

# ANNUAL REPORT



Scottish Funding Council  
Comhairle Maoineachaidh na h-Alba



# KEY FACTS

## Low Carbon Transport

## Energy Transition

## Construction

## Engineering

## STEM



OVER

500

College staff CPD supported in 2022/23

530

People have completed the **Hydrogen Awareness** online course since launch.

**IET** The Institution of Engineering and Technology



CHALLENGE

10

REGIONAL TOURNAMENTS

100

REGISTERED TEAMS

1000

STUDENTS PARTICIPATED

43%

OF SCOTTISH TEAMS RECEIVED FUNDING

## PDA IN HYDROGEN: AN INTRODUCTION FOR TECHNICIANS

ESP were able to support **11** college lecturers to undertake the PDA in Hydrogen. This comprised of 3 units with the final unit incorporating a visit to Stornoway where the candidates undertook the practical session at UHI Outer Hebrides.

60

ESP attended over significant events representing all key college sectors.



On 10 and 11 May, ESP and colleges from Borders, Dundee & Angus, Edinburgh, Fife, Forth Valley and South Lanarkshire attended All Energy to exhibit and showcase some of the equipment and technologies being used by colleges to train staff and students in renewable and low carbon energy.

STEP INTO PHYSICS

140

Views on YouTube of video presentations created with partners to promote and highlight careers in the Physics industry.

Over **180** developer/investors meetings and consultations held representing all key college sectors.

67

Government and Ministerial discussions held to support, inform and influence priorities and policies.



60

On 14 February over college representatives including College Principals, Vice Principals, Lead Forum Members and Business Development Directors attended an event hosted by ESP to focus on Climate Emergency Skills and highlight the developments and opportunities for colleges.

237

People have completed the **Offshore Wind Awareness** online course since launch.

**CECA SCOTLAND ACADEMY (NPA CONSTRUCTION OPERATIONS) SCQF LEVEL 5**

ESP worked with CECA, UHI Inverness, UHI West Highland, UHI Argyll and Fife College to develop the first CECA Scotland Academy Construction Operations NPA course to address the major skills shortage in civil engineering.

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# FOREWORD



**SIMON HEWITT**

Chair of ESP  
Management Board  
and Principal of  
Dundee & Angus  
College



**JIM BROWN**

Director  
ESP

**“We have represented and championed the college sector on more groups, attended more meetings and presented at more conferences and events, whilst continuing to leverage funding into the college sector.”**

It's hard to believe ESP was established 12 years ago. We have come a long way in that time from a position where there was only a Director to now, where we have a great team of 8 talented and committed individuals supporting the sector through increasingly challenging times.

2022-23 was another immensely successful year for ESP and has also seen major developments with a restructure of the team to align with government policy priorities, allowing better engagement with Government, agencies and industry on behalf of our college members.

We have continued to evolve under the Management Board and Lead Forums' guidance and are now in a position where we have 11 established Training Networks developing capability, capacity and curriculum with a focus on the Just Transition to Net Zero.

We continue to work with, and on behalf of Scottish Government and agencies, leading in a number of areas across Energy Transition, Transport, Engineering and Advanced Manufacture, Construction and Energy Efficiency and STEM.

We have represented and championed the college sector on more groups, attended more meetings and presented at more conferences and events, whilst continuing to leverage funding into the college sector.

A significant development this year has also been our involvement with potential inward investors working with the economic development agencies, SDI and SDS to understand the companies skills needs and give them reassurance that we can deliver a skilled workforce by working closely with the college sector.

The effort of the team has been phenomenal, relentlessly determined to ensuring Colleges are at the forefront of the Green Skills revolution in Scotland.

Looking forward, we are committed to working with and influencing government, agencies and industry to understand emerging skills needs and with our partner Colleges to develop the capability and capacity to support them in delivering a highly skilled workforce for the future.

On a closing note, it would be remiss of us if we did not mention the sad passing of Management Board member and SFC key contact, André Reibig. André was instrumental in establishing ESP and was a huge supporter over the years, being instrumental in securing SFC funding to allow ESP to grow into the organisation it is today.

We feel it is only proper to recognise the huge impact André has made over the years – he was a great supporter, colleague and friend and he will be sorely missed!



