



IMPACT REPORT 24/25

Our commitment to a **sustainable** future for everyone

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Our Journey to a Sustainable Future

1989

Industry 3.0 The Foundations

Founded in 1989, Booth Welsh began its journey within the framework of Industry 3.0 by offering traditional engineering services.

2017

Transition to Industry 4.0 Digitalisation

Booth Welsh embraced the shift to Industry 4.0 by merging over 30 years of core engineering services with cutting-edge digital technologies.

2022

Embracing Industry 5.0 People, Planet, Profit

Driving our mission of, 'Through collaboration, we engineer a better future,' Booth Welsh is at the forefront of embracing Industry 5.0, merging profit with purpose.

Future

Impact Summary



reductions in emissions intensity against our electricity usage.



of eligible staff signed up for the Electric Vehicle Salary Sacrifice Scheme that was launched this year.



50% reduction in emissions by 2030 in Scopes 1 and 2 emissions



reduction in waste related emissions



reduction in energy use



Powering Futures Carbon Reduction project saves 9.47 tCO²



local businesses engaged in our Net Zero Programme



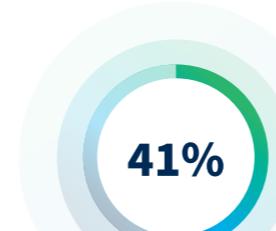
of staff live in Ayrshire. 98% in West of Scotland



of our supplier base in Ayrshire



Energy Dashboard helps identify targeted energy use



Powering Futures Carbon Reduction project reduces gas usage by 41%



involved in 6 strategic projects to build community wealth in Ayrshire



One third of our annual revenue generated in supporting Ayrshire's industry



locally owned by our management team to Engineer for a better future

A foreword by our CEO

Martin Welsh

Founded in 1989, Booth Welsh has evolved over the past 35 years, continuing to grow into the agile, independent business we are today. We employ over 300 people, working on projects and sites primarily in the UK, but with true international experience and capability.

Our 5P's of Purpose

In a year of significant change in business, politics, global affairs and technological advancements, we reflected on our mission and goals, reshaping our sustainable growth strategy. As a result, we have embraced a new framework: the 5 P's of Purpose – People, Planet, Place, Product and Profit. This approach will ensure alignment with our business objectives and core capabilities, driving us towards our sustainable growth ambitions. By measuring impact across all five areas, we are strengthening how we communicate and deliver our mission to our workforce, community, and customers.

Embedding Sustainable Practices Across the Business

We're committed to a Just Transition, focusing on making the shift to a low carbon, sustainable future fair for everyone involved; our employees, communities we work in, and partners we collaborate with. This commitment has sharpened our approach to net zero targets, balancing emission cuts with social and economic considerations. We've learned that it's crucial to weigh our environmental aspirations against real-world financial and social impacts. Through our supply chain readiness programme, we've seen the importance of working closely with our suppliers to encourage sustainable practices and develop solid plans for reducing carbon emissions.

To keep things clear and manageable, we've divided our net-zero goals into two categories. For Scope 1 and 2 emissions, which we have direct control over, we're aiming to cut emissions by 50% by 2030 from our baseline. For Scope 3 emissions, we're still gathering the necessary data to set realistic targets. We're ramping up efforts to get the information we need to make informed decisions. Building on our 2023 carbon reduction efforts, we have formed a Net Zero Heroes team with members from each department to further embed sustainability principles across the business. The team is focusing on progressing our carbon reduction plans, leading our supply chain readiness programme, tackling Scope 3 emissions, supporting suppliers with their own carbon reduction plans and driving our purpose across the business. Despite growing in size this year, I am pleased to report reductions in overall emissions, **with over 50% reduction in waste related emissions.**

in, and partners we collaborate with. This commitment has sharpened our approach to net zero targets, balancing emission cuts with social and economic considerations. We've learned that it's crucial to weigh our environmental aspirations against real-world financial and social impacts. Through our supply chain readiness programme, we've seen the importance of working closely with our suppliers to encourage sustainable practices and develop solid plans for reducing carbon emissions.

This is even more impressive considering we are now measuring more of our footprint than last year, and our employee count has increased. We have also created new roles to help embed sustainable practices across the business.

Industry 5.0 is Helping Reshape the Future of Industry

Industry 5.0 has the potential to change the way we deliver technology. Our early exposure to this next wave of innovation has given us a look at what is coming next and we believe it can help to reshape the world of manufacturing by blending advanced technologies like AI and robotics with a focus on human values. It emphasises human-machine collaboration, fosters creativity, sustainability, resilience and wellbeing. By prioritising ethics, societal impact and environmentally responsible business, Industry 5.0 aims to enhance human potential, ensuring technology serves people and communities for a balanced future.

Delivering the Solutions Critical to a Sustainable Future

COP29 highlighted the urgent need to reduce emissions and advance the UN Sustainable Development Goals. The World Economic Forum notes that **AI and IoT could cut 50% of manufacturing emissions—20% of global emissions—by 2035.** We have the capability to help deliver these COP29 priorities: implementing renewable energy, enhancing energy efficiency, and leveraging AI and IoT for measurable emission reductions.

For over 3 decades, using our core engineering services of process, electrical and instrumentation and more recently mechanical and piping engineering, we have provided our clients with industrial process controls and energy optimisation services and solutions. In 2024, as part of our drive to add a new product to our core engineering services, we partnered with the Smart Manufacturing Data Hub (SMDH) to launch an energy monitoring solution. Local businesses Emergency One and Taste of Arran were pilot projects, implementing our system and in turn benefiting by being able to identify energy efficiencies. Although these two projects were much smaller in size than our larger multidiscipline projects, they were very significant in developing our new product which will

help other new clients, across a wide range of sectors, gain valuable insights to support sustainability and optimise their operations.

The Importance of Enabling Community Change Makers

Although Booth Welsh deliver projects all over the world, **over 60% of our team live in Ayrshire.** It is therefore a priority for us to support our local community - not only because it's the right thing to do, but because it has helped us attract exceptional local talent and build trusted client relationships that span decades.

Now, halfway through our third decade, we take pride in our heritage and the positive impact we have made in Ayrshire, a hub of collaboration and innovation driving sustainable economic transformation. Partnering with North Ayrshire Council, we are supporting digital enablement and energy optimisation to help local companies achieve sustainable growth. Ayrshire's exceptional talent, innovation, and focus on sustainability have attracted global companies, many of whom we are proud to call clients. We look forward to helping our clients implement the sustainable processes & systems which will lead to reduced energy consumption, lower waste disposal costs, and more efficient use of resources, resulting in significant cost savings. This work in sustainability will in turn help us to grow into new sectors and employ more local staff to continue to develop our world class services.

