

 Vysus Group

**PLANT22**<sup>0</sup>

The transition  
to a sustainable  
future

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Collaboration is all about learning on all sides and working together to improve lives.

Emma Haggart  
Senior Well Engineer



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## Collaboration and innovation working in perfect partnership



*An innovative drilling project in South Tyneside needed our collaborative approach to create a revolutionary energy centre in the local community. Emma Haggart, Senior Well Engineer, was part of that team.*

The Hebburn Minewater Project will provide a renewable source of heat for public sector buildings in the town of Hebburn. These include high-rise flats and supported living accommodation and the local shopping centre, with water from the disused mine on which Hebburn sits being the key component.

Vysus Group, the local council and external specialists, joined forces to commence the drilling of the geothermal well - crucially ensuring that the operation would have as little impact on the surrounding community as possible, especially as the site is in the heart of the town. One particular issue we looked to address was minimising any vibrations and noise caused by the drilling of boreholes, using our applicable oil & gas knowledge.

Taking the skills from oil and gas, such as risk assessments and surveying, has been key to this project and its safe implementation. The same knowledge can be used in explaining to the wider community that whilst there will be a level of disruption over the course of the project, but there will be tangible benefits to come off the back of it.

The energy centre at Hebburn will become operational in 2023. But that doesn't mark the end of the project. Further councils across the region are starting to take note of its potential and are exploring how the disused mines in their own constituency can be repurposed as renewable heat generation facilities.

For me, this is what collaboration is all about; learning on all sides. Projects like Hebburn will help a lot of people's lives going forward, and even the ex-miners in the area have been excited to see future work in their local community. And I myself have learnt new skills, including what a geothermal well project entails in comparison to a gas well, which I have based my career around.

Hebburn has also revealed that without the skillsets from years of oil & gas, the technology being used within the renewables sector would not be possible. The systems, processes, and the very foundations that we had been using for years are adapting in much the same way we ourselves have had to in recent months. That is where collaboration has a pivotal role.

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By lending others our expertise,  
it creates the best opportunity for  
both short and long-term success.

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Catherine Reynolds  
Key Account Manager



## Working in partnership for a common goal



*Vysus Group's Planit22 campaign goes beyond company objectives – it is how we adapt our methods to facilitate the energy transition. In order for this to be successful, there must be an improvement in global cooperation.*

*Catherine, our Key Account Manager, expresses how collaboration lies at the heart of Vysus Group.*

Collaboration, to me, is working together in partnership to achieve a common goal for the benefit of all involved. It is key to what we do, and the very nature of the services we provide as an engineering consulting business.

Vysus Group's services are wide ranging, so our clients gain access to the full set of skills and capabilities we possess. We are able to manage our customers' requirements as our service lines work closely together as part of our proactive approach.

Many of the services we provide are required by the same industry and the same customers, so we have to collaborate to be able to meet their individual needs.

In order to implement this, we work across discipline, geography and industry, allowing us to work in synergy to achieve the desired outcome.

As well as collaborating internally within Vysus Group, the nature of our consulting work requires us to collaborate and work in partnership within our client organisations to achieve their objectives. By lending others our expertise, it creates the best opportunity for both short and long-term success.

An example of this would be our asset performance management health check workshops, which help our clients balance cost, risk and opportunities. By getting the experts such as the maintenance managers and engineers to collaborate together in one place, the areas of improvement become clear, and we are able to strengthen capabilities.

These workshops are across industrial sectors - from oil and gas to nuclear energy and utility businesses. Projects like this have significant value as you are able to clearly see the gaps and deficiencies but also areas of excellence. Collaboration is vital in consolidating an organisation's strengths and identifying areas for improvement.

In order to support the global energy transition, we have to think innovatively. Rather than reinventing the wheel independently, which would be inefficient, we need to work together and combine the knowledge we have.

This way we can meet the common goal of net-zero through the most efficient means of resources.

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Each party must recognise that the energy transition involves every single person on the planet.

William Hodshon  
Head of Offshore Wind Site Assessment



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## The international reach of active collaboration



*Vysus Group's Planit22 details a new world where the international community learns how to utilise the full potential of clean energy sources. However, this can only be achieved through collective, global cooperation.*

*William Hodshon, Head of Offshore Wind Site Assessment, illustrates why the energy transition requires collaboration on both a large and small scale.*

For me personally, collaboration is people who wouldn't normally work together, assembling for a mutually beneficial outcome. It can involve a variety of stakeholders working towards a common goal, which can work on a variety of scales.

