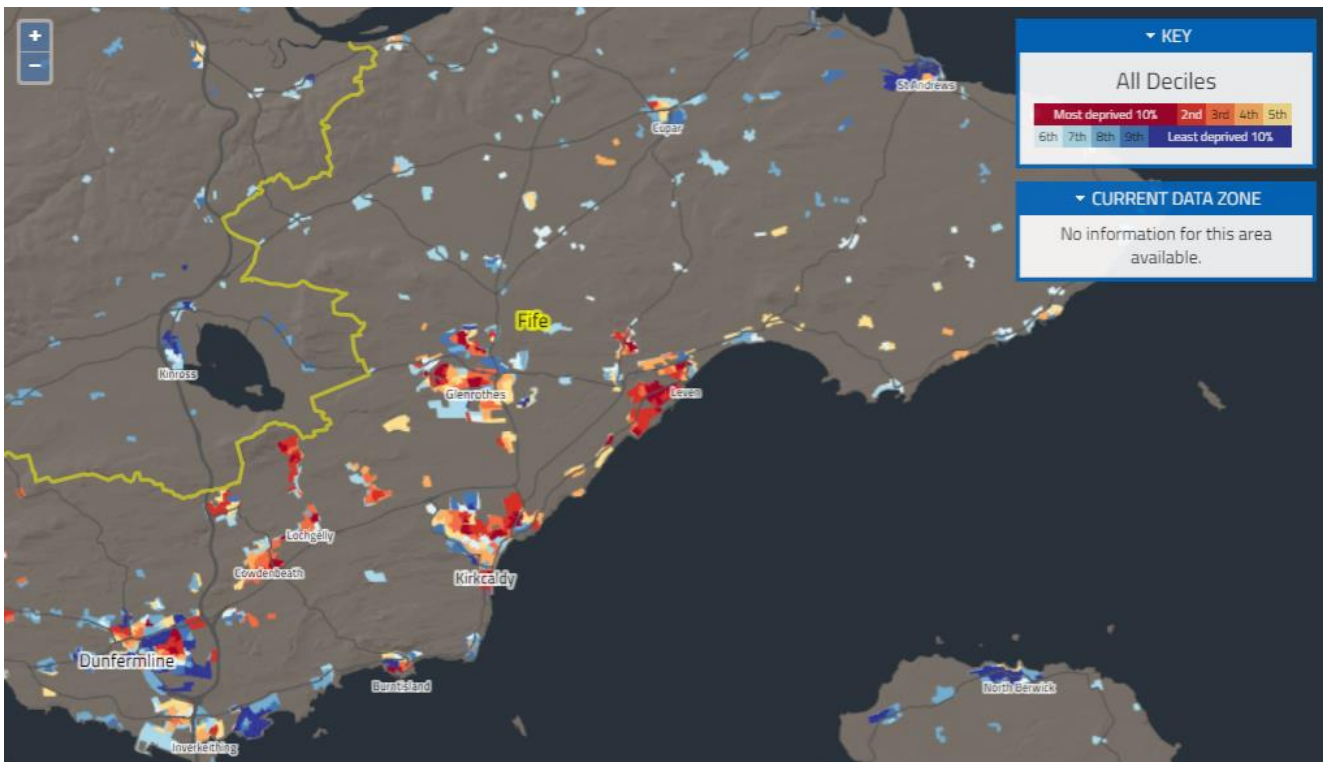


FIG. 21.—INDEX MAP OF THE FIFE AND CLACKMANNAN COALFIELDS

Figure 1 above SMID showing former coalfields sites in central + west fife villages in dark red showing areas of lowest development. figure 2 below Also Levenmouth from where the coal was exported. Highlighting the requirement for a just transition.



An Ocean of Opportunities.

Opportunities present in a range of areas and sectors associated with the Blue + Energy sectors: perhaps most obviously in Energy and Renewables. Fife is very close to Major offshore developments Sea green, Inchcape and Nearth na gaoithe. In addition to new jobs this presents opportunities for the wider value chain from construction to decommissioning as well as opportunities for retraining workers from oil and gas and the engineering and manufacturing sector.

Our Port facilities, 28 in total, with 3 large ports Rosyth, Burntisland Methil where Fife Energy Park is situated means Fife has the capacity to take the opportunities that come with the new developments. We see this shift in fife already in Fife Energy Park where Cesscon Decom (decommissioning) and Harland & Wolf (offshore wind) have recently located. A huge boom to a region that has suffered in recent years.

There is great potential for the Region for the Blue Revolution to become a key driver of economic growth. But there are also challenges that mean many companies will have to adapt, find new ways of working or change their business model and value chains entirely. Diversification of Oil and gas and the growth of greener low carbon technologies will be a key driver of this change.

It is estimated that renewable energy production in Scotland could create up to 95,000 jobs (1) but only if the correct policy decisions are made. Currently renewables support 22,600. Which is actually a decrease since 2010. A key aim of the Blue consortium is to assist in helping Fife realize the full potential.