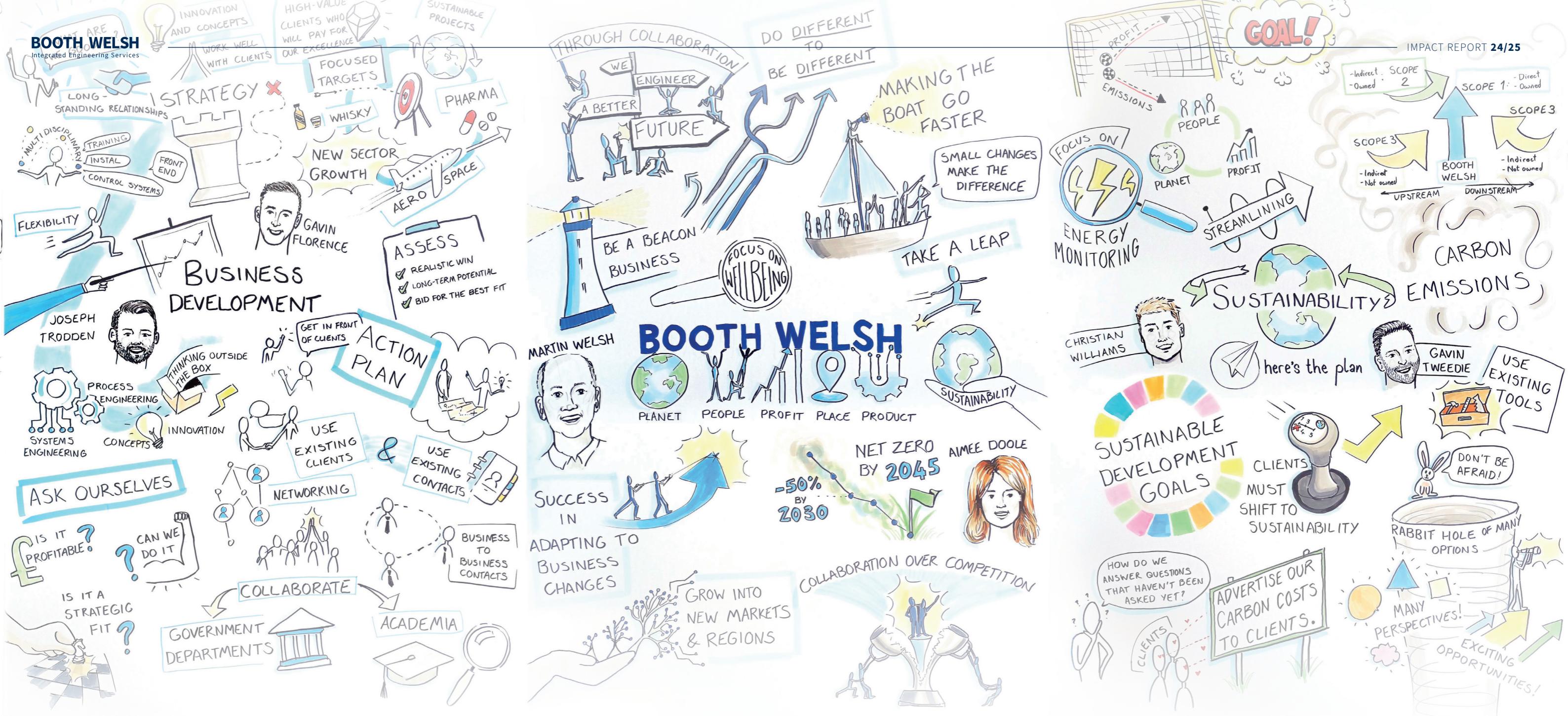
In 2024, we proudly partnered with the Ayrshire Chamber of Commerce to sponsor the Community Wealth Building Award at the Ayrshire Business Awards. This award celebrates those change-making organisations making meaningful contributions to local economic development and social value. We were inspired by the dedication and impact of all the nominees, with 9CC Group deservedly winning for their outstanding work in community wealth building.

By investing in the local workforce and engaging in community projects, we continue to reinforce our commitment to regional economic growth, resilience, and sustainability.

And now... It is with great pleasure that I share our 2024-2025 Impact report with you.



MARTIN WELSH
CEO



Through **Collaboration**, We Engineer a **Better Future**

Our Mission

We develop and nurture the talent of our entire workforce, empowering people to do better every day and enhancing their health, wellbeing and fulfilment. We practice open and collaborative working with colleagues, clients and other stakeholders, leveraging key talent to be leaders in thinking and practice. We are visionary and ambitious, promoting creative, innovative and agile ways of working. We aspire to make a positive impact on the environment.

Realising our Ambition

We hosted our team 'Away Day' at CentreStage in Kilmarnock. The goal was to take a step back from the office to collaboratively shape the future direction of Booth Welsh.

The day, which centred around the theme of "making the boat go faster," was packed with innovative ideas and focused discussions aimed at enhancing our strategies. We had a mix of in-depth sessions and interactive elements, making it as engaging as possible. We also enlisted the help of a graphic illustrator to help bring our ideas to life in a visually impactful way.

Our 5P's of Purpose



Place

We believe in making a positive impact on the communities and environments where we work. Our aim is to contribute to the well-being and wealth of the communities we serve and leave a positive legacy in the places we operate.



Planet

We recognise the urgent need for environmental responsibility and are committed to building this into our strategy. Our aim is to operate in an environmentally sustainable way that supports a healthier planet for all.



Profit

We recognise the importance of profitability in ensuring the long-term sustainability of our business. However, we also believe that this must be achieved responsibly, with a commitment to ethical and socially responsible business.



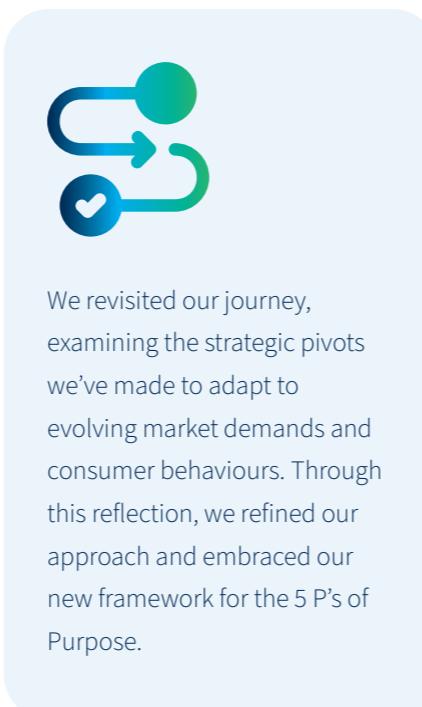
Product

Our services and future offerings are designed to be market-leading, while also supporting a sustainable future. We are committed to providing solutions that address the challenges facing our clients and the world around us.



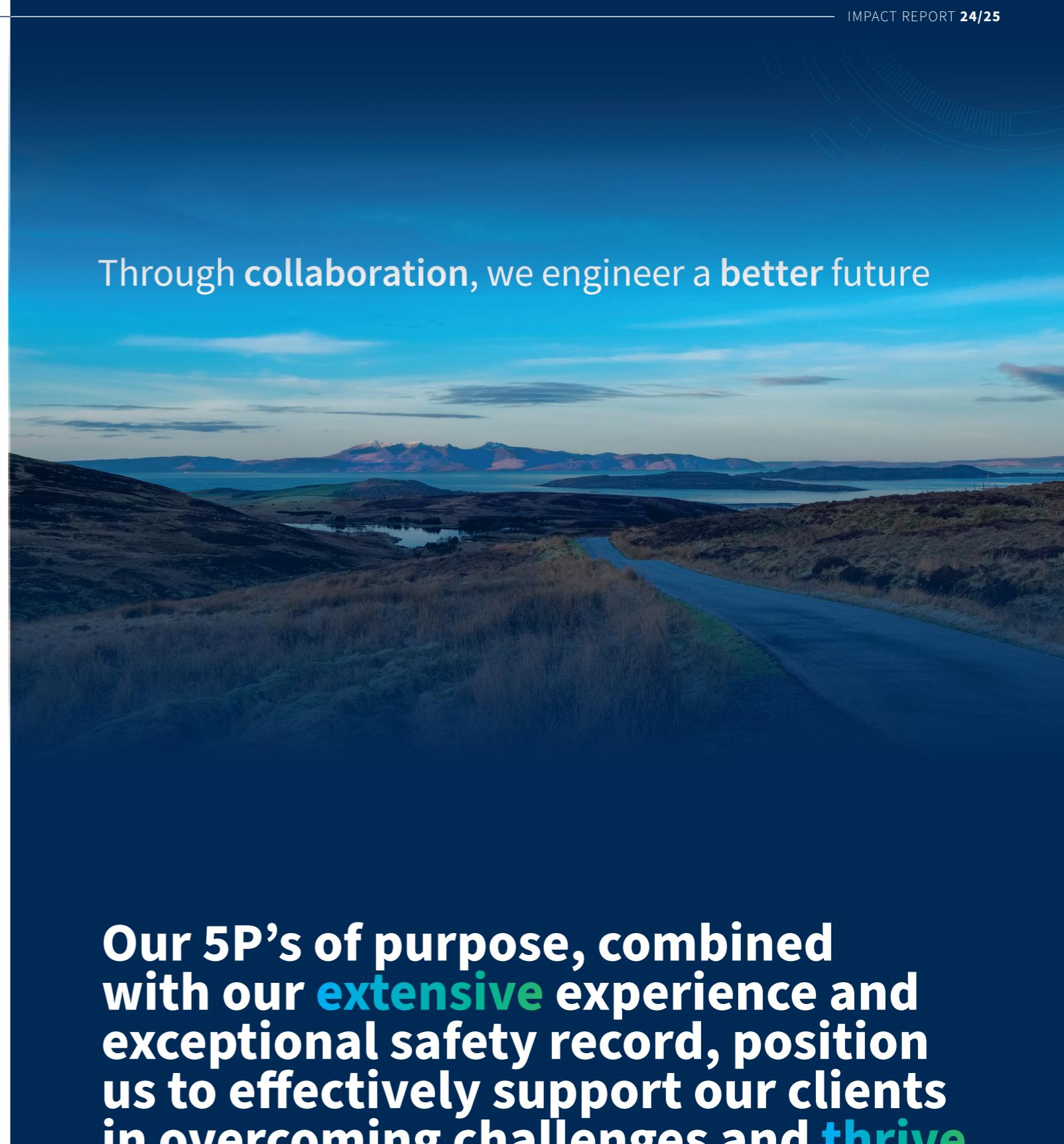
People

As a services business, our success depends on investing in and developing the potential of everyone who works for us. We are committed to our employees to reach their full potential and achieve personal and professional growth.



