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IMPACTING AND INFLUENCING
engineers responsible for a safer and ethical tomorrow

SOE is at the forefront of elevating standards in engineering, raising the profile of professional registration and guiding members through their career aspirations. With the support of you, our members, we have made a huge impact in the sector through events, webinars, new content and innovative solutions with more to come.

Key areas where SOE invests your membership fees

<p>Product Innovation</p> <p>In 2024, we worked hard to bring you our top innovation to support your career development. Mentoring (out in 2024) and CPD.</p>	<p>Events</p> <p>Through events like the 2024 Think & Learn Day, the Safety & Resilience Awards, SOE is actively supporting and motivating by providing exciting opportunities for development, CPD, and publishing resources with you.</p>	<p>Content</p> <p>This year we launched the 'Navigating Pathways to Progress' guide - a brand new career guide which is all about helping you map your career progression through membership, CPD, and publishing resources with you.</p>	<p>Campaigns</p> <p>Working with the Engineering Council, the Society for the Environment, and our Professional Sector Council (PSC), we are actively lobbying for professional standards to become a reality in engineering.</p>	<p>People</p> <p>Members of SOE, we're also ensuring that we support you through internal training and development schemes, industry networks and industry events and activities. We're also ensuring that we support you through internal training and development schemes, industry networks and industry events and activities. We're also ensuring that we support you through internal training and development schemes, industry networks and industry events and activities.</p>
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SOE News

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THE QUARTERLY NEWSLETTER FOR SOE MEMBERS

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Safety and Resilience Awards Honour Engineering's Best

On 17th October The Society of Operations Engineers alongside the engineering community celebrated the 2024 Safety and Resilience in Engineering Awards at Birmingham's ThinkTank Science Museum, in which a line up of outstanding engineers and engineering companies were celebrated for their remarkable contributions to safety, resilience, and innovation across the engineering sector. Supported by a number of influential sponsors such as DAF Trucks, the Road Haulage Association, and Beverley Bell Consulting and Training, the event brought together over 70 industry leaders and professionals from a wide range of sectors.



The awards ceremony opened with a fascinating keynote by SOE Chair Howard Seymour, emphasising the critical role of continuous improvement in driving safety and resilience within engineering. Howard's address set a tone of admiration and respect for those in the field who strive to enhance standards and innovate amidst industry challenges. Roger Atkins, a respected engineering figure and LinkedIn top voice, hosted the event, engaging attendees and underscoring the shared mission of advancing safety practices.

A highlight of the ceremony was the presentation of the Helix Award won by Flavia Popescu FAPM CMgr FCI EngTech of Babcock International Group, an honour dedicated to recognising resilience and ethical leadership. This award, regarded as the pinnacle of achievement in the engineering community,

celebrates the individuals that exhibit adaptability, strategic insight, and ethical standards. Award recipients are commended for navigating complex challenges with a forward-thinking approach, showcasing the importance of resilience in today's engineering landscape. In addition to the Helix Award, the Volunteer and Region of the Year awards celebrated individuals and regions making an impact in their communities, underscoring the collaborative spirit that is central to SOE's values.

SOE Executive Director Emma Thompson MSOE delivered an inspiring speech that highlighted the dedication and passion of engineers who drive positive change in their fields. She acknowledged that SOE's mission goes beyond technical excellence, focusing on the commitment engineers have to safety, professional standards, and continuous

learning. Emma's address reinforced the importance of collective efforts within the engineering community to make lasting improvements in safety practices and operational standards.

The event also marked the launch of SOE's new mentoring program aimed at supporting engineers at every career stage. Presented by Robin Bates, SOE's Membership and Professional Standards Lead, the program promises to foster knowledge exchange, personal growth, and professional development. The mentoring initiative has already received enthusiastic support from members, with over 70 professionals signing up to serve as mentors. This program aligns with SOE's commitment to nurturing a supportive, development-focused engineering community and enhancing connections across sectors.

The event concluded with

a special moment honouring SOE trustee Ian Macdonald, who received an Honorary Fellowship for his long-standing support and dedication to SOE's objectives. Ian's recognition highlighted the invaluable contributions of SOE members who commit their time and expertise to advancing the Society's mission.

The 2024 Safety and Resilience in Engineering Awards served as a powerful reminder of the critical role engineers play in shaping a safer and more sustainable future. The event celebrated the achievements of individuals and organisations dedicated to advancing industry standards and building resilience across the engineering landscape. Through events like this, SOE continues to honour the commitment and innovation that drive progress, creating a community where engineers can inspire one another and foster positive change.

WINNERS

ENVIRONMENTAL ENGINEER OF THE YEAR
Fuk Hung Wong CEng CEnv
 FSOE FIPlantE, Majestic Engineering Company Ltd.

ROAD TRANSPORT ENGINEER OF THE YEAR
Peter Collins AMSOE MIRTE,
 Stagecoach

PLANT ENGINEER OF THE YEAR
Dr Bishnujee Singh
 FSOE FIPlantE, Cayley Aerospace Inc.