RENEWABLE EMPLOYMENT IN SCOTLAND

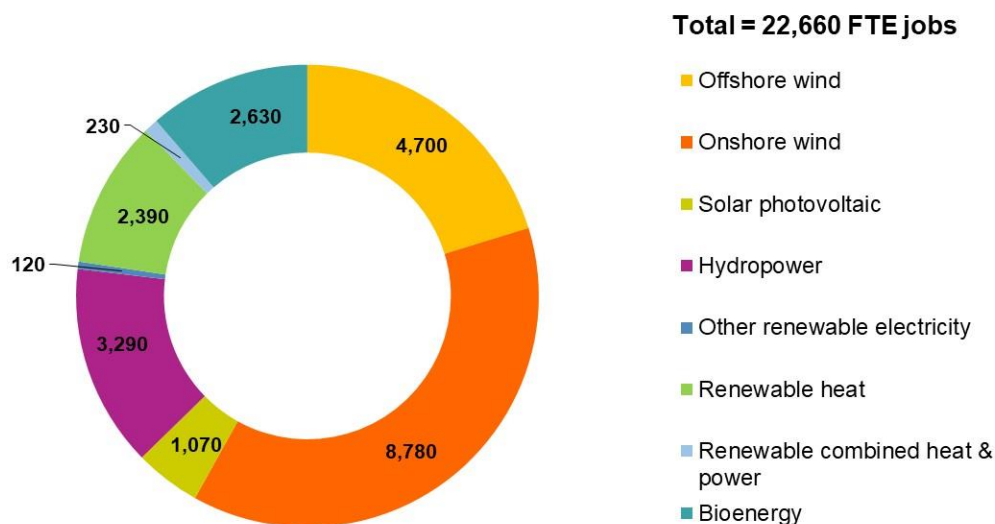


Figure 32 Scottish Renewables data showing total employment figures.

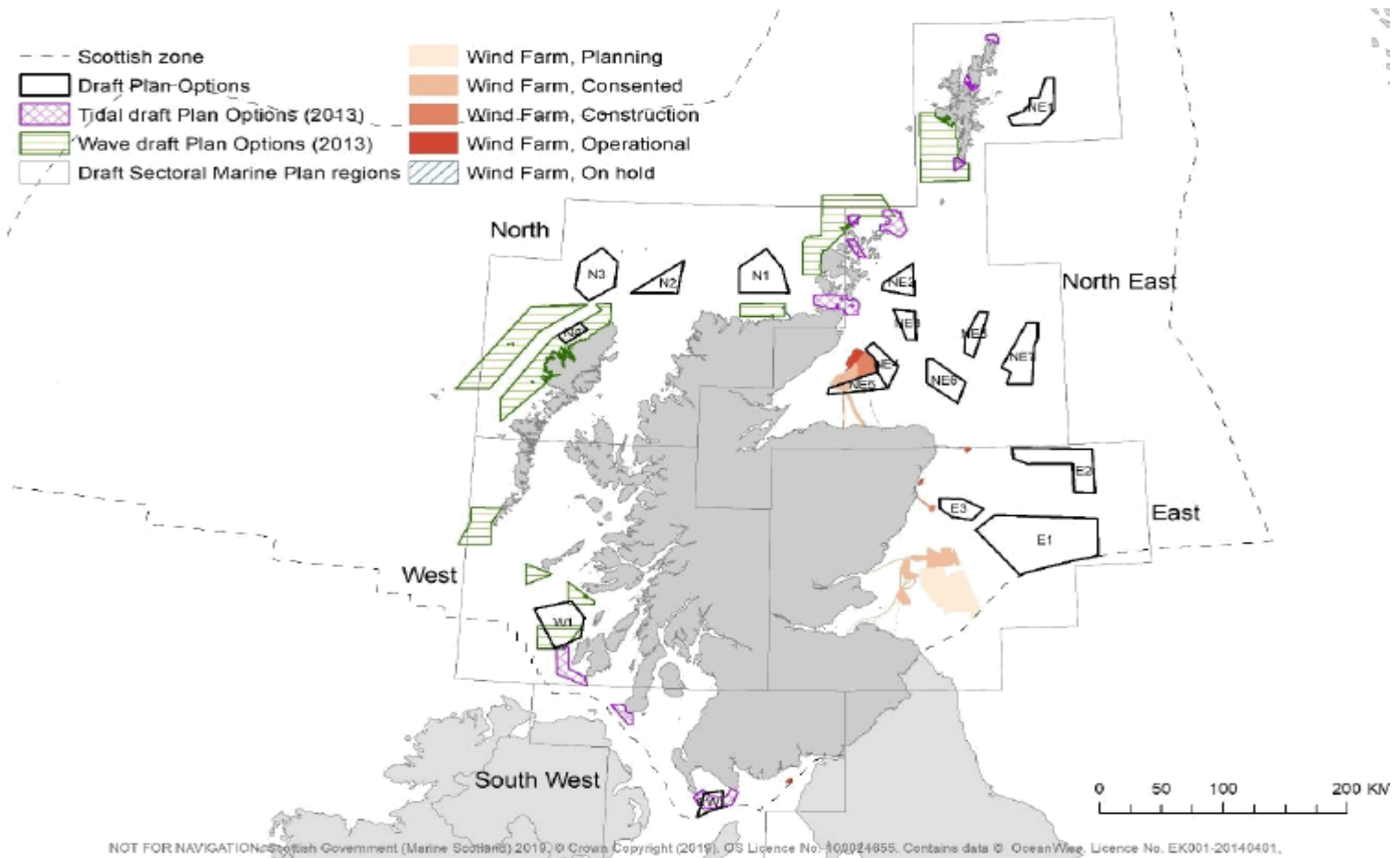


Figure 3 Offshore Energy draft sectoral marine plan Scottish government showing the size and scale of nearby developments.