We revisited our journey, examining the strategic pivots we've made to adapt to evolving market demands and consumer behaviours. Through this reflection, we refined our approach and embraced our new framework for the 5 P's of Purpose.

Through collaboration, we engineer a better future



Our 5P's of purpose, combined with our extensive experience and exceptional safety record, position us to effectively support our clients in overcoming challenges and thrive for a more resilient and prosperous future.

A Blistering Pace of Change

The business environment over the next five years is set to evolve dramatically due to shifts in consumer behaviour, economic dynamics, societal expectations, technological advancements, and environmental imperatives. With our 5P's of Purpose we have set out a strategy that will help us and our customers to future-proof our businesses in this rapidly changing landscape.



People Centricity



Resilience



Sustainability

Shifting Gears to Industry 5.0

What is Industry 5.0? Simply put, it's about putting people back at the heart of industry. Unlike Industry 4.0, which zoomed in on tech-driven efficiency, Industry 5.0 brings a balanced approach, making sure innovation serves the people who drive it, supports a sustainable planet, and builds resilience to future challenges. Instead of tech for tech's sake, it's tech that works with us, not around us.

The shifts from Industry 4.0 to 5.0:

1. People-First Approach: Industry 4.0 focused on making processes faster and more efficient. But Industry 5.0 is about finding that sweet spot where technology enhances people's roles rather than sidelining them.
2. Sustainability as Standard: In Industry 4.0, sustainability was often more of an add-on than a main focus. Industry 5.0 builds it into the core of the process, so growth and environmental responsibility go hand in hand.
3. Resilience over Pure Efficiency: Industry 4.0 was all about efficiency, but Industry 5.0 places its bets on resilience. Think of it as building systems and supply chains that are ready to adapt and bounce back, whatever the future throws at them.

At Booth Welsh, we are **all in** on this change.

Our work in people-centric design, sustainable engineering, and resilience-first strategies shows just how ready we are to make Industry 5.0 a reality. And sharing these insights at recent conferences gave us a chance to bring this message to a wider audience: Industry 5.0 isn't just an idea – it's a practical way forward, and it's happening now.





Our clients operate in a range of energy intensive industries including Pharmaceuticals & Life Sciences, Manufacturing, Utilities, Defence, Energy & Food and Drink. Our process design and optimisation solutions are helping many of them to make progress with their own Net Zero plans, achieving significant reductions in processing time, energy usage, emission reductions and of course, cost savings.

Reduced Chemical and Water Usage in Pharmaceutical Production

Industry: Pharmaceuticals

Outcome:

The project delivered a **future-proof solution** that adhered to stringent regulatory standards, **significantly improving sustainability in production processes**. By integrating advanced automation and scalable design, the facility achieved **long-term environmental and operational benefits**.



Impact:

- Implemented an automated Clean-in-Place (CIP) system, reducing water and chemical usage while enhancing plant cleaning efficiency.
- Designed a scalable Process Control System (PCS) to **support future production growth**, minimising resource waste through **optimised workflows**.
- Improved operational efficiency by 40%**, reducing energy consumption and emissions while enhancing data security across the facility.

Delivered 1MW of energy savings & significant emission reduction in an Energy Intensive Plant

Industry: Utilities

Outcome:

The pump replacement project for the utilities industry successfully **reduced carbon emissions** and operational energy consumption through the installation of three energy-efficient turbo blowers. This upgrade enhanced the plant's energy efficiency, aligning with the client's decarbonisation strategy and promoting long-term sustainability. To date, there has been around **1MW of power reduction to the client**. By integrating advanced variable speed drives and optimised processes, the project delivered **significant environmental and operational benefits**.



Impact:

- The replacement of existing pumps with three energy-efficient turbo blowers significantly **reduced carbon emissions**, aligning with the client's decarbonisation strategy.
- The upgraded equipment enhanced the plant's overall energy efficiency, contributing to a **more sustainable and environmentally responsible output**.
- By incorporating advanced variable speed drives and optimised processes, the project supported the reduction of operational energy consumption, fostering long-term environmental benefits.



Enhanced F1 Testing Efficiency; Saving Time, Money and Emissions

Industry: Automotive



Outcome:

The project **improved energy efficiency** with advanced control panels, streamlined resource use through automated systems, and **ensured long-term sustainability with a scalable design adaptable to future needs.**



Impact:

- Enhanced Energy Efficiency: The installation of advanced Local Control System (LCS) and Low Voltage Distribution (LVD) control panels facilitated efficient power distribution, reducing energy consumption during wind tunnel operations.
- Optimised Resource Utilisation: The custom-developed software centralised control over complex systems, enabling real-time monitoring and adjustments. This automation minimised resource wastage by streamlining testing processes and reducing setup times.
- Scalable Sustainable Design: The system's scalable architecture allows for future upgrades without major overhauls, promoting long-term sustainability by **adapting to evolving technological and environmental standards.**

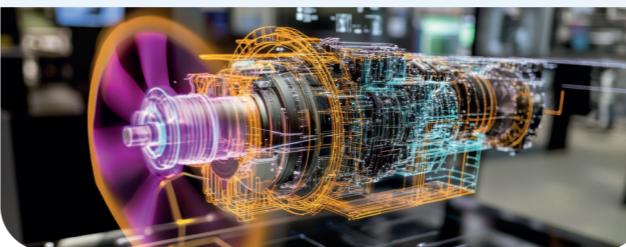


Designed State of the Art Sustainable Digital Factory for Aerospace

Industry: Aerospace

Outcome:

This project is ongoing, and goal by time of completion is to deliver a state-of-the-art digital factory platform that **improves manufacturing efficiency while supporting sustainability goals.** By integrating flexible assembly concepts and advanced data systems, the client will achieve enhanced operational precision, reduced waste, and a future-ready digital manufacturing environment.



Impact:

- Designed and constructed an automated assembly unit for leading-edge structures, leveraging "as-built" data to **enhance assembly precision and operational efficiency.**
- Developed a digital factory architecture to streamline data collection, transfer, and integration, **enabling advanced forecasting, trending, and real-time analysis** accessible across the workforce.



Enabled Green Building Certification in Pharma R&D Facility

Industry: Biopharmaceuticals



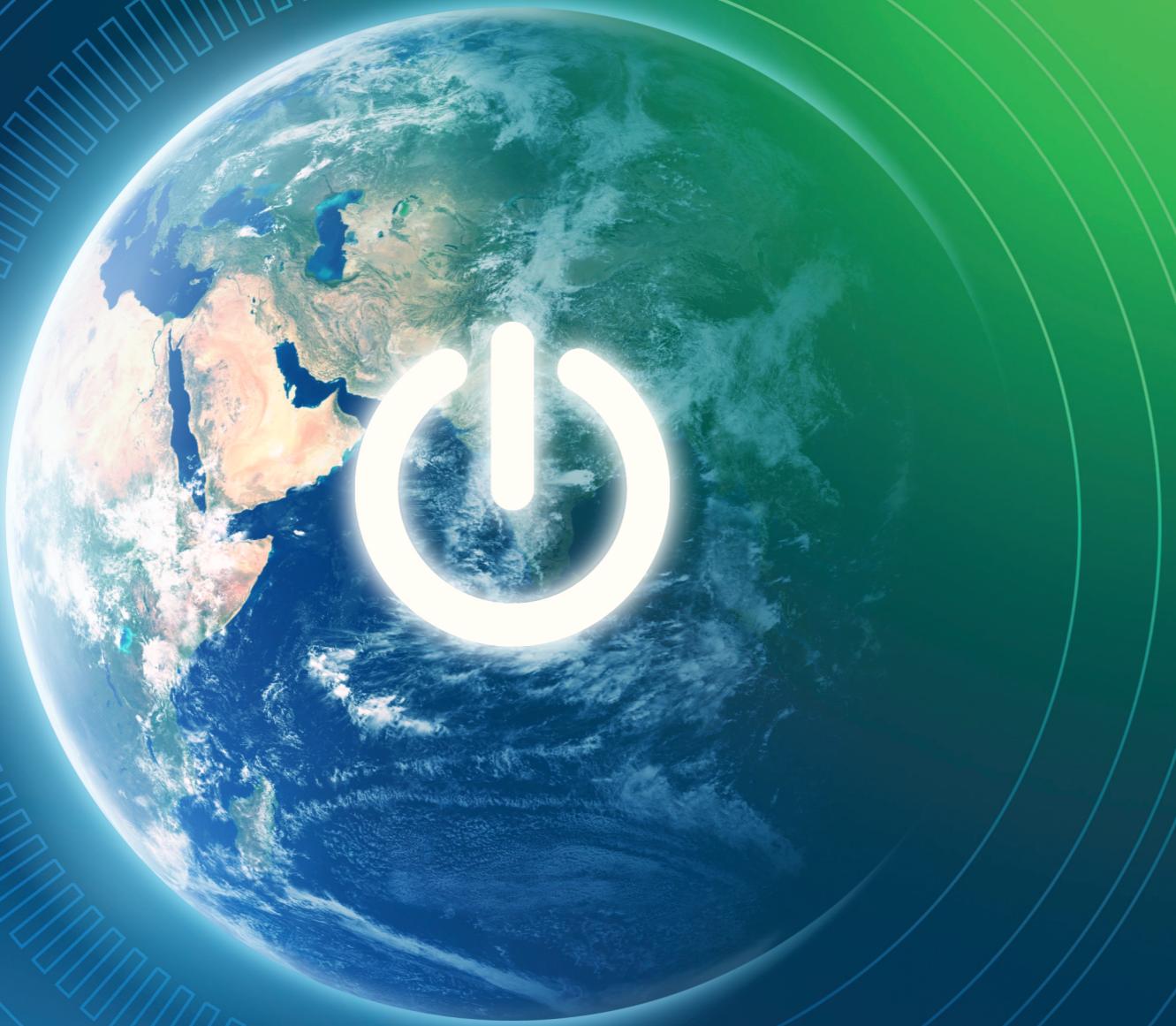
Outcome:

The project delivered a state-of-the-art control system tailored to the client's R&D requirements, ensuring precise operational control, reduced resource wastage, and alignment with stringent sustainability standards. The comprehensive approach included extensive testing and commissioning, **enabling a future-ready, efficient, and environmentally responsible facility.**

Impact:

- Successfully implemented control systems across five process modules, including hydrogenation and solvent delivery, **enhancing operational efficiency and safety.**
- Supported the client's platinum LEED (Leadership in Energy and Environmental Design) green building certification goals** by integrating advanced control systems designed for sustainability and energy efficiency.

Innovation To Create a Better Future



As a company who has been on the Net Zero journey now for three years, keeping a close track on emissions is also very important to us and our workforce. We set out to create an industrial energy efficiency solution that would give us the precise visibility we needed to take more informed decisions into our own energy usage and emissions strategy. As we often say, 'you can't manage what you can't measure'. Using our inhouse developed energy monitoring system, we were able to identify and achieve a 20% reduction in our annual electricity bill. We were then invited to collaborate with the SMDH to develop this innovation for external use by other manufacturing organisations.

SMDH Project – Energy & Emission Monitoring Innovation Project



One example is our collaboration with the Smart Manufacturing Data Hub. The Smart Manufacturing Data Hub (SMDH) supports small and medium-sized manufacturers to become more competitive by harnessing the power of data.

Digital solutions, expert guidance and funding are available to companies through the hub, allowing them to explore and evaluate their processes, make operational savings, de-risk investments and become more digital savvy.

SMDH provided innovation funding and resources to help develop our in-house energy monitoring system and make it available to other organisations.

The aim was to create a real-time energy and emissions demonstrator for the manufacturing industry, helping to maximise the profitability and competitiveness for manufacturers, helping them achieve their sustainability goals and de-risk the impact of further energy price rises.

We worked with two manufacturers in the region:

Emergency one



Emergency One is the Leading UK manufacturer of fire and rescue vehicles and creator of the world's first fully electric fire engine.

Taste of Arran is a premium artisan food and drink supplier from the Scottish island of Arran; offering dairy ice cream, award winning Arran cheese, handmade oatcakes and many more delicious products.



The project symbolises Booth Welsh is dedicated to advancing technology and environmental goals in partnership with like-minded organisations such as SMDH and Emergency One."

Project leader, Andrew Brittan, Head of Technology & Digitalisation at Booth Welsh



Taste of Arran installed energy monitoring sensors in their Brodick, Arran facility and is using the Booth Welsh Energy Monitoring platform & dashboard to gain better insights into their energy usage and emissions.

“ Not only are our clients asking for us to provide transparency into our sustainable practices and emissions, but they also expect us to be efficient in doing so and reflect that in the quality and safety of our products. Taking part in this pilot with local Ayrshire companies, Booth Welsh has helped us gain better insights into the efficiencies and emissions of our operation and enabled us to share more data with our clients as a result”

Alastair Dobson, MD, Taste of Arran

Speaking about the project, Emergency One Compliance Manager, Stewart Gorman said

“ As with all manufacturers, rising energy costs are forcing us to keep looking for ways to streamline the efficiency of our operation.

Our commitment to become a Net Zero business and leading provider of low emission vehicles to the emergency services sectors is driving us to become better informed about our energy usage and emissions.”

Consultancy Services Director, Gordon Semple said

“ We can engineer a better future through collaborations like these. It has been a pleasure to work alongside local Ayrshire companies, Taste of Arran and Emergency One who have long embraced innovation and been pioneers in sustainable solutions such as heat recovery systems. This is another terrific example of local manufacturing businesses that share our ambitions for sustainable practices and setting the pace for a low carbon future.”



Snapshot of the energy dashboard at Taste of Arran and Emergency One

A video demo of the energy dashboard can be viewed here:



Advancing the Clean Energy Transition

Our commitment to help create a brighter, lower carbon future for everyone has led to the appointment of a sustainable growth and clean energy leader who is evaluating the applications for Hydrogen and Carbon Capture and Storage solutions.

Hydrogen Expert Support Programme

Earlier this year, we were pleased to participate in the Hydrogen Sector Support Programme, led by Scottish Enterprise. This opportunity provided valuable insights and connections with like-minded organisations committed to advancing clean energy and low-carbon operations. Following this, we joined the Hydrogen Scotland community and initiated research studies to explore how we can further support the clean energy transition.





Hydrogen Projects

We have delivered a number of projects in 2024, designed to help evaluate and perform due diligence into clean energy sources for clients.



Adoption of Green energy in heavy-duty transportation Developing Test Calibration Rig for TÜV SÜD Hydrogen Filling Station

Industry: Hydrogen

Outcome:

The project successfully delivered a robust, scalable calibration rig that met TÜV SÜD's requirements, **supporting the development of safer and more efficient hydrogen filling stations**. The solution **aligned with sustainability goals** by enhancing hydrogen dispensing precision, which is **critical for the adoption of green energy in heavy-duty transportation**.

Impact:

- Designed and developed a test/calibration rig tailored for 300 bar nominal working pressure (NWP) heavy-duty hydrogen filling stations, **ensuring precise flow measurement and compliance with varying process conditions**.
- Booth Welsh incorporated **advanced safety and sustainability features**, including a thorough HAZOPs, Risk Analysis and DSEAR (Dangerous Substances and Explosive Atmospheres Regulations), **minimising risks and enhancing operational safety**.
- The Mechanical & Piping team then utilised thick-walled tubing and optimised piping models to fit within a trailer of fixed dimensions, enabling portable and scalable calibration solutions for hydrogen energy systems.



“ Advancing the clean energy transition is a key focus for our Business Development efforts. To drive this, we have appointed a Sustainable Growth and Clean Energy Leader to explore innovative technologies like hydrogen and carbon capture. Earlier this year, we participated in the Hydrogen Expert Support Programme, gaining valuable insights and connections with organisations committed to low-carbon solutions. Our involvement with Hydrogen Scotland and ongoing research in these emerging industries further solidifies our commitment to a more sustainable, lower-carbon future for all.”

Gavin Florence, Booth Welsh Projects Director

Our membership with Hydrogen Scotland highlights our interest in supporting the development of the renewable energy sector and making it one of relevance and value for our clients. We also have a commitment to invest in the next generation giving them opportunities to apply their critical thinking and skills to real world questions such as the evolving role of the clean energy transition.



“ Booth Welsh has demonstrated a strong commitment to a “people, planet, profit” approach to business and a willingness to collaborate in advancing the clean energy transition. They have recently been welcomed as a member of Hydrogen Scotland, and I look forward to seeing them bringing their safety and engineering-led culture to help to build a credible local supply chain for large Power to X projects in Scotland”

Sam Mackilligin, leader of the Power to X Group at Hydrogen Scotland.