André Reibig

# ENGAGE AND INFLUENCE

ESP's influence has gone from strength to strength over the past year, particularly in the green skills space where we:

- Continued to lead on the Skills for the Scottish Offshore Wind Energy Council.
- Led on the Heat in Homes Skills Group.
- Were actively engaged in the CESAP update.
- Provided input into the Wither's Report.
- Have been directly approached by consultants who were commissioned by government and agencies seeking our input into numerous consultations drawing on our range of expertise.
- Are supporting agencies in a wide range of activities including international and inward investor opportunities.

**“We are supporting agencies in a wide range of activities including international and inward investor opportunities.”**

## POLICY DRIVERS

- **Climate Change Plan**
- **Climate Emergency Skills Action Plan**
- **Energy Efficiency Scotland**
- **Energy Strategy and Just Transition Plan**
- **Equality, opportunity, community: New leadership - A fresh start**
- **Heat in Buildings Strategy**
- **Hydrogen Action Plan**
- **Making Scotland's Future**
- **National Transport Strategy 2**
- **North Sea Transition Deal**
- **Offshore Wind Sector Deal**
- **The Scottish Government's STEM Education and Training Strategy**
- **The National Strategy for Economic Transformation**

## COLLEGE SECTOR

- **Colleges Scotland**
- **College Development Network**
- **Climate Emergency Expert Group**
- **College Principals' Group**
- **Vice Principals' Group**
- **Business Development Group**

## INDUSTRY

- **Energy Transition**
  - Energy Skills Alliance
  - ORE Catapult
  - RenewableUK
  - Scottish Renewables
  - SHFCA
  - SOWEC
- **Transport**
  - IMI
- **Engineering**
  - ECITB
  - Enginuity
  - Engineering Policy Group Scotland
  - EngineeringUK
  - IET
  - Scottish Engineering
- **Construction**
  - CECA
  - CITB
  - Federation of Master Builders
  - Historic Environment Scotland
  - Scottish Builders Federation
  - Scottish Decorator Federation
  - Select
  - SNIPEF

## PUBLIC SECTOR

- **Scottish Government**
  - Crown Estates Scotland
  - Energy Efficiency
  - Hydrogen
  - Transport Scotland
  - Wind
- **DYW**
- **Education Scotland**
- **Energy Savings Trust**
- **Enterprise Agencies**
- **EQUATE**
- **RAiSE**
- **Scottish Development International**
- **Scottish Funding Council**
- **Skills Development Scotland**

# OUR SECTORS

## ENERGY TRANSITION

**Hydrogen  
Training Network**

**Wind  
Training Network**

**Oil & Gas  
Training Network**

### ENERGY TRANSITION PRIORITIES

1. CESAP Implementation
2. On/Offshore wind
3. Hydrogen Technologies
4. SOWEC - Scottish Offshore Wind Energy Council Skills Group

### ENGAGE AND INFLUENCE

- Scottish Government Hydrogen Policy Team
- H2 Accelerator
- SHFCA
- Hydrogen skills baselining group
- SOWEC – Scottish Offshore Wind Energy Council Skills Group
- Offshore Energy Supply Chain Conference with the Cabinet Secretary

### CAPABILITY AND CAPACITY

Building on the development of the Hydrogen PDA we welcomed our first cohort of lecturing staff from colleges across Scotland onto the PDA Hydrogen: An Introduction for Technicians. This included colleagues from Ayrshire, Dundee & Angus, Dumfries & Galloway, Edinburgh, Fife, Forth Valley, UHI Perth, NESCol and UHI North Highland colleges across curriculum areas in automotive, engineering and science. As part of the programme the group travelled to Stornoway for the practical sessions hosted by UHI North, West and Hebrides. We are working to secure additional funding for further CPD in this important step to increasing the capability and capacity in hydrogen for this emerging technology.

### PROJECTS

2022-23 saw ESP consolidating the work of previous hydrogen projects, taking stock and reviewing our position within the hydrogen economy. We have established foundations for some new and exciting project development in 2023-24 such as Virtual Reality Training aids through funding from the UFI.

ESP were delighted to support the partnership between Dumfries and Galloway College and leading renewable energy consultancy and service provider, Natural Power in launching their graduate placement scheme.

Thanks to the partnership, the first three placements who were graduates of the wind turbine technician course, are now underway with their work placements as part of the service operations team supporting Brockloch Rig Wind Farm in Dumfries and Galloway.

The ambition is to collaborate with additional Colleges to roll out the scheme throughout Scotland in a bid to help tackle the industry skills gaps.