3.0 About the Pilot

3.1 Description

The research phase in Work package 3 of the project identified that there is a lot of good work going on to meet these challenges but collaboration between key stakeholders' local government, academia and business (The Triple helix) could be better. Although there is good work going on, it is often fragmented or happening in silos. We have established that there is;

- 1) A very strong research community, MASTS, based at ST Andrews university.
- 2) A very well-established enterprise and employability support partnership via opportunities Fife, DYW, Culture of Enterprise.

- 3) *A good business base of SME's and larger employers in the Blue and Energy Sectors+ wider supply chain*
- 4) *Excellent potential for growth in both the blue and energy sectors and a number of policy incentives and action plans relevant to the sectors.*
- 5) *Recommendations from Interreg Clipper tally with the recommendation. Opportunity for consortium to be joint output.*

As such, one of the key aims of the group is to try to strengthen the connections amongst the triple helix. This was done very successfully for a cluster of Financial technology (Fintech) companies in Fife. We seek to adapt a similar methodology and approach to the development of a blue growth skills consortium.

Timeline

There have been some obvious delays due to Covid, but we aim to launch our activity in Q1 2021. We are optimistic, although we have seen a significant delay there is enough time to complete our activity in line with original project deadlines. The ultimate aim is for the RIGHT project pilots and partnerships to become sustainable beyond the life of the project which is due to end in Dec June 2022



3.2 Methodology

1) Cross sectoral Group –

Due to the cross sectoral nature of the Blue Economy and a pursuit of a quadruple helix approach to Improving the innovation ecosystem. The Blue Consortium is not limited to One sector. The Right project recognizes the interconnectivity of the Blue and Energy sectors, so we keep it open to both, in addition to companies within the wider supply and value chains associated with them. A theory that supports this approach is that cross sectoral collaboration has can lead to more innovation within companies and institutions. By providing a platform for knowledge sharing it can lead to solutions becoming transferrable between peers, different organizations and even sectors.

2) Quadruple/Quintuple Helix

To this point We have spoken of the triple helix and the triple helix approach to Innovation which is the core concept on which the Consortium is based. In fife we aim to go further and add another helix, Community who are also a key stakeholder in coastal activities and the Energy transition. If we think of the wider context in which these components sit, The Environment and our goals for a just transition we can add a fifth helix as demonstrated in the figure. The crucial elements of community and environment are crucial for Fife council in meeting its own development goals as set out in the Plan4fife, particularly in terms of community wealth Building and the climate emergency.

3. Collaborations

Spirit of collaboration is a key theme that underpins the consortium and activity as we seek to provide a platform for knowledge sharing and the transfer of solutions from organization to organization. This could range from a number of things such sharing of different approaches to recruitment to different models of

business, communications strategies, Net zero strategies. Additionally, we could see better use of resources, better uptake of funding and recruitment incentives by providing better awareness of opportunities and capabilities among partners.

At the same time, we are mindful of considerations around intellectual property and that some may from time to time come to a point of competition, but we would encourage partners to collaborate where they can and compete if they can't.

3.3 Results/Outputs

This is difficult to measure at this point, but the spirit has been good pilot project evaluation has not been completed but it looks like it will be positive, map out collaborations and new partnerships as with programmers, events and seminars as group output based on the expertise and directions as set by the Consortium and built on the knowledge gained through the RIGHT project and experienced from RIGHT project partners.



Expected Outcomes

We expect that there should be a range of positive outcomes, new partnerships and new interactions on the back of our consortium activity. We aim to translate these into stories that highlight the strengths and potential for Fife to become a regional Hub for Blue growth. We hope to achieve some or all of the below:

- Assisting in meeting the recruitment challenges for the engineering and manufacturing sector, renewables, low carbon decarbonisation and wider supply chain. KEY Sectors
- Opportunity to match fund skills development upskilling courses and academies via RIGHT budget.
- Increased uptake of opportunities/ funding (new and existing) through better awareness amongst members.
- Increasing Education interactions to promote Blue Stem, technical jobs.
- Better connectivity amongst the triple/quadruple helix by working in partnership Increasing > Innovation
- Increasing innovation capacity in SME's by addressing skills gaps.
- Opportunities to identify areas for upskilling staff, life-long learning -this is becoming more important for SMEs in the current recovery.
- Highlighting the potential and capacity of Fife and particularly Levenmouth as a Hub for decommissioning, energy transition, blue growth and innovation.
- Circular economy approach, sustainability + social interaction, work with community projects, if possible, highlight + develop circular business models.
- Proof of concept for quadruple helix approach to innovation and overcoming skills barriers.
- Positive PR and marketing for Fife Council, RIGHT project and stakeholders. Attraction of investment into the region, long term development off Innovation ecosystem.