Growing the hydrogen economy in Scotland

Hydrogen Research with Edinburgh University

Part of our evaluation of the Hydrogen market is being conducted by a 4th year student at Edinburgh University studying environmental science - Alex Tweedie. Alex is pictured here with Sam Mackilligin, the leader of the Power to X Group at Hydrogen Scotland at the 2024 Hydrogen Scotland Christmas market in Edinburgh. Alex has been sharing insights with us to reveal what are the likely impacts from adopting Hydrogen as a clean energy source at scale within the atmosphere.



Alex said:

"I appreciate this opportunity to collaborate with Booth Welsh and share some of the insights from my research on the use of Hydrogen, its potential impact in global warming and the economic potential for those who find ways to successfully harness it as a sustainable energy source."



Find out more



While Hydrogen is not a greenhouse gas, it does have the potential to influence an increase in other Greenhouse gases, hence this research is important to us and our clients.

Alex has recently been part of a team publishing research on potential effects of Emissions of hydrogen (H₂) gas from human activities indirectly causing climate warming effects. Our Net Zero Heroes team will have an opportunity to learn more about it directly at a knowledge exchange session in January 2025. You can read the research here: EGUsphere - Quantifying the soil sink of atmospheric Hydrogen: a full year of field measurements from grassland and forest soils in the UK.



Leveraging the **Talent** in Our Team to Develop Our **Sustainable** Growth Strategy

Building on our 2023 carbon reduction efforts, we formed a Net Zero Heroes team with members from each department to align and embed sustainability principles across the business.

Our Net Zero Heroes Team Rock!

We are excited to put these great ideas from our team into action, helping to shape our sustainable growth strategy.



Although I have only been slightly involved, my reason for joining is to progress the NZH agenda both for environmental purposes and also as part of the future of the business. In my role, I can see the forthcoming challenges that will come with environmental KPI's being built into contracts in the not too distant future. By picking these initiatives up early, we will gain a competitive advantage.

Mark Lee, Project Manager & Quantity Surveyor.



I joined the fuel change challenge when I started at Booth Welsh. This allowed me to meet other people in the business and gave me a chance to make a difference in the company. After the challenges were over, I still had an interest in working towards our sustainability goals, which is why I joined the Net Zero Heroes team to continue contributing to our efforts.

Fraser Currie, Finance Assistant



I joined the NZH because I had previously been involved in other ventures to do with sustainability and environmental impact, mainly Fuel Change. After my involvement in that, I realised how vital it is for people to reflect on their impact on the environment, not just at work, but in their own personal lives too. Our mission as the NZH team is to continually seek to improve how sustainable we are as a business, and accurately report our results for people to understand how anything can make a difference.

Megan Coupar, Business & Administration Assistant

Strategic Investments in Our Workforce and Workforce of the Future

Graduate Programme

As part of our growth 400 initiative, Booth Welsh has made a commitment to the future workforce by launching a new graduate programme that will welcome a cohort of 10 graduates in 2025. This initiative reflects the companies dedication to creating meaningful opportunities for young talent in the region, fostering innovation, and contributing to the local economy.

The programme spans key disciplines including engineering, technology, business support, and project management. It is designed to upskill graduates through hands-on experience, structured development, and mentorship. This approach not only addresses the skills gap within the industry but also ensures that Ayrshire benefits from a pipeline of talented individuals prepared to meet the demands of the future workplace.

As a local business, Booth Welsh recognises the importance of creating opportunities close to home. By equipping these graduates with the skills and experience to thrive in their careers, the programme bolsters Ayrshire's workforce, enhances the local economy, and positions Booth Welsh as a key contributor to the region's long-term growth and development.



“ The launch of our graduate programme is an exciting step forward for Booth Welsh. By welcoming 10 graduates next year, we're bringing fresh perspectives into the business while creating valuable opportunities for local talent. This programme is designed to equip graduates with the skills and experience needed to succeed, ensuring they can contribute meaningfully to both our industry and the Ayrshire economy.

Laura Lawler, Booth Welsh People Business Partner



Tackling the NEC X29 Carbon Reduction Clause in the Built Environment

Here is a live example of a 2024 graduate project.

The built environment is the world's largest greenhouse gas emitting industry, responsible for 37% of global emissions and **40%** of UK emissions. The New Engineering Contract (NEC) is a series of contracts designed to manage any project from start to finish with sound project management, procurement principles and sustainable practices. Booth Welsh work to the NEC standard to maximise efficiency, quality and delivery of projects. The addition of the X29 sustainable practice clause highlights the focus on achieving efficiency and climate positive outcomes within contracts. Our graduates worked on the X29 Carbon Reduction clause as part of their practical sustainable development training.

Cameron Finlay, one of our graduates taking part said **“The X29 project really opened my eyes to the benefits that will come for ourselves, clients and supply chain partners from embracing sustainable practices and help make the built environment a more climate positive industry in the future”**.



Cross-functional Team to Gain Qualifications in Practical Application of Sustainable Practices



We are working within the Ayrshire Growth Deal framework to support skills development in clean growth and sustainable practices. The mission of the Growth deal is to build **a vibrant, outward looking, confident region, attractive to investors and visitors, making a major contribution to Scotland's growth and local well-being, and leading the implementation of digital technologies and the next generation of manufacturing**. We will be leveraging their support to provide access to qualifications that will embed Net Zero in the heart of business through expert insights and implementation management that will help drive our carbon reduction journey.

The programme which is certified by the chartered management institute (CMI) will equip members of the Net Zero Heroes team from across the business with the skills to implement practical sustainable projects and outcomes.



Upon successful completion of the **CMI Level 5 Certificate**, participants can progress to higher **CMI qualifications such as the Level 6 or Level 7 diplomas in management and leadership**. Additionally, this certification will enhance career prospects, opening doors to higher managerial roles and leadership positions within Booth Welsh or other organisations. The skills acquired through this programme are recognised globally, enabling opportunities for **career advancement**.

Future Volunteer Programme: Empowering Community Engagement

Booth Welsh is developing a volunteer programme for 2025 designed to encourage employees to actively participate in meaningful community initiatives. This programme will provide structured opportunities for our team to dedicate their time and skills to local causes, with a focus on areas such as mentoring young people in STEM education and supporting community development projects.

By channelling our employees' expertise and enthusiasm into impactful volunteering activities, the programme aims to strengthen connections between Booth Welsh and the communities where we operate. It reflects our commitment to creating social value not just through financial support but through direct, hands-on involvement that makes a tangible difference.

The programme is a practical step toward Booth Welsh's goal of investing in people and creating long-lasting, positive outcomes for the communities we serve.