Since the announcement of the ScotWind leasing round in January 2022 ESP have been working with developers, supply chain, Colleges and other partners to ensure as far as practically possible that we are set to meet the predicted skills demand. To achieve this, we have investigated innovative learning models embracing the latest technology to accelerate the learner journey and we aim, with the backing of developers to allow Colleges access to augmented and virtual reality kit for wind turbine maintenance technician training and fabrication and welding practice in a safe low carbon virtual environment.

**“The ambition is to collaborate with additional Colleges to roll out the scheme throughout Scotland in a bid to help tackle the industry skills gaps.”**



## PARTNERSHIP AND COLLABORATION

ESP represents the colleges on a number of different groups, positioning our members as a first choice for technical skills.

- Offshore Wind Industry Council's Investment in Talent Group supporting to Offshore Wind Sector Deal
- Energy Skills Alliance supporting the North Sea Transition Deal
- SHINE – Scottish Hydrogen Innovation Network
- H2 Accelerator
- SHFCA

Through these partnerships we have presented at a number of events demonstrating hydrogen skills within the college sector. These include Scottish Government Hydrogen Brokerage events in partnership with HIE, SOSE and SE as well as presenting on college skills at the SHFCA annual conference and their hydrogen workshop event in Elgin.

ESP were asked to run a session at Aberdeen City Council's Road to Decarbonisation event and we participated in a hydrogen integration accelerating energy transitions workshop (HI-ACT) with participants from across the four nations.



We have been working closely with offshore developers and wind turbine manufacturers to identify the skills requirements for the manufacture, installation and maintenance of the Scotwind projects, along with additional developments within the UK and the wider international market.

With Scottish Colleges at the forefront of offshore renewables skills training we are currently regarded as global leaders. An accolade we are keen to maintain and with continued Government backing and support we have the potential to collaborate and share knowledge and best practice with a wider global market.

### SOWEC

ESP chair the SOWEC Skills Group and lead on two subgroups.

1. To raise awareness of the emerging offshore wind sector and the opportunities that Scotwind and the supply chain offers to long term skilled careers within the industry ensuring that Colleges are central to delivering. The target audience for this is from primary school through to graduate level and beyond.
2. Developer Working Group established to develop a skills framework to be agreed with developers around key strategic priorities for Scotland with several recommendations including the establishment of a strategic co-investment fund.

Additionally, we are supporting:

1. SDI in discussion with a number of potential inward investors.
2. Natural Power in collaboration with D&G with future potential for other colleges to be involved.
3. SOWEC skills and SLWGs.
4. Energy Skills Alliance and OPITO – energy units.

“With Scottish Colleges at the forefront of offshore renewables skills training we are currently regarded as global leaders. An accolade we are keen to maintain and with continued Government backing and support we have the potential to collaborate and share knowledge and best practice with a wider global market.”



# TRANSPORT

**Automotive  
Training Network**

**Heavy Duty  
Vehicles Group**

**Marine & Maritime  
Training Network**

## TRANSPORT PRIORITIES

1. CESAP Implementation
2. Zero carbon transport technologies
3. Aerospace/Aviation
4. Maritime
5. Hydrogen Technologies

## ENGAGE AND INFLUENCE

ESP and Transport Scotland continue to work closely together supporting skills through our colleges. ESP represents the college sector in the following groups:

- CESAP transport implementation group
- Maritime skills baselining group
- Aviation skills baselining group
- Space skills working group

## CAPABILITY AND CAPACITY

This academic year our Automotive Network was closely linked to our hydrogen activity with opportunities offered up to our automotive colleagues. We finished development of our new online hydrogen CPD course for college automotive staff, concentrating on the technical aspects of hydrogen vehicles which includes the following units;

- An Introduction to hydrogen for Net Zero Transport
- Fuel Cell EV Technology for Trucks & Buses
- Case Studies and Developments
- Safety Requirements for Hydrogen Delivery, Storage & Refuelling

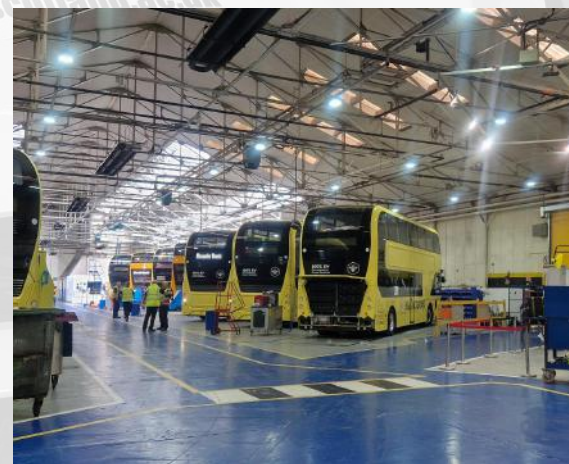
With reduced funding for transport and hydrogen during academic year 2022-23, we focussed on using this time to consolidate learning and develop previous investment. We have confirmed funding from Transport Scotland for academic year 2023-24 and will use this investment to build on our previous developments.