3.4 Case Studies

SIMULATION-LED SUSTAINABLE INNOVATION

'Simulation is every bit as much a way of thinking, as a means of visualisation.'

SIMULATION-LED's mission is to enable change and innovation to traverse the TECHNOLOGY READINESS LEVEL (TRL) 'Valley of Death'. It has been developed in partnership with RIGHT and the Blue consortium to promote a digital data-based approach to innovation. The Full scoping Document can be found in the annex.

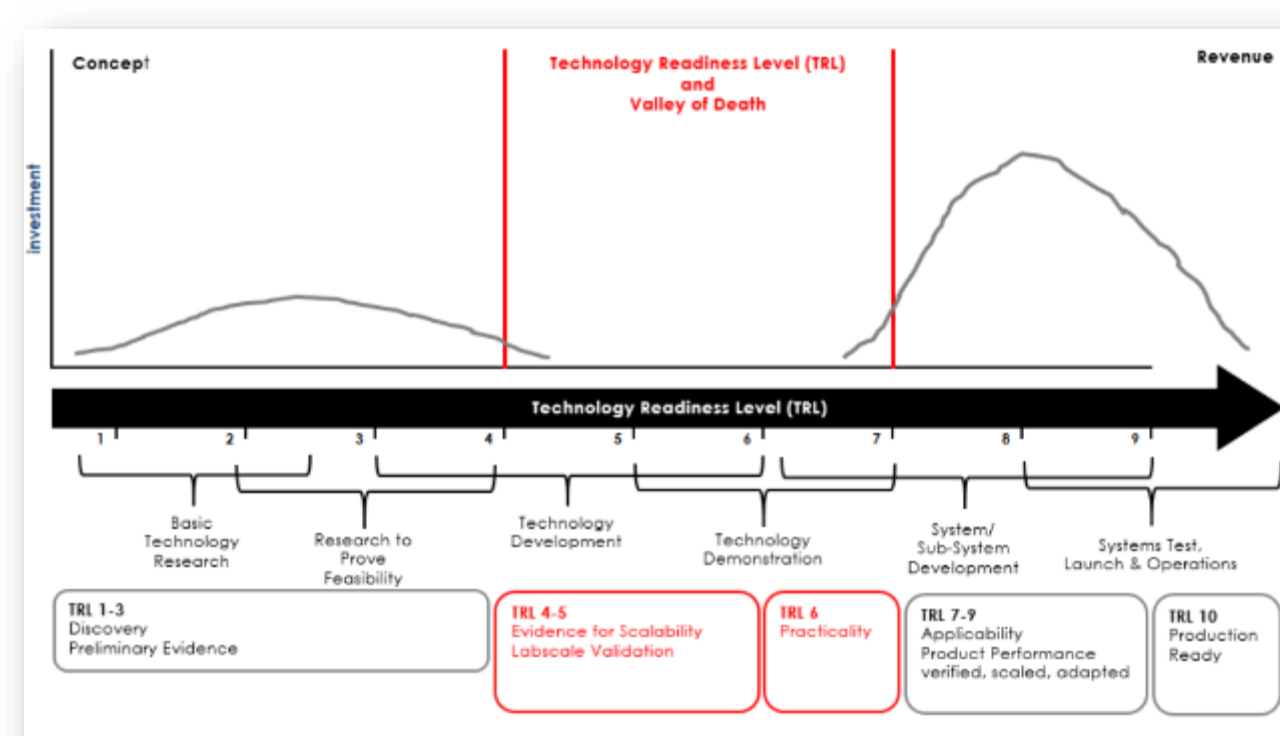


Figure 4 : success profile of Technology Readiness Levels (TRLs)

It seeks to achieve this by taking a holistic Lifetime approach that better reflects that multi-faceted demands to implement innovation. In practical terms this means:

- o using the Simulator from the outset of all projects, to focus on the DELIVERY OF FUNCTION IN DESIGNATED SERVICE as the prime objective;
- o placing SUSTAINABILITY at the core of thinking, through the development of SUSTAINABILITY ASSURANCE LEVELS (SRLs) that use TECHNOLOGY as the foundation to consider SAFETY, STEWARDSHIP and BUSINESS in parallel, as opposed to in series.

- o creating an immersive environment in which transdisciplinary groups can meet, and have their input translated, dynamically into physics using SPACE, TIME, TEMPERATURE and PRESSURE as primary dimensions.

PROJECT NAUTILUS

The NAUTILUS ecosystem made possible by Interreg Funding to Fife Council and its pilot project to create a Blue Consortium as a means of enriching young people's lives and addressing the Blue Economy skills gap. The full report can be found in the annex to this report under outputs.

Background

The NE Atlantic has been identified by UK and Scottish governments as an area of significant importance from a resource, sustainability, security and logistics perspective. For this reason, there is increasing interest and investment in understanding this area through sensors, measurements, data analysis, simulation, modelling and visualisation.

Coupled with this there is an increasing requirement to grow a skilled technological workforce capable of doing this.

Additionally, organisations such as the European Space Agency (ESA), want their satellite data and code to be used and leveraged for the 'greater good'; importantly they want their data to be 'ground truthed'.