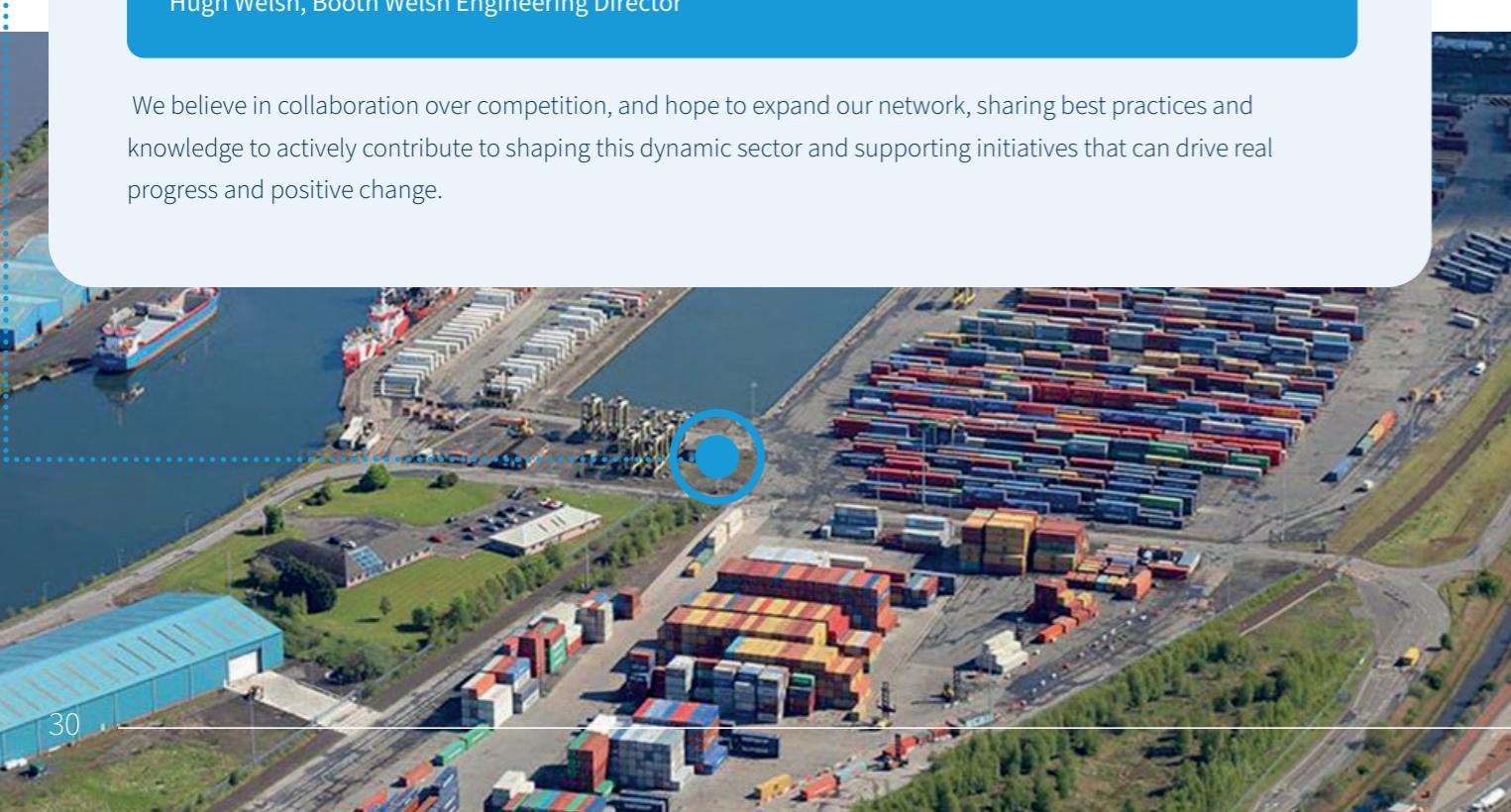
Creating Jobs and Skills Opportunities in Emerging Industries

A key part of our growth plans is the opening of our new satellite office in Falkirk, supporting the creation of new roles in engineering, project management, and business support. Situated near Grangemouth, a hub for green energy, this expansion strengthens our ability to support clients in sectors such as energy, pharmaceuticals, and food & beverage, while contributing to local economic growth and sustainability.

“The opening of our Falkirk office is an exciting step in Booth Welsh’s commitment to creating meaningful impact in the Grangemouth area. This expansion not only enhances our capacity to support critical sectors but also drives local job creation.”

Hugh Welsh, Booth Welsh Engineering Director

We believe in collaboration over competition, and hope to expand our network, sharing best practices and knowledge to actively contribute to shaping this dynamic sector and supporting initiatives that can drive real progress and positive change.



Empowering the Workforce of the Future

We have proudly continued our support for nonprofit Powering Futures, dedicated to creating a sustainable and prosperous future for future generations. We are thrilled to host the Schools Challenge final presentations at our Irvine head office in March 2025, where senior students from across the region will present innovative solutions to real-world sustainability challenges.

Throughout the academic year, 5th and 6th-year students in the Challenge Programme research and collaborate on industry-relevant sustainability issues, culminating in presentations to a panel of industry judges. Participants gain valuable skills such as teamwork, problem-solving, critical thinking, and resilience—essential for future success.

Upon completing the programme, students receive an accredited qualification, equipping them as sustainability-enabled problem solvers capable of delivering practical solutions. This empowers them to advance in their careers or any path they choose, truly enabling them to “Power their Futures.”



Career Events

Booth Welsh employees dedicated hundreds of hours to volunteering activities, including participating in school career events, university engagements, and conducting mock interviews. These efforts aimed to inspire and prepare students for future career opportunities while strengthening connections with the education sector.

We look forward to some of these students potentially joining Booth Welsh as future team members, contributing to our vision of a sustainable future.

Find out about Amy's Powering Futures experience

WATCH VIDEO HERE



“ I took part in the Powering futures challenge two and a half years ago when I first started in the company. It was a really good way to kickstart my career learning useful skills such as communication, problem solving and critical thinking. I would say to 16 year old me if I was thinking about this subject, definitely do it. It gives great life skills, something you can always take forward no matter what you do or workplace you're in “

**Amy Nelson,
Booth Welsh Culture Lead**

Driving Wellbeing, Diversity & Inclusion within Booth Welsh



Embracing Industry 5.0: Launching the People, Brand, and Culture Department

In 2024, Booth Welsh established the People, Brand, and Culture department, combining our Marketing and HR teams to prioritise people and our brand at the core of our strategy. This aligns with Industry 5.0 principles of people-centricity, resilience and sustainability for long-term sustainable growth.

To support this vision, we formed a new department with a number of new roles to focus on employee support and wellbeing, drive talent development and engagement, deliver on cultural initiatives and embed social impact to create a purpose-driven brand.

These roles ensure our people-first ethos remains central as we grow, empowering employees and meeting the needs of our clients and industry.

“

This new department is all about nurturing and championing the very essence of what makes Booth Welsh unique inside and out. Focusing on our people, amplifying our brand, and continuing to nurture our strong culture that helps us meet our mission of ‘through collaboration we engineer a better future.’

Aimee Doole, People Brand & Culture Director

“

My newly created role highlights the importance of support functions in our businesses to create collaboration, inclusion, and innovation to deliver meaningful outcomes for employees, clients, and communities.”

Amy Nelson, Culture Lead

Driving EDI Through Insights and Training

In 2024, Booth Welsh launched Insights sessions for over 50 employees, enhancing collaboration by understanding diverse working styles. Building on this, tailored EDI training for managers will begin in 2025, aiming to train 20 leaders through workshops and an e-learning platform to embed inclusivity in recruitment, management, and decision-making.

These initiatives not only enhance internal culture but also reinforce Booth Welsh's commitment to building a diverse workforce that reflects and respects the communities we serve, setting a standard for societal equity and responsibility.



Bringing **Neurodiverse** Talent into the Workforce with the **Equal** Programme

This year, Booth Welsh welcomed new team members through North Ayrshire Council's 'Equal' Programme, an initiative designed to support individuals with long-term health conditions, disabilities, or those who are neurodiverse. The programme provides opportunities for these individuals to contribute and grow in the workplace, bringing unique skills and perspectives to businesses. Through this partnership, we were able to access a diverse talent pool.

Hev, who joined us, has played a key role in supporting our sustainability efforts, including collecting and analysing data to map our carbon footprint, while also providing valuable support across multiple teams, such as environmental, commercial, and engineering. Their skills and dedication have been a great asset, and we are pleased they have transitioned from their placement to a full-time role as Booth Welsh's Net Zero and Social Impact Coordinator.