Automotive staff joined us at All Energy again in May 2023 and demonstrated some of the resources available to colleges through ESP.



- One of our electric vehicles
- Lucas Nülle CarTrain
- Lucas Nülle TruckTrain
- Lucas Nülle First Responder CarTrain
- Hydrogen Fuel Cell & Automotive Electrical Fundamentals Desktop Kit
- Electude Desktop Trainers

In June our Automotive Training Network attended a visit to Alexander Dennis sites in Falkirk and Larbert to see production on their electric and hydrogen buses. This visit had been due to take place prior to the pandemic.



“This academic year our Automotive Network was closely linked to our hydrogen activity with opportunities offered up to our automotive colleagues.”



## PROJECTS

2022-23 was a year of consolidation and planning. With a major refresh of CESAP, the publication of Scottish Government's hydrogen strategy, and Transport Scotland's combined skills study most of our project work was focussed on hydrogen and planning for academic year 2022-23. We have secured grants from Transport Scotland and UFI Voc Tech and started work for the following projects which will complete in 2023-24.

- Virtual Reality Hydrogen Refuelling Station development
- Additional TruckTrain and associated training for Automotive Training Network
- First responder Cartrain training
- Establishment of strategic transport group across college network
- Promotion of zero emission transport careers

## PARTNERSHIP AND COLLABORATION

Our ongoing partnership with Transport Scotland continues to go from strength to strength. The college network is increasingly recognised as key to moving forward the net zero agenda. We are increasingly asked about impact of our previous activity which has led to the creation of a shared resource booking system which will allow us to effectively report on activities from Transport Scotland funding.



In October we were asked to represent the college sector with our partners in Transport Scotland, Scotrail, Ballard Mobility, HV systems and Scottish Engineering as part of the Shifting skills – the vital role of Transport in hitting net zero session at the Scotsman's Green Skills Conference.

ESP were asked to present at Aberdeen City Council and North East Scotland College (NESCol) Road to Decarbonisation: H2 Skills to Accelerate the Transition to Net Zero event to highlight the activity of our Automotive and Hydrogen Training Networks.

ESP continues to represent the college sector in Aviation, Aerospace, Maritime, Rail and road transport with Transport Scotland and Space Scotland.



ESP sits on the CESAP Zero Emission Mobility skills group. Through collaboration with Transport Scotland and SDS we have signposted our training networks and individual colleges to the baselining skills studies in Aviation, Aerospace and Maritime ensuring college voices were heard.

Ongoing discussions and collaboration with H2 Accelerator has led to some exciting conversations around the hydrogen demonstrator train and potential access as a training aid for the college sector.

We continue to collaborate with college partners in the rest of the UK and internationally in emerging transport skills.

**“Through collaboration with Transport Scotland and SDS we have signposted our training networks and individual colleges to the baselining skills studies in Aviation, Aerospace and Maritime ensuring college voices were heard.”**



# ENGINEERING AND MANUFACTURE

**Advanced Manufacture  
Training Network**

**Fabrication and Welding  
Training Network**

## ENGINEERING AND MANUFACTURE PRIORITIES

1. MA review and qualification development
2. HN NextGen
3. Skills for Offshore Wind and Supply Chain
4. Fabrication and Welding
5. CESAP Implementation

## ENGAGE AND INFLUENCE

ESP represents the college sector in the following groups:

- SOWEC
- SDI
- ESLG
- EAL Advisory Group
- SQA

As members of Engineering Skills Leadership Group (ESLG) we continue to have direct access to industry partners and public bodies which allow us to respond to intelligence highlighting key skills needs, in turn leading to development of a cohesive action plan through the Engineering Leads' Forum and our Training Networks. This collaborative and informed approach effectively targets skills requirements as the Engineering and Manufacturing sectors evolve and new technology and challenges continue to emerge.