Vision

The Nautilus programme is a vehicle to give young people of secondary school age a better start in technology. Challenges are set to build ocean sensors to go under the water to measure, for example, temperature, transparency and colour. The programme will create a collaborative platform, linking together young people and the places that they call home.

The Nautilus school network will gather data from around the NE Atlantic, helping fill in the gaps with regards to ocean data, as well as helping local communities through, for example, advanced data analysis and modelling at the D'Arcy Thompson Simulator Centre (The D'Arcy), based at the University of St Andrews. This will all contribute to the wider regional and governmental understanding of the oceans as part of climate change;

Through the Nautilus programme, and linking with the Curriculum for Excellence and STE(AH)M, secondary school age children will apply classroom based learning in physics, chemistry, biology, geography, maths, coding, information technology, design and young enterprise, in the context of local coastlines, inshore waters and Exclusive Economic Zones marine environment, to collaborate in exploration and understanding of the marine environment, to then innovate and employ knowledge, systems and procedures to support their local communities.

Secondary school students will work together on an ocean science and engineering challenge, with a set budget, to innovate, design, build and deploy cost- effective, scalable ocean instruments and sensors, to measure and ground truth the ocean;

The Nautilus 'Arctic' network will be utilised to set up satellite stations in coastal schools in Scotland, Norway, Iceland and Faroes;

Each school will build and maintain their own local network of ocean sensors, with data being fed into a central server; data gathered by the Nautilus programme sensors will be organised by The D'Arcy and safeguarded by the University of St Andrews.

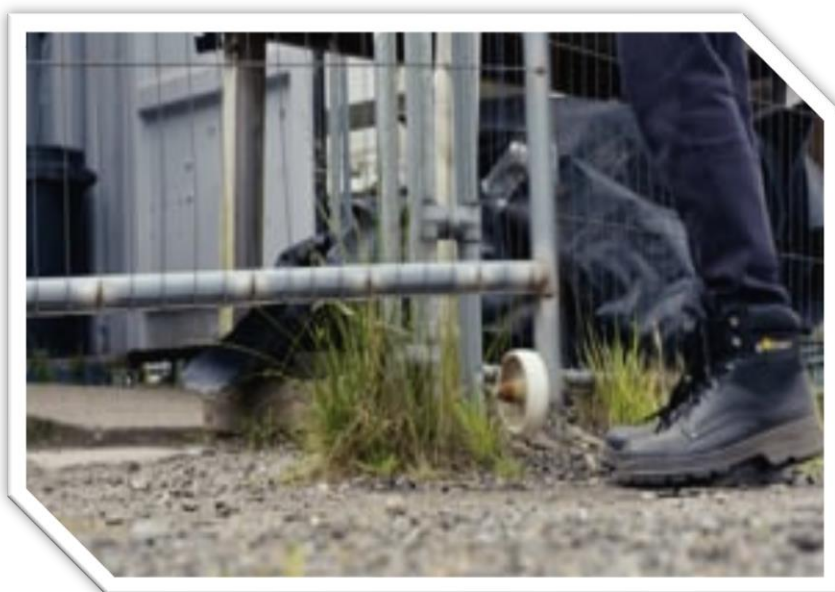
The Nautilus programme aims to: Facilitate: by providing wider access to valuable Earth observation data and ocean sensor data, and also ocean equipment through the network. The programme will also coordinate the involvement of established local maker spaces (such as at Eden Campus at the University of St Andrews and the Icelandic Fab Labs) in the network. This will enable after school ocean science and technology activities to be run with no significant upfront investment, by providing a supported resource in which sensors can be designed and built, geographical and biological data analysed, and placed-based sustainability studies undertaken with input from the local community.

Coordinate: by encouraging schools to liaise, communicate and work directly with other schools in the network with respect to activities in the 'Blue Space'; and also provide contact with industry, academia and learned societies for support and guidance.

Challenge: set regional challenges, encouraging schools to collaborate, compete and participate in designing, innovating and deploying ocean sensors in tandem with conducting local analysis of the data collected. Local engineering, instrumentation, equipment hire and IT companies will be involved via donation of their time and resource. This also acts as a contact link for the school students to the local technological workforce, providing potential future employment opportunities.

Karen Seath, Marine Industry / Science Interface D'Arcy Thompson Simulator Centre Limited, Walter Bower House, Eden Campus, Guardbridge, St Andrews, Fife, KY16 0US