Collaboration on a microscale is what we at Vysus Group practise regularly. In my service line of survey & GeoEngineering, we initiate our projects by understanding the geology of a potential offshore wind farm, in order to assist foundation engineers with their designs.

A huge part of our work is international, and we collaborate with other specialists to assess the potential for wind farm leaseholds.

Through workshops, we are able to bring together our own specialisms such as MET ocean risk, UXO risk, visual impact or orthological issues.

Together, we come to a mutual agreement which benefits all sides in terms of the project's success.

Alternately, on a larger scale, there are three parties working simultaneously - the consumer, the industry and the government. All parties would admittedly prefer renewable energy to be the norm, however, each has their own set of conditions before this can be in effect.

For instance, the consumer demands price efficiency, the industry is riddled with competition, and government has a multitude of prerequisites within geo-political and social issues.

For collaboration to be successful on this wide scale, each party must recognise that the energy transition involves every single person on the planet. Therefore, the speed in which it needs to happen should be a priority, especially when events such as the Ukraine conflict are factored in. Energy security is now at the forefront of our concerns.

The benefits of international collaboration are limitless, particularly in my area of expertise. There is often not one type of foundation that works best; there are usually a few options.

However, this decision is made based on the economic benefits and what can be sourced locally. The US, for example, has its oil and gas industry, where energy can be mass produced effectively and locally. Yet, a lack of familiarity with monopiles means these would have to be imported, at great cost.

If countries were to work together in supplying resources to make improvements, then collaboration would have a lot of potential in supporting the energy transition.

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The key to successful collaboration is partnership.

That's embedded in everything we do at Vysus Group.

Alex Munro  
Global Lead QHSE Advisor, Senergy Wells



## Everyone needs to be on the same page



*Vysus Group's Planit22 campaign demonstrates how we can change our mindset and ways of operation to support the global energy transition.*

*Alex, our global lead QHSE advisor, likens collaboration to football, demonstrating how individual 'players' are crucial to a successful team and how this approach helps him to support the various business streams in his own work within Vysus Group.*

Collaboration is about working smarter and efficiently, finding the individuals with expertise outside of your own skillset to make that happen. You are saving your resources, time and cost to come to a greater result than you would working independently. In my scope of work, the most significant benefit is reducing risk, and can be shown in one of my recent projects assessing a drilling contractor. Essentially, I was expected to identify problem areas, however working within a partnership meant that I also worked to improve and enhance their own systems.

It is often said that there is no cost in safety, but there is, whether that be in the front-end or back-end of any incident. If we have the means to collaborate and reduce this risk at source, it is a win-win for everyone.

In my eyes, what the global community needs to do in order to achieve a collaborative energy transition is set clear goals and objectives which are needed right from the outset. That is embedded in everything we do at Vysus Group, as partnership - one of our core values - plays a significant role in how we operate.

Whether it's with clients, contractors, colleagues or other stakeholders, partnership is essential. Having that trust in one another - trust is another of our core values - enables greater results.

Working internally with our various service lines, a large portion of my time is spent supporting ModuSpec, undertaking rig intakes, management system assessments, dropped objects, environmental or any verification compliance assessments for the clients.

Having someone to work with collaboratively with QHSE expertise and knowledge available at the other end of the phone or email ensures the delivery of services with confidence and quality.

To support the energy transition, collaboration is extremely valuable. The oil and gas sector already has mature systems in place, of which the renewable sector is only just now embedding within its own foundations of safety. Working with offshore wind sector before my current role, it is evident that there is a magnitude of crossovers, so working collaboratively would make the energy transition swift and seamless.

“I see collaboration as being involved from the start, to gain better value for the clients as we can identify any problems earlier on.”

Ian Thomas  
Senior Principal Consultant



## The stars are now aligning



*Vysus Group's Planit22 campaign details how we can show our commitment in playing our part to facilitate the energy transition.*

*Ian Thomas, one of our senior principal consultants, explains what the idea of collaboration means to him, and how it can propel innovation. He details the need for urgency in collaborative working when supporting the energy transition.*

Collaboration for me is deriving better value for the clients and allowing us to think more creatively whilst challenging ourselves. It has been a journey for me - back in the day as part of a department of environmentalists, I was part of a group of 15 people who didn't speak to anyone.

Nowadays, I can imagine you get two or three specialists working closer together, meaning you get much better value if you work across the board.

Back then, collaborative work used to include handing over unfinished tasks further down the line, and by that point it was often too late to make a meaningful contribution. However, I see collaboration as being involved from the start, to gain better value for the clients as we can identify any problems earlier on.