ESP's primary focus was representing the College sector during the Engineering Modern Apprenticeship review with attendance at both Technical Expert Group (TEG), and facilitating the Provider Advisory Group (PAG) events and promoting of the public consultation process to Colleges and Industry ensuring the most appropriate qualification to meet current and future skills needs was produced. As the qualification framework developed, we continued to interface and feedback comments from the delivery partners to awarding bodies ensuring the best possible qualification can be achieved.

As HN NextGen advances from the HNC that was piloted this academic year to the completion of the initial version of the HND, we continue to participate as part of the qualification development team and interphase with SQA as the awarding body and the College representation to develop the best qualification to suit the needs of current and future engineers.

ESP were accepted as members onto the EAL Strategic Advisory Board to support their future qualifications strategy as the specialist awarding organisation for engineering and manufacturing, to ensure that they continue to provide and create qualification products that meet the needs to sector now and in the future. This allows ESP to influence the development and production of qualifications that align to technology and evolving new practice within the national and regional Engineering and manufacturing sector.

## CAPABILITY & CAPACITY

Members of the Fabrication and Welding Training Network were welcomed by WB Alloy Welding Products Ltd to their Glasgow training facility and received demonstrations on the Soldamatic augmented reality equipment used to develop welding skills in a safe and low carbon environment.

The tour concluded with a demonstration of their cutting-edge laser welding and cleaning equipment. WB Alloys supported us further at the All-Energy Event at the SEC with VR equipment displayed on the impressive Colleges Skills Zone.



Several Colleges have already taken the initiative and increased capability and capacity to deliver fabrication and welding skills to meet industry demands with full apprenticeships as well as short upskilling and reskilling initiatives, this was based on information gained by ESP from our recent study with Scottish training providers.

**“This collaborative and informed approach effectively targets skills requirements as the Engineering and Manufacturing sectors evolve and new technology and challenges continue to emerge.”**



## PROJECTS

Since the announcement of the ScotWind leasing round in January 2022 ESP have been working with developers, supply chain, Colleges and other partners to ensure as far as practically possible that we are set to meet the predicted skills demand. To achieve this, we have investigated innovative learning models embracing the latest technology to accelerate the learner journey and we aim, with the backing of developers to allow Colleges access to augmented and virtual reality kit for wind turbine maintenance technician training and fabrication and welding practice in a safe low carbon virtual environment.



## PARTNERSHIP AND COLLABORATION

Scotland has significant potential to attract inward investment from the global market in manufacturing and particularly connected with the renewable energy sector. ESP are working closely with Scottish Enterprise, Scottish Development International and Scottish Government to support the skills element within these projects, promoting the current and future capability and capacity available through the College network and the collaborative approach embraced by the sector to achieve success.

“ESP are working closely with Scottish Enterprise, Scottish Development International and Scottish Government to support the skills element within these projects, promoting the current and future capability and capacity available through the College network and the collaborative approach embraced by the sector to achieve success.”

# CONSTRUCTION

**Building Services  
Engineering Training  
Network**

**Construction  
Technician Training  
Network**

**Construction  
Crafts Training  
Network**

**Energy  
Efficiency Training  
Network**

**Low Carbon  
Heat Training  
Network**

## CONSTRUCTION PRIORITIES

### Capability & Capacity Building

1. Staff CPD
2. Curriculum
3. Supply chain upskilling

### Partnership and Collaboration

1. Articulation
2. CECA Scotland Academy
3. Local Authority Building Standards (LABSS)
4. Manufacturer Partnerships

### Construction

1. SVQ's Apprenticeship backlogs
2. Pre-apprenticeship programmes
3. Qualification apprenticeship review

### Just Transition to Net Zero

## ENGAGE AND INFLUENCE

We are actively working with our colleges to reshape their construction and green skills curriculum to ensure it is flexible and responsive to the evolving needs of the industry. Recognising the importance of aligning education and training programs with real-world demands, colleges are collaborating closely with industry stakeholders to create partnerships that drive curriculum development. By working hand-in-hand with companies, trade associations, and industry experts, colleges can stay informed about emerging trends, technological advancements, and evolving skill requirements. This collaborative approach enables colleges to design courses that equip students with the practical knowledge, technical skills, and industry-specific expertise necessary for successful employment in the construction and renewable sectors.