WESTRIGG WIND PROJECT



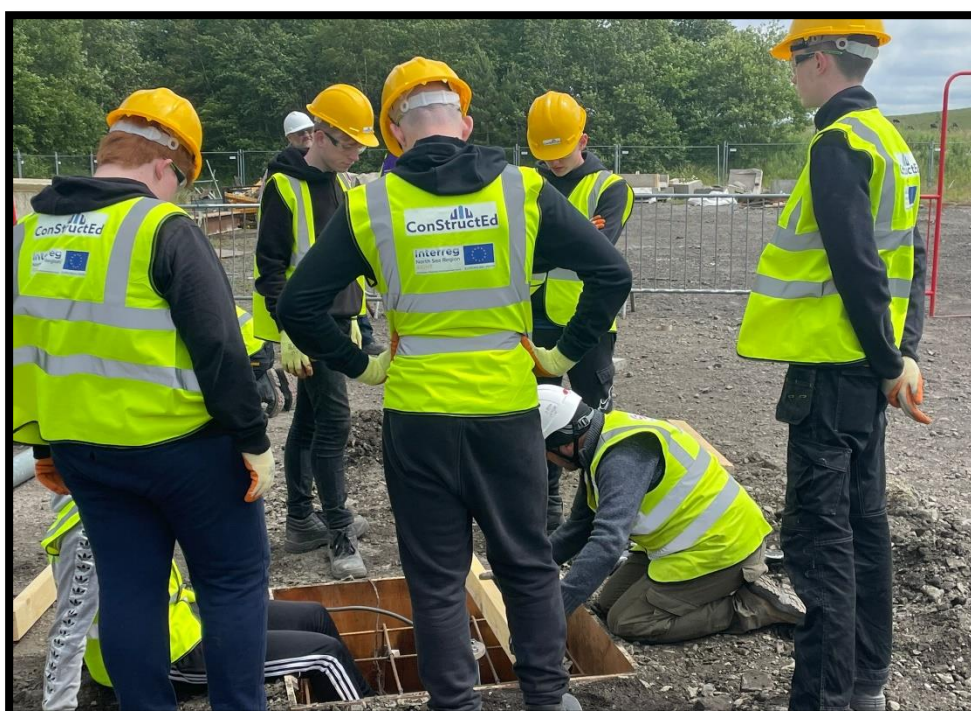


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A new and additional pilot program, funded by Developing the Young Workforce (DYW) Fife and the Interreg RIGHT project, and supported by Fife Council Employability Service and Culture of Enterprise, has been launched enabling 60 pupils from four of Fife's high schools to gain an introduction into the construction sector. It was created largely

The Westrigg Windfarm Project consisted of three days of site visits where young people worked together to plan and construct a working wind turbine and powerhouse from two-dimensional drawings. The young people were split into teams and had to assign themselves roles and plan on how to tackle the challenge of building the wind turbine. They were supported with the more technical aspects of the project but had to problem solve most of the planning themselves and were allowed to make mistakes. They were responsible for preparing the site, excavating, constructing the turbine, and wiring and electrics to make it a fully functioning wind turbine.

Speaking of the project, Ryan Hepburn, DYW Fife Lead at Fife Council, said:



"The project has exposed our young people to the construction sector, providing simulated hands-on experience and through this multi-phased development programme, makes our young people better equipped for the world of work.

"The enthusiasm shown by the young people and the collaboration of all involved to make the project a success has been fantastic.

"Providing such opportunities to learn about construction and renewables will hopefully allow our young people to make more informed decisions regarding their future career path."

the project was delivered by ConStructEd Scotland at the Sibbald Training Facility in Armadale. The pupils also took part in an e-learning Site Awareness course and a one-day Site Safety Plus course prior to attending the site. The students are now being supported to complete the CSCS (Construction Skills Certificate Scheme) touch screen test, which is a minimum standard requirement for anyone wishing to work on a construction site.



4.0 Conclusions

4.1 CHALLENGES

Most of the challenges related to the pilot have come about due to the ongoing Pandemic. It led to a delay in launch of our group due to a range of factors. Many partners were on job retention schemes (furlough) and were unable to work for lengthy periods of time, others had to refocus priorities to focus on core business, in some cases survival and others were adjusting to new ways of working and engaging which required a period of re-adjustment. The main impact of this is that we lacked the opportunity to meet physically. For groups of this nature, it is significant as it is often the discussions out with formal meetings that can lead to stronger partnerships developing.

When speaking of challenges, it is impossible not to mention Brexit. The Consortium model would have been an excellent vehicle to build on the RIGHT project and the transregional partnerships created from it in future activity but without the access to Interreg funding it will be much more difficult. This is a significant de-motivator and makes the project and pilots more difficult to 'sell' to prospective partners in addition to making us look inwards rather than outwards for collaborative partners.

Brexit also had the impact on a number of SME's, particularly those with EU and overseas markets which required a lot of refocus activity. It caused a difficulty to engage with a number of the companies we had worked with previously as they were too busy to focus on anything else. It is also worth noting that this situation is continually developing, and the full impact may not be known for some time. Rising costs, transportation issues, energy, access to talent are all likely to be affected in some way. It is also argued that there may be some benefits to UK SME's by being able to access new markets, better develop internal markets and talent supply though there is not much data to support this.

The loss of our project lead, Lucinda Mcallister who sadly had to retire due to ill health had a significant impact on our activity. Lucinda was very engaged in the RIGHT project and had established excellent relationships with partners. She was an inspirational leader for our project team and her loss meant that we lacked that driving force as well as a crucial financial decision maker which impacted on all our pilots. At the time of writing Lucinda has not been replaced though we have managed after some time to receive the support required to deliver our pilots.

4.2 OPPORTUNITIES

There are a number of opportunities for the consortium to sustain activity and even grow. The Blue and energy sectors are very significant to both the Fife and Scottish economy as it is, and it is likely that this will continue to be the case as the Energy transition gains momentum. We have just seen the contracts awarded for £700 million for new offshore windfarms which is a major development in Scotland's energy future, and this will bring a requirement to train and retrain 1000s of workers in a range of roles from construction to maintenance as well as indirect jobs in the supply chain and supporting sectors. Our consortium should provide a good vehicle to improve the planning in terms of skills toward realizing these opportunities.