I've worked on several projects where I think the collaborative nature has yielded a much better solution. As a biology student, I know you need the right ecosystem to thrive, and here at Vysus Group we have that fully integrated solution which a lot of our competitors lack.

I was recently supporting on a financial transaction of a refinery in the southern states of America, where it was clear to see how collaboration makes Vysus Group special. We've worked with other external organisations in the past such as Deloitte and Arthur D Little, offering our environmental safety due diligence skills. However, this time was different as we were supporting our own asset integrity team to go out and review the asset for sale.

It's that combined approach which allows us to give better value to our clients, and incidentally allowing us to offer new products and services.

For things to happen, we need to be in alignment. As a microbiologist I've seen this before. I've recently witnessed conversations around CH<sub>4</sub> being used as a hydrogen carrier and how it can be produced by biological means. Yet, I remember studying that 20 years ago!

The technology has been there, and for it to happen the second time round, the political, regulatory and financial factors need to be in alignment.

In times of necessity there is always a need to collaborate, but more often than not people revert to competition. In terms of the international community, I hope we can do things differently this time around as we have a bigger problem to solve.

People can go so far with incremental improvements but every so often there will be a paradigm shift. Something will come out of nowhere, out of left field and that will probably be a discussion with somebody that isn't in the usual domain.

What does collaboration mean to you? X

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... so let's figure out the best way to solve that problem.

Vishal Lagad  
AMC Operations Director for the Americas



## A collaborative process is an efficient one



*Vysus Group's Planit22 campaign is based upon three pillars; education, collaboration and integration.*

*Vishal Lagad, AMC Operations Director for the Americas, explains what collaboration means to him, and what is needed to improve international collaboration in order to meet sustainability commitments worldwide.*

In a practical sense, collaboration is handpicking 'pockets of excellence' from both internal and external stakeholders, creating a more effective and efficient method to solving problems.

This means drawing the best people from any geography, background or position in the company. It is by this method that we are able to support the client to the absolute best of our ability.

Essentially, we have to consider whether we have the correct people, in the right area of expertise. If not, where can we source the additional support?

Collaboration is essential for project efficiency, as evidenced by our pipe vibration analysis in the Netherlands earlier this year. Expertise from external organisations provided the necessary regional compliance knowledge, and this was supported internally by our own vibration analyst based in Houston, Texas.

Further collaboration with international partners enabled us to fulfil the additional base work to meet our deadlines. If there were areas where we could bring somebody in from the outside, it meant we could get it done efficiently and have people working in parallel rather than traditionally, step-by-step. Having various groups working in synergy was a vital component in the project's success, and we would not have been able to meet the client's needs if not for our collaborative efforts.

The technological advancements and increased pressure to facilitate working virtually due to Covid-19 have given us the tools to get on the same page. Whilst time zones can be viewed as a logistical nightmare and an obstacle to some, the bottom line in driving collaboration comes from mindset.

Being in this industry for twenty years, and observing the common mentality of self-reliance and assuredness, things are changing and there has certainly been a shift. Once you realise what you have to offer is finite and limited, and that there are other people out there with their own resources, you discover that the best way to solve a problem is not always what was done traditionally.

What does collaboration mean to you?

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It's the aspect of multiple disciplines which you need to combine, of which I'm just one piece of the puzzle.

René Smidt Lützen,  
Principal Consultant



## Collaboration is about what you can't see as well as what is above the surface



*René Smidt Lützen, Principal Consultant, dives deeper into how collaboration delivers the best possible outcomes in offshore wind projects.*

To me, collaboration is like a puzzle; different pieces all need to join to produce a clear picture. The energy transition is one of the biggest puzzles of our time, but it is one that I am excited to play even a small part in solving.

At Vysus Group, we have teams across the world, all with varied skillsets but which are all needed in order to make the energy transition sustainable. My specialism, offshore wind, is a perfect example of collaboration in action.

Together with researchers, technical personnel and marine biologists, my team and I generated a comprehensive underwater noise study for a Danish offshore wind project, revealing the likely effects of the noise on marine life. Through various surveys of the environment and how sound travels through it, alongside our technical predictions, we were able to deliver a model which the client could feel confident would comply with legislation set by the Danish Environment Agency.

Marine life is something I have long held a passion for and collaborating with the various groups was a really satisfying and meaningful experience in itself, but to be able to achieve our objectives to make a difference for the environment and the protection of marine life made it even more significant.

Collaboration exists through all levels at Vysus Group. Teaming up with colleagues, working together and sharing experiences is one thing, but joining efforts to achieve the targets is what drives us further on. I have seen through working alongside my international colleagues that when you join forces across disciplines you can achieve so much more than when you stick within your own comfort zone.