The Construction Leads' Forum plays a pivotal role in driving strategic change for the college's construction, energy efficiency, and low carbon heat sector. The forum serves as a hub where Heads of School meet to share knowledge, exchange innovative ideas and collaborate on transformative initiatives. By leveraging their expertise, they drive strategic change through college collaboration with industry partners to identify best practice, implement cutting-edge technologies and develop curriculum that prepares students for careers in the evolving green construction technologies across Scotland.

## CESAP Heat Decarbonisation Subgroup

ESP was delighted to chair the CESAP Heat Decarbonisation Subgroup, tasked with developing recommendations to tackle the skills gap in the energy efficiency and low carbon heat supply chain with a strong focus on upskilling and reskilling the existing workforce. The purpose of the subgroup was to collaborate with industry stakeholders, identify skill gaps and develop targeted strategies to bridge them effectively.

## CAPABILITY AND CAPACITY

ESP is working with member colleges to build capability and capacity to support emerging skills priorities. Recognising the urgent need for a skilled workforce for colleges to be at the forefront of providing high-quality education and upskilling training to support industry with the skills needed to help government meets its Net Zero targets. In addition, we are actively collaborating with industry partners and embracing innovative teaching methodologies to ensure that their courses remain relevant and aligned with industry needs.

We are working with colleges to:

1. Actively expand their capacity to deliver construction and green skills, recognising the growing importance of the skills industry needs to decarbonise Scotland.
2. Scale up their facilities to provide accredited flexible and tailored training in construction techniques, renewable energy systems and energy-efficient technologies.

Colleges are now well placed to develop construction and green skills among students, industry and wider stakeholders, including councils, social housing companies, government agencies, and government personnel.

**“Colleges are now well placed to develop construction and green skills among students, industry and wider stakeholders, including councils, social housing companies, government agencies, and government personnel.”**

## PARTNERSHIP AND COLLABORATION

### Industry

Colleges met with Vaillant Group to develop plans to address the heat pump skills needs. Scotland Excel launched their installers' mobilisation event in partnership with ESP at Forth Valley College. This event was run to help the supply chain delivery of Net Zero and grow quality and skills within the energy efficiency and low carbon heat sector.



## Energy Savings Trust

ESP has worked alongside Energy Savings Trust to develop a Heat Pump Installer Supply chain toolkit.

ESP also supported Energy Savings Trust live webinars to promote Scotland's colleges and help the supply chain transition onto the energy efficiency and low carbon heat sector.

## CECA Scotland Academy

CECA Scotland and ESP have launched the CECA Scotland Academy to train Civil Engineering Operatives to meet future workforce needs. Starting in August 2023, the 18-week training course leads to a National Progression Award (NPA) in Construction Operations. Initially, four colleges will provide training, increasing to eight in 2024 and twelve in 2025, aligning with sector demands with CECA Scotland predicting significant growth and sustainable workload for the Civil Engineering Sector across Scotland.

## Installers Skills Matrix

The Installers Skills Matrix, hosted by ESP, continues to play a vital role in the transition to net zero in the domestic energy sector in Scotland. This matrix serves as a comprehensive framework for monitoring and updating the minimum competencies required for installers. With a focus on aligning with the Scottish Government's net-zero goals, the Skills Matrix ensures that installers possess the necessary skills to meet the evolving demands of the industry.

## LABBS

An innovative Modern Apprenticeship (MA) in Building Standards, developed by ESP in collaboration with LABBS, Scottish Government, Building Standards, UHI Inverness, and Fife College, addresses the skills shortage in the sector. The two-year program aims to attract and retain local authority apprentices across Scotland. The MA pilot program offers a new entry route into the profession and a training framework for other sectors facing skills shortages.

## PROJECTS

### Low Carbon Skills Grant

ESP worked in partnership with Energy Saving Trust (EST) and 8 regional colleges to upskill 163 Scottish plumbing and heating apprentices to gain their Air/Ground Source Heat Pump qualification providing apprentices with the skills needed to install heat pumps.

## Mobile Heat Pump Training & Assessment Centre

The mobile training and assessment centre aims to increase the number of qualified heat pump installers across Scotland, especially in remote and rural areas. It fills training gaps by providing flexibility to colleges in support of their local companies.



## CONVERT

ESP engaged with CWIC in Wales to deliver VR technology to the classroom and workshop within colleges. By embedding VR into construction curricula, students gain hands-on experience in a simulated environment that replicates real-world construction scenarios. They can engage in immersive training exercises, such as virtual site inspections and equipment operation, without the need for physical construction sites or expensive machinery. This technology enables students to develop critical skills in a safe and controlled setting while allowing for repeated practice and immediate feedback.