The transition away from Oil and Gas also presents opportunities for fife. We have seen, throughout the life of the project the emergence of a Decommissioning facility in fife Energy Park. Cesscon Decom are engaged partners the consortium and have built an excellent triple helix relationship with fife council, St Andrews university in time this will lead to a range of opportunities for people seeking to enter the industry or to retrain into the new industry. It is likely that the decommissioning work in Fife will continue for some time and grow with the potential to expand into decommissioning of offshore renewables. Through the consortium we hope to establish a decommissioning campus that turns Fife into the center of excellence for sustainable re-use and repurposing of materials. This is a long-term objective that will be realized beyond the life of the RIGHT project, but the partnerships have been created due to RIGHT project activity.

For the consortium itself there are a range of opportunities to grow and continue activity. As we near the end of the project we will evaluate the funding position and it is likely we will seek new sources of funding to continue activity. Success in this area will be built on the strength of our partnerships and the activities that we have created through the consortium. Because the sector is so relevant to fife and to Scotland places us quite well for this and the combined expertise of the partners gives us a strong position to do so. Although we will no longer be in the North Sea Region Interreg program we hope that there will still be ways to build on the partnerships with our RIGHT partners in the coming years.

4.3 NEXT STEPS

The next steps for the Consortium are to continue our activity and to build on what we have learned. Our Objectives as outlined above if met will really boost the overall innovation ecosystem of Fife by creating new partnerships and opportunities and this should lead to measurable increases whether it is in the up numbers of new jobs or clients supported into the sector or the number of new research opportunities taken or uptake on existing funding incentives for employment.

A key action for the group now is to increase our employer engagement to help us realize these objectives more effectively. Over Q1 and Q2 2022 we hope to host a series of events to showcase the tools we have developed with the aim of achieving this and again our success will be measured on the strength of our outputs. One of the actions of the consortium is for Fife council to review our employer engagement protocols as business often prefer a single point of contact and can be confused when multiple people from the same organization contact them for similar things.

Our experience this far, in addition to from that of partner regions with more established Consortia/clusters + RIGHT project research shows us that these groups achieve the best impact and highest levels of engagement if they sit within Industry. For this reason, we are seeking to utilise some of our external expertise budget to obtain some experience for the remaining 6 months of the project Jan-June 2022. We feel that this step will maximise the impact of our consortium as well as having benefits for our communications activity and storytelling of our success. We Hope to have the procurement for this completed by January 2022 and are excited by the potential opportunities that this brings to enhance the network.

5.0 Outputs for new strategy and policy for Skills education and SME innovation

REGIONAL

1 The ultimate aim of the Consortium is to prove that the quadruple helix approach to improving the Innovation Ecosystem will act as proof of concept that the collaborative approach leads to better outputs when responding to the complex challenges and barriers faced by SMEs in skills development. There have been a number of learnings that have come throughout the whole of the RIGHT project and the Blue Consortium pilot has provided a platform to voice these. One example being the difficulty in SME's accessing funding potentially being improved through closer partnerships and support from academia and government (1). We also observe that the different components of the quadruple helix, education, business, government and community often have different priorities, speak different languages and hence have an incomplete understanding of each other's strengths and capabilities. The Consortium has been designed to be an intermediary here that can assist in demystifying and simplifying this map. If as outlined in our Objectives, we are successful this approach can be replicated for other priority sectors or groups of sectors with similar challenges which would be good for overall regional development. The scope of the group can also be broadened beyond skills to look more widely at regional development, resilience and how a triple helix model can support this.

2 As mentioned above, our consortium has of course created new partnerships. From these partnerships we can incorporate the new approaches into our own core employability delivery and academies. We have worked in our Environmental Access academy sub pilot (1) with the Verdancy group a Sustainability Training and Guidance SME and we aim to utilize their courses in all our core employability delivery. Not just for courses relevant to the Blue and energy sector but for all sectors that we support. This collaboration is a direct result from Blue Consortium networks and partnerships and is a good example of how we can use our networks to enhance our delivery in line with regional and national priorities.

3 We can also argue, based on the experience of our Env industry access academy for higher levels of funding support to be allocated to green/energy jobs for SME's. This would be a good way for us to use existing funding such as No One Left Behind and the Young people's guarantee to promote and support the sectors. This again is a good fit and a practical way to support regional and national priorities as set out in the plan 4 Fife (1) as well as addressing the skills for climate emergency action plan (1).

4. Smart Specialization Strategies. Fife region does not have a Smart Specialization Strategy though we have key sectors and key industries that are supported in various action plans. The Blue consortium and RIGHT project partnerships gives us an excellent opportunity to use the collective knowledge within the project to Develop strategies in the area of the marine Economy/Energy. We have already discussed the possibility of a future partnership with Skane region in regard to this.

5. Review of internal employer engagement protocol. Audit/ review of Teams projects who are engaging with employers to explore synergies and collaborations and improvements to process. Consortia member quoting, 'It's staggering the amount of people from Fife Council you speak to for similar things. This has

been a long-standing issue a review with the aim of establishing a new protocol or re-establishing existing protocol.