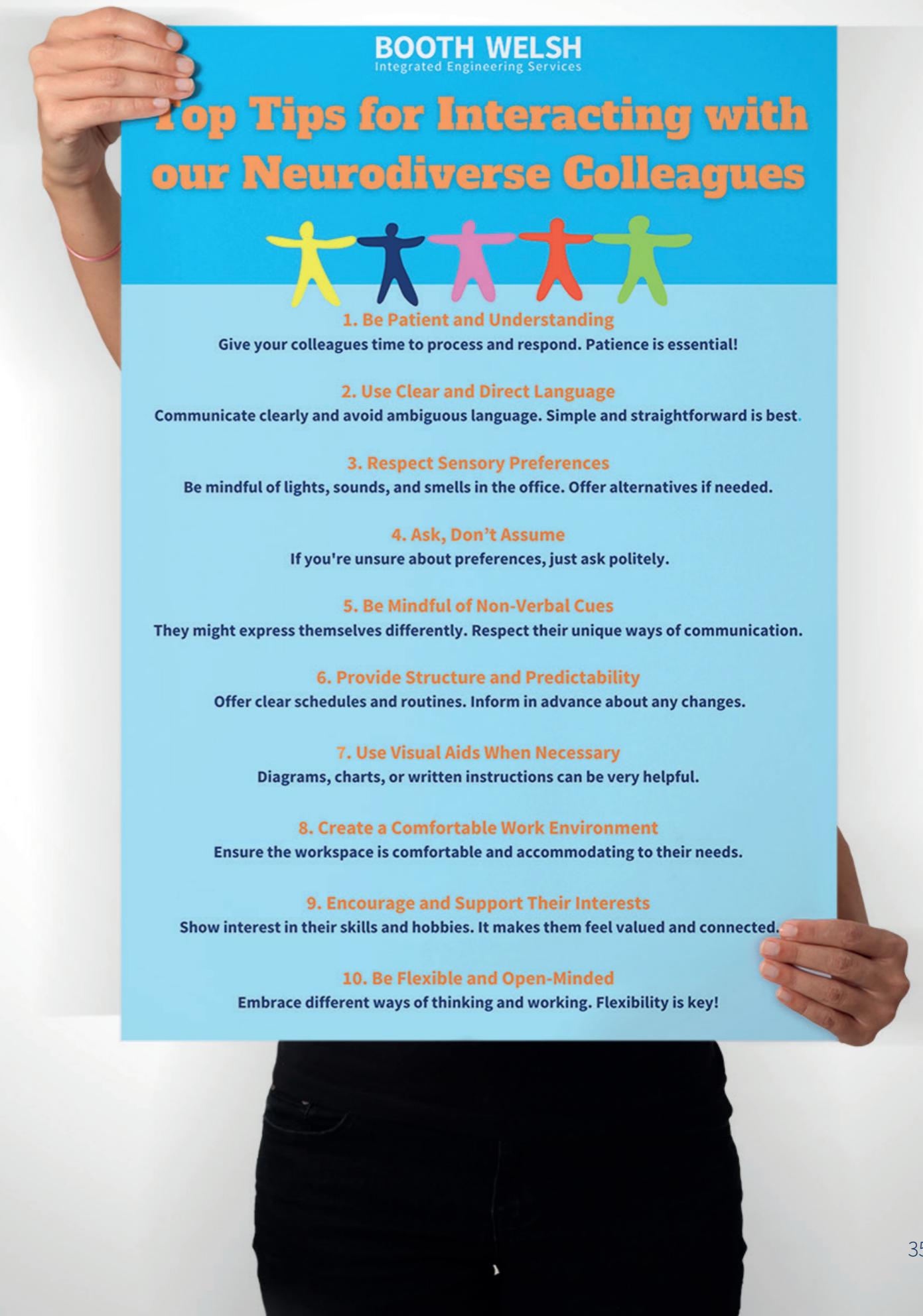
Building on this success, Booth Welsh is exploring ways to bring more opportunities through the Equal Programme, ensuring more individuals can contribute meaningfully to our business and develop their careers. We have partnered with another individual from the Equal Programme, welcoming Benedict Terry as Animation Consultant, working with our Branding team, and are looking to recruit within the programme for another two roles across the business.

As part of our commitment to creating an inclusive culture, and with Hev's valuable input, we have developed workplace guidelines to support neurodiverse colleagues. These guidelines aim to enhance understanding and inclusivity across our teams, creating a positive and supportive environment for all employees. We look forward to seeing the wider impact this will have on our team and the broader community.



The Equal Programme in North Ayrshire works closely with a wealth of talent from our disabled community, and in particular those with physical or mental health, neurological or learning conditions that makes the journey into permanent employment really difficult. Finding employers who are willing to work with our clients and support their progression towards their chosen career has been difficult and I am so pleased to say that we have found an amazing partner in Booth Welsh and we look forward to continuing this successful and exciting collaboration."

Linda Ford, Programme Manager at Equal



Driving **Collaboration** & Best Practice Sharing Across Engineering Networks



Over the past few years, we have actively collaborated and supported the work of innovation centres, academic and industry groups on various digital transformation and sustainability initiatives:

- **Net Zero Trading Zone:** In November 2024, we contributed to CeeD's (Centre for Engineering Education and Development) Net Zero Trading Zone event. The purpose of the Trading Zone is to act as an 'innovation sandpit' where likeminded individuals come together, bringing problems and solutions and ways in which to solve them. We delivered a presentation offering insights on Industry 5.0 and the practical ways in which we have applied the principles to deliver results for our clients and improve our own business, through the spirit of collaboration
- **The DPMC centre opened within our Irvine HQ:** The Digital Process Manufacturing Centre (DPMC), part of the National Manufacturing Institute Scotland (NMIS), supports process industries in driving digital transformation, adopting emerging technologies, and advancing toward net-zero. In partnership with the University of Strathclyde, NMIS, CPI and North Ayrshire Council, it offers training, digital demonstrators, and R&D support to future-proof businesses and workforces.
- For the **2025 CeeD Industry awards**, Booth Welsh is the Platinum sponsor of the event, and sponsors of the Transformational Change award.
- We were pleased to join the **Scottish Engineering organisation** this year who believe that when business thrives, communities prosper and Scotland benefits. Membership will allow us to further the reach of our collaborative efforts to help engineer a better future.



These collaborations underscore our dedication to sustainability, innovation, and advancing the Net Zero transition.



Centre for Engineering
Education & Development

“ CeeD rely on the active participation of members who will openly share and do so on a two-way basis. Booth Welsh have been very active with the CeeD network for a number of years willing to share their expertise and knowledge. Their deep understanding of sustainability as a driver for productivity and growth in their customer base has been one of their stand out contributions in 2024. I am really excited that they are now taking another lead on opening up dialogue around Industry 5.0 and on choosing to do this in part with the CeeD network through event content and feedback gathering. This further highlights their innovative approach to thought leadership and building value in a community of practice network.”

Joe Pacitti, Managing Director, CeeD



“ Booth Welsh has been a valued supporter of Ayrshire Chamber as Platinum Partners, actively championing local businesses and place-based community growth. Their sponsorship of the Community Wealth Building Award this year highlights their commitment to supporting the region and making a positive impact. Their leadership sets a strong example of how larger businesses can play a pivotal role in fostering collaboration and innovation locally. As we look ahead to 2025, we're excited to continue building on this strong relationship to drive further growth and success.”

Claire Baird, CEO, Ayrshire Chamber

Creating Impact Within the Local Community



“Winning this Community Wealth Building award, sponsored by Booth Welsh, has been a very humbling experience. The Board and staff of the 9CC Group see this as our first real milestone on our journey to deliver real Economic & Social impact to our residents and communities”

Stephen McCarron, COO, 9CC Group

By applying our technological expertise, we have made Burns' legacy more accessible and engaging, especially for local schools. Using innovative technologies like photogrammetry, drones, VR, and AR, we have created interactive 3D models of Burns' artifacts and manuscripts. This approach connects a new generation with Burns' contributions in a way that is both meaningful and modern.

- **Educational Impact:** Local schools are incorporating the digital platform into their curriculum, making learning about Burns more interactive and engaging.
- **Increased Access:** The virtual museum allows anyone, anywhere, to explore Burns' world, overcoming barriers like location or mobility.
- **Heritage Preservation:** Digitising artifacts safeguards Ayrshire's cultural treasures for future generations.
- **Community Pride:** The collaboration brought together schools, local organisations, and government to celebrate and share Ayrshire's history.

“This project highlights our commitment to preserving local history while using modern technology in creative ways. We are proud to enhance Ayrshire's cultural legacy and make it accessible for generations to come.”

Martin Welsh, CEO of Booth Welsh

“Booth Welsh's innovative approach has brought Burns' story to life in ways we never imagined. This new digital format makes his works and the club's history accessible to a wider audience.”

Angus Middleton,
President of Irvine Burns Club

Wellwood Museum Burns Project

Ayrshire is the Birthplace of Robert Burns and also where Booth Welsh was founded and continues to thrive. As part of this, Booth Welsh partnered with Irvine Burns Club to reimagine the Wellwood Museum as a dynamic digital platform celebrating Robert Burns' life in Irvine.





Creating sustainable spaces for our workforce

To support the growth and development of our people, it was essential to invest in improved, more fit-for-purpose spaces in our Head Office environment that foster collaboration, creativity, and wellbeing. We consciously chose Saxen, a local Ayrshire supplier with shared sustainability values, to support our office upgrades. By prioritising pre-loved and sustainably sourced furniture, we are reducing waste, supporting the principles of circularity, and actively lowering our scope 3 emissions.



“ We first connected with Booth Welsh through the Ayrshire Net Zero Accelerator, and their commitment to sustainability shines through in their choice of pre-loved and sustainable furniture for their office upgrades. Partnering with a local business that shares our values has been rewarding, and we're proud to work together to drive a sustainability mindset with tangible impact across Ayrshire.”

Lyndsey McLarney, Saxen Interior Solutions Manager

50%

We have reduced our waste based emissions by over 50% this year.

37.2m

37.2 million tonnes of commercial waste goes to landfill in the UK each year. That's the weight equivalent to 3 million London double decker buses in landfill every year.