**“This technology enables students to develop critical skills in a safe and controlled setting while allowing for repeated practice and immediate feedback.”**



# STEM

## STEM PRIORITIES

1. Support the implementation and ongoing development of the Scottish Government's STEM Education and Training Strategy.
2. Coordinated assistance to the Regional STEM Partnerships:
  - a. Facilitate the STEM Leads' Forum.
  - b. Ensuring key groups and organisations are represented on Regional Partnerships.
  - c. Sharing of best practice and working collaboratively to develop solutions to shared challenges via the STEM Leads' Forum.
4. Work with Regional Partnerships to better inform 'Influencers' of STEM careers and pathways.
5. Develop a robust evaluation process for STEM activity in Scotland.
6. Closer links to ESP Training Networks with a focus on Sector Attractiveness including STEM.

## ENGAGE AND INFLUENCE

ESP is instrumental in identifying the STEM priorities for the 13 STEM Regional Partnerships through its role as Chair of the STEM Partnership Steering Group. Our role in chairing the STEM Leads' Forum also allows prompt feedback to the Steering Group members, on any shared challenges faced by the Partnerships and college members.

As an education partner of the IET, ESP sits as a guest providing advice on STEM to the IET Scotland Committee. We also provide STEM guidance to the Engineering Policy Group Scotland and were part of the Scottish working group who provided input into the IET Engineering Kids' Futures Report that was formally presented to the UK Government.

The Scottish Parliamentary Debate on 'Increasing the Participation of Women in STEM' saw MSPs highlight a number of initiatives which are running in colleges or which are supported by the Regional STEM Partnerships.

## CAPABILITY AND CAPACITY

By working collaboratively, the members of the Regional STEM Partnerships have ensured better alignment of STEM activities with local skills needs. The shared workload has:

1. Improved event effectiveness.
2. Significantly increased participation.
3. Allowed a more focussed use of funding and industry sponsorship.
4. Shared best practice has allowed colleges to optimise limited STEM funding to ensure continued support to local schools.

ESP has been directly involved in gaining funding from Ocean Winds and Digital Xtra allowing schools from Aberdeenshire, Renfrewshire and Moray to participate in the **FIRST® LEGO® League**.

## PROJECTS

### **FIRST® LEGO® League 'Superpowered'**

The 'Superpowered' season had around 100 teams of 9 to 16 year olds register for one of the 10 Scottish Challenge tournaments with Dunblane High School going on to represent the UK at the World Finals in Marrakesh. Many additional schools registered for Challenge and Explore class packs allowing them to deliver the activity in the classroom and run their own tournament.

### **Step into...**

In partnership with the IoP, ESP launched its [Step into Physics](#) webpage; where industry professionals showcase careers and apprenticeships which have a strong focus on physics.

“ESP is instrumental in identifying the STEM priorities for the 13 STEM Regional Partnerships through its membership of the STEM Partnership Steering Group.”





## PARTNERSHIP AND COLLABORATION

ESP was able to support the IoP with its review into physics based apprenticeships through encouraging industry partners to participate and provide feedback, thus ensuring that Scottish views were well represented in the final document.

ESP's continuing relationship with Education Scotland's RAiSE officers has not only widened the outreach and sustainability of programmes such as *FIRST*® LEGO® League Explore but has provided CLPL to teachers and assisted with CfE alignment resulting in improved teacher confidence and enhanced delivery of activities to pupils.



ESP supported the Skills Scotland event at the SEC in Glasgow. This event is Scotland's largest skills, career and apprenticeship event which reaches around 4000 young people. Several colleges were able to showcase their educational resources and course opportunities to help to attract students onto work-related learning courses in Engineering, Construction and Renewable Energy.

WorldskillsUK invited ESP to exhibit our renewable energy demonstrator at the National Finals in Edinburgh College providing a greater awareness of opportunities in this growing industry. Local schools were in attendance and were able to experience offshore wind turbine and construction environments through VR and AR in a hands-on, safe, and engaging way.



“ESP’s continuing relationship with Education Scotland’s RAiSE officers has not only widened the outreach and sustainability of programmes such as *FIRST*® LEGO® League Explore but has provided CLPL to teachers and assisted with CfE alignment resulting in improved teacher confidence and enhanced delivery of activities to pupils.”





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