NATIONAL

1. Continued support for cross border collaborative projects (ETC/Interreg). Scotland has participated in Interreg programs for 30 years. The Scottish report on post 2020 Interreg highlights a number of reasons why it is important to continue, to work across borders but also specialisms and areas of expertise. If we are to lose these opportunities completely this will impact on the innovation capacity and competitiveness of Scottish organizations businesses. (1) The key themes of Smarter, greener, Closter to citizens are in tune with National goals sustainable economic development.
2. Continued and enhanced support for Blue/green clusters. If policy is key to ensuring we make the most out of the potential jobs boom it is really important that these groups are able to work and shape the RIGHT policies. Compared to partner regions our existing clusters are underdeveloped. Although this is a disadvantage it provides the opportunity to learn successful approaches from RIGHT partners.
3. Simplified funding/ increased support for SME's. We see this as a continual issue raised by SMEs throughout the life of the project and it is even echoed by partners in other regions. As mentioned above we often need intermediary groups or professionals with the knowledge and expertise, and this relies too much on people and personal connections for things to run effectively. The Scottish funding portal is good but by no means comprehensive and this is an area that could be improved.
4. Enhanced support for the creation and development of blue/green jobs. More targeted approach to developing the skills required for the sector. Businesses, education and government working in triple helix partnership to achieve this.

NORTH SEA REGION

1. Flexibility on adding partners – Opportunities to add partners after the application stage would have been beneficial for Fife. We had partners willing to match fund pilot activities, but it seemed impossible to add them or to procure for external expertise. I think, had we been allowed to do this our project would have been stronger as we had financial support from local politicians and plans to work with community development groups
2. More guidance for partners in terms of procurement. The NSR factsheets are not clear and there is inadequate support for queries. When queried I was redirected to the factsheets that are ambiguous which could lead to mistakes being made.

6.0 Potential for upscaling/learning Transfer/Internationalization

There is a good deal of potential in the Blue consortium to upscale our activities as we proceed through the life of the RIGHT project and ideally, beyond. The group has been designed to grow organically as people use their own networks and contacts to bring people along. We also plan to host a series of events and seminars with the aim of engaging more SME's and bringing them onboard to the group. There is also the potential to collaborate/assimilate the consortium into other existing groups if it is chosen to do so. This will be something that can be decided on in the future.

The consortium model could also be replicated for other sectors and key sectors within life. Experience this far suggests that this would be beneficial as it would at the very least improve the overall knowledge base amongst the various organizations and improve our understanding of skills challenges and other barriers to innovation and growth within the sector.

There is also a great deal of potential for the group to seek new funding streams to continue the activity. This will depend of course on the success of the group and will be measured on our outputs and tools that can be developed. The consortium model provided a good basis and a good range of institutions to be able to bid on new and existing funding streams. One of the current actions is to map the green/funding situation with SMEs in mind but this could be useful to all partners within the group and even to the group itself.

Another decision that may be made is to commercialize the Consortium. Currently there is no membership fee and the budget for activity has been covered via RIGHT staff costs or the external expertise budget. The group may decide to make it a membership organization depending on which business model it is decided but there is possibility here and some advantages in the cross sectoral, quadruple helix approach. If this course of action is taken, then we can build on the expertise of other partners such as Skane region to develop this model. For this the consortium pilot is a good vehicle for knowledge transfer. Additionally, tools developed by partners can in effect become transferrable and there are plans for February 2022 to offer the Swedish, 'Mind the gap pilot' with five SME's.

For us in life, the cross regional learning is a huge benefit. In some ways we are well behind other regions in terms of Consortia or cluster groups so we must build on what has been learned in partner regions but there are also areas where we are strong and can pass on expertise. There is a good opportunity for cross regional events + seminars to promote this and we aim to build on our work so far. This is included in our ongoing action plan. As mentioned, we aim to work closely with Sweden on their mind the gap pilot and their Industrial development center and we also aim to continue work with Ghent to build on the Marine training pilot and to explore the creation of a simulator center in Ghent similar to the Darcy Thomson. There is good potential for the simulation led approach to be replicated in partner regions.

7.0 Footnotes.

1. Fife's Economic Strategy 2017 – 2027 available at
<https://www.investfife.co.uk/wp-content/uploads/2021/07/fifes-economic-strategy-2017-27.pdf>
2. Plan 4 fife 2021 -2024 available at
<https://our.fife.scot/plan4fife/plan-for-fife-2021-24>
3. Scottish Renewables Publications
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5. Green Jobs in Scotland STUC
https://stuc.org.uk/files/Policy/STUC_Green_Jobs.pdf
6. A Blue Economy Vision 2022 - Scottish Government
<https://www.gov.scot/publications/blue-economy-vision-scotland/>

8.0 Annex.

Annex 1 Simulation-led, FA+ST/Smart, Sustainable Fife

Annex 2 Nautilus Ecosystem program

Annex 3 Nautilus ecosystem challenge

Annex 4 Nautilus Ecosystem Overview

Annex 5 Environmental Industry Access Course (consortium academy)