By its nature, the energy transition is multi-disciplinary. As a technical specialist, my area of expertise is within acoustics, but when I bring my knowledge together with other experts in other fields, we both have the opportunity to go so much further and achieve more. Working on a project to project basis, we are able to work with external consultants who know the local regulations and can provide us with the deep insights we need to confidently meet compliance requirements wherever we operate.

Because there isn't a standardised set of rules or regulations for underwater noise globally, we welcome partners that know this space and combine it together with the technical knowledge we have amassed in the course of our energy heritage.

Finding a sustainable solution to the energy transition is a large puzzle, one that combines several disciplines. Professionally, it's exciting and challenging at the same time; on a personal note, being able to collaborate with multiple experts in their fields, for the benefit of our environment, gives me great pride.





“ Without a desire work together, all the technical advancements we have made in recent decades will be for nothing. ”

Kristina Gillin  
Principal Consultant



## Taking what we already have and making it better



*Having written extensively about managing nuclear waste management and decommissioning throughout her career, Principal Consultant Kristina Gillin has seen collaboration in action on several occasions.*

*Now the spearhead for the development of our sustainable decommissioning offering, Kristina explores why leveraging existing knowledge is key for the energy transition.*

Collaboration is as much about mindset as it is the physical sharing different skills. Without a desire to work together, all the technical advancements we have made in recent decades will be for nothing.

At various points in my career, I have encountered the view that electric will solve everything. Cut down emissions in transport? Go electric. Store energy? Use electric. And yes, electric will be a key component for meeting our future energy needs, but it is not the only one we have. Furthermore, switching to full electric would require a huge investment in new infrastructure and in time which we don't realistically have.

Here is where we should be collaborating more efficiently to achieve positive outcomes.

Looking at what we have already in the nuclear sector, particularly when the facility reaches the decommissioning stage, a circular economy built on the foundation of collaboration has the potential to bring new life into assets that otherwise would have either been abandoned.

In Sweden for example, decommissioned nuclear facilities are now being used as training centres for the next generation of experts all the way through to conference venues. These would not have been possible if not for the shared input of technical, cultural, and political stakeholders, and the external advice of organisations like Vysus Group, which have that inside knowledge of each side of the table.

Even in domestic networks, collaboration has been shown to be vital in maintaining the generation and distribution of renewable energy. Again, looking at Sweden, the highest consumption of energy is in the south, where major cities such as Stockholm, Goteborg, and Malmo, are all located, yet generation tends to come from the north. Identifying the challenges associated with transmitting energy the full length of a country is far from being the sole responsibility for one stakeholder group – a collaborative approach not only finds areas of weakness but also reveals the solution to this issue.

In short, collaboration is the result of individual stakeholders drawing on different yet complementary skills and taking learnt lessons to deliver true, authentic change.

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Each side involved in a project needs to have an open mind and communicate with each other efficiently for collaboration to be successful.



Simona Caruso  
Senior Geoscientist



## “Everyone needs to be on the same page” - Simona’s experiences of creating a collaborative working environment during a pandemic



*Bringing groups of people with different skills and ideas together isn't always as straightforward as it might seem; add a global pandemic into the equation and the need for innovative ways of working becomes more imperative. Simona Caruso, Senior Geoscientist, explores how to get all stakeholders involved for the benefit of the project.*

As a dual national citizen, learning new cultures and adapting to a different way of working is something I have naturally had to factor into my work. For the clients I work with, who themselves are often located in completely different timezones, having a point of contact who has an appreciation of the challenges they are facing when working in an unfamiliar area brings a sense of reassurance.

For me personally, bringing my experience of moving to a new country and the technical knowledge I've gained from my career to a client and to colleagues is what makes collaboration possible. But before any project can start, the communication has to be right.

Each side involved in a project – consultants, researchers, and investors, amongst others – needs to have an open mind and communicate with each other efficiently. If we take the ways in which Covid-19 forced everyone to adapt operations, it is now less challenging for these groups to get into one 'room', and this process is something that is here to stay in the form of online workshops.

Collaboration from other areas can be good sources of inspiration. Sport is one such example, one that I have experienced in my personal life. It is a perfect model to follow for collaboration in action – while team members have individual ability levels, we are all working as one towards the same outcome.

This is what is needed in the energy transition. While we are all unique in our abilities, in the end, what matters most is that we continue to share knowledge and experience. At the same time, we also need to be active, rather than simply talking about what needs to happen. Otherwise all the collaborative efforts from across the entire energy sector will be in vain.

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