A positive **impact** in our community



Making a Positive Impact on Communities and Environments

As a business rooted in Ayrshire, Booth Welsh is proud to contribute to the communities where we live and work. Our goal is to support wellbeing, foster local connections, and enhance the prosperity of the areas we operate in through meaningful initiatives and actions.

Supporting Local Causes in 2024

This year, Booth Welsh supported several charitable causes through donations, sponsorships, and team-led fundraising events. These efforts focused on addressing key community needs and providing vital resources for local organisations.

Partnering with CentreStage

Centrestage in Kilmarnock offers free activities and support services designed to connect and empower people of all ages and backgrounds. Recognising their impact, Booth Welsh partnered with Centrestage for a series of fundraising efforts, including a zipline challenge where employees leaped from a 100ft crane and zipped 1,200ft across the Clyde.

We also hosted our team strategy day at Centrestage in May, experiencing firsthand the incredible difference they make in breaking down barriers and fostering a sense of community. The venue perfectly suited our needs while also supporting their vital charitable work, making it a meaningful choice for our event.

Through our fundraising efforts, the team raised £2,000, which Booth Welsh matched to bring the total to £4,000. This funding will help sustain Centrestage's valuable programmes, supporting local talent and providing essential services to those who need them most.



“ It has been great to work closely with Booth Welsh across a number of fronts this year. From choosing CentreStage as the venue for their Away Day to fearlessly taking on the zipline challenge to raise funds, they've shown what it means to truly lead with purpose. Booth Welsh understands that real change happens when businesses and communities come together to empower changemakers. Their energy, passion, and belief in making a difference align beautifully with our own purpose. Together, we're demonstrating how powerful collaboration can be in creating lasting and meaningful change.”

**Dr Fiona McKenzie,
Co-founder of Centrestage**



Planet positive business

Our Investment

We are implementing our planet positive strategy to maximise impact through business workstreams that include:

- ISO 14001 Environment Management System
- Ecovadis Certification
- Net Zero Nation accredited Carbon Reduction Plan
- Leading companies on Net Zero Accelerators to create credible Net Zero pathways
- Assessing and supporting our supply chain Net Zero readiness
- Planning to implement an onsite renewable energy system at our HQ in 2025
- Our Net Zero Heroes team which represent each department of the business is the driving force behind the implementation of these initiatives and workstreams

Our Net Zero Commitment

01

We aim to achieve Net Zero in line with the Science Based targets set out by the UNFCCC i.e., to achieve Net Zero no later than 2050 and target a 50% reduction in emissions by 2030.

02

To set realistic short- and long-term targets that are designed to achieve our Net Zero commitments.

03

To report the total Greenhouse Gas emissions of our business, at a minimum, on an annual basis.

Maximising Net Zero Progress

Booth Welsh are now in Year 3 of a Net Zero business transformation programme called the Net Zero Accelerator, delivered by social enterprise, Net Zero Nation. As a founding member of the Net Zero Accelerator, Booth Welsh has multiplied the emission reduction effect of their efforts in helping inspire over 150 companies to create clearly defined pathways towards Net Zero, mitigating the worst effects of climate change.



79,500
tonnes CO₂e

under management in
our local North Ayrshire
Net Zero Accelerator

Accelerating **Net Zero** progress across the **local value chain**

Our role in the Net Zero Nation ecosystem, Booth Welsh in partnership with another local company, Ailsa Reliability solutions and North Ayrshire council hosted and helped to guide a cohort of 14 companies in the local value chain through their first year in the Net Zero Accelerator program, bringing 79,500 tCO₂e of emissions under measurement in alignment with Science-Based Targets. By actively mentoring and influencing this new wave of businesses, Booth Welsh is helping to define clear, actionable pathways to Net Zero, aligned with rigorous sustainability standards.

Emission Reduction Progress Report for 2022 - 2023

Strategy	2022 - 2023 Initiatives	Progress
Embedding Sustainability across the business	Embed sustainable practices in the strategic direction of the business	Our 5P's of purpose is driving progress across the business. The Formation of Net Zero Heroes team is helping to deeply integrate our sustainability goals into our culture. We have created new roles to drive the embedding of sustainability across the business
Net Zero Nation Accelerator	Accelerate Net Zero action within the business, supply chain and local business community	Hosting a Net Zero Accelerator cohort of 14 local companies which now has 79,500 tCO ₂ e under management
Sustainable Travel Policy	To better measure and reduce the Scope 3 Employee Commute Emissions	Introduced a sustainable travel policy encouraging use of public transport and lower carbon options when practical to do so. Liaising with the local authority on a business park initiative with the aim to provide new public transport services to the business park reducing overall transport emissions
Energy Reduction Measures	Significantly reduce energy usage and the resultant emissions	Replacement of boiler that is better sized and suited to the requirements of the business premises. A reduction in carbon emissions of 40 tCO ₂ e per annum are currently being measured for accuracy
Measure Emissions Continuously	Implement continuous monitoring of emissions to take better informed carbon reduction actions	Recruitment of Net Zero co-ordinator and Net Zero Team enabling us to monitor emissions reductions continuously. Operating an energy monitoring system onsite to focus on optimisation. Focused on improvements in ISO 14001 environmental management and improved EcoVadis score
Supply Chain Engagement	Review Supply Chain Net Zero Readiness and support accordingly	Readiness survey pilot has assessed 70% of suppliers. Net Zero workshops for suppliers planned in 2025



**Receiving our Net Zero certification,
celebrating our 3rd Year on the Net Zero
Accelerator**



One of the key outcomes of the Net Zero Accelerator programme is meeting the UN Race to Zero objectives to Pledge, Plan, Progress, Publish and Persuade and in so doing, being a Climate Champion. Booth Welsh are an advocate for Net Zero, inspiring the wider business community to embrace it as a gateway to business growth to make their business stronger, be more competitive within the supply chains they serve and attract the future workforce to join them.

Working within a community of companies taking part in Net Zero Accelerators nationwide, they collaborate and support each other on their journey, providing peer review, creating circular and sustainable approaches to make their business more planet positive and work towards their Net Zero ambitions.

Among the first ever companies to take part in the Net Zero Accelerator, Booth Welsh is directly responsible for helping develop a national ecosystem of companies, who are bonded by the common purpose of decarbonisation.



North Ayrshire Cohort 1

Led by Ailsa Reliability Solutions Hosted by Booth Welsh



Adam Tait
Haulage



Hear from one of our supply chain partners, Lowmac Alloys who took part in the North Ayrshire cohort.



Based in the waste industry, Lowmac play a big part in the circular economy. It was vital for us to understand our carbon footprint. From the first set of carbon accounts, reductions in double-handling of materials, throughput of material, and then the transport and logistics team using that to reduce double journeys. Recently competing on a major tender, we received a higher score than it's ever been for the business and I believe that was a result of having a complete set of carbon accounts"

Gordon Whiteford, Operations and Logistics Manager
at Lowmac Alloys Ltd

Find out more here

WATCH VIDEO HERE



Final Reflections

This year has been a year of progress on several fronts. We have maintained our growth plans, while increasing our Zero LTI (lost time injury) to 18 years, reduced our overall emissions making a 50% saving on waste and helped our local community and supply chain advance their own sustainability goals.

Looking after our **People** and our culture is paramount to the success of our business. Achieving 18 years LTI free is a major achievement for any business especially when you consider the nature of our work and the live process plants and construction sites we often work on. Reducing our overall emissions and making a 50% saving on waste has ensured we have made our contribution to the **Planet** in this year. Our work with local businesses in supporting them to reduce their carbon footprint points to our **Place** commitment and we will continue to support the local community in the years to come. Our work with businesses such as Taste of Arran team has helped us develop a great **Product** which can be used by all businesses, enabling them to measure their energy usage and monitor it remotely if required. We have realised that working in this collaborative way we all **Profit** from our endeavours and help make our communities better and protect the health of the planet.

By integrating our 5 P's of Purpose framework—People, Planet, Place, Product, and Profit—to align with our objectives and evaluating impact across these dimensions, we have enhanced how we communicate our mission and deliver lasting value, fostering sustainability, resilience, and relevance in a rapidly evolving world filled with new challenges and opportunities.

We have always prioritised building a culture that invests in our workforce, creating opportunities for growth and personal development. It has been deeply rewarding to see our team embrace the 5 P's of Purpose, embedding sustainable practices into our operations and turning them into impactful solutions for our clients and stakeholder challenges. I look forward to seeing us further building on our progress to create longer term impact.

Thank you for reading.





BOOTH WELSH

Integrated Engineering Services

Find out more
boothwelsh.co.uk



#collaborate to innovate