ENGINEER SURVEYOR OF THE YEAR
Peter Jacobs EngTech MSOE
 MBES, Zurich Engineering

FUTURE LEADER
Flavia Popescu FAPM
 CMgr FCI EngTech
 Babcock International Group

SAFETY SPECIALIST OF THE YEAR
Dr Veera Kumar Mohan
 CEng MSOE MIPlantE
 Abu Dhabi Vocational Education and Training Institute

VOLUNTEER OF THE YEAR (shared by)
Mike Ponsonby MSOE
 MIPlantE MIRTE
 M. J. Ponsonby Ltd
George Haywood
 EngTech FSOE FIRTE

SOE REGION OF THE YEAR
IRTE Ireland North

ENGINEERING COMPANY OF THE YEAR
Bureau Technical Inspection Services

SAFETY INNOVATION OF THE YEAR
Roller Brake Test Accreditation

PEOPLE DEVELOPMENT CHAMPION
Stagecoach East

HELIX AWARD
Flavia Popescu FAPM CMgr
 FCI EngTech Babcock International Group

INDUSTRY
UPDATES
CELEBRATING 20 YEARS OF CHARTERED ENVIRONMENTALISTS: A MILESTONE IN SUSTAINABILITY LEADERSHIP

The Society for the Environment recently marked 20 years of Chartered Environmentalists, highlighting their critical role in driving environmental progress across industries. Since its inception, over 7,500 professionals have earned Chartered Environmentalist (CEnv) status, including members of the Society of Operations Engineers (SOE). These professionals contribute to sustainability, climate action, and responsible environmental management in various sectors.

The 20th-anniversary event, titled "If Not Now, When?", reflected on the importance of environmental leadership and the urgency of addressing global environmental challenges. The event featured key industry leaders, emphasising the need for continued commitment to achieving net-zero emissions, biodiversity restoration, and sustainable practices.

The celebration underscored the essential role of engineers and environmentalists in shaping a greener future, encouraging professionals to further embed environmental responsibility in their work.

ENGINEERINGUK REPORT HIGHLIGHTS SECTOR'S ECONOMIC IMPACT AND CALLS FOR GREATER DIVERSITY IN WORKFORCE

A recent report by EngineeringUK reveals that 19.2% of the UK workforce was employed in engineering and technology occupations in 2023, highlighting the sector's major role in the economy. In addition, 10.2% of the workforce is engaged in related fields within the industry, such as HR roles within engineering firms. Engineering and technology jobs also demonstrate a positive income trend, with average earnings higher than other sectors at £39,163 per year.

However, the report identifies persisting diversity challenges. Women's representation in engineering and technology roles declined to 15.7% in 2023 from 16.5% in 2022, marking a decrease of around 38,000. Ethnic diversity also remains a concern, with minority ethnic groups representing only 12.4% of engineering roles compared to 16% across other sectors.

Additionally, women in the field showed a higher minority ethnic representation (18.3%) than men (11.4%), and those reporting a disability (13.6%) were less than those in other occupations (18%).

Welcome Back...

FROM THE EDITOR

Welcome back to another edition of SOE News. This edition marks my one-year anniversary of writing for SOE News. Over the past year, I have had the privilege of meeting countless members, both digitally and in person. Each interaction has reinforced how dynamic and passionate our community is – always striving to drive innovation, uphold safety standards, and nurture new talent in the engineering field.

One of the highlights of the year was the Safety and Resilience in Engineering Awards, held at the ThinkTank Science Museum in Birmingham this October. This event celebrated the best in our field, showcasing the unwavering dedication of engineers who push boundaries to advance safety and resilience. It was a powerful reminder of how central safety is to our mission and how the excellence of our members inspires progress across industries.

Another key highlight from this quarter has been the introduction of SOE's new

"To everyone who has contributed to making this year memorable – whether you shared your story, attended events, or connected with us – thank you"

mentoring platform – an initiative that has already made a significant impact. The pre launch was met with enthusiasm, and over 70 members have stepped forward to mentor others, demonstrating the deep commitment within our community to lift each other up. Mentorship goes beyond professional advice; it builds connections, fosters growth, and shapes the future of engineering by empowering the next generation with the knowledge and confidence they need to succeed.

Beyond events and initiatives, what stands out most from this year is the passion and dedication of our members. Whether through webinars,

workshops, or industry gathering's, your participation and dedication have brought our collective mission to life. The stories shared and the achievements celebrated showcase a community not just committed to technical excellence, but to the broader goals of leadership, ethics, and continuous learning.

To everyone who has contributed to making this year memorable – whether you shared your story, attended events, or connected with us – thank you. It's your passion and dedication that make SOE more than a professional body; it's a thriving network where every member's voice matters and every contribution counts.

As we look ahead, I am excited for the opportunities that await. The year ahead will bring more milestones, challenges, and successes. We will continue to innovate and support our members with resources, events, and initiatives that promote growth, safety, and excellence. And most importantly, we will continue to celebrate you – our members – who are at the heart of everything we do. Here's to another year of growth, connection, and shared achievements!

Chris Knight
PR & Communications Officer

Do you have a story to share?
Get in touch with me at:
editor@soe.org.uk



SOE 2024 Elections Empower Members to Guide Engineering Excellence

The Society of Operations Engineers is gearing up for the 2024 elections, a cardinal process that allows members to shape the strategic direction and professional guidance the Society offers across diverse engineering sectors.

These elections will fill key positions on the Trustee Board and the Professional Sector Councils, which are fundamental for SOE's mission to uphold standards, promote industry expertise, and support its members' professional growth. The outcome of these elections significantly influences the Society's strategic aims and priorities, helping it stay relevant in an ever-evolving industry landscape.

The Trustee Board has two open positions for members with senior leadership experience, a strong understanding of governance, and knowledge of the charitable sector. This board ensures the Society remains aligned with its mission and charitable objectives. Trustees are responsible for financial stewardship, regulatory compliance, and developing strategic initiatives. Candidates with a commercial background or familiarity with governance were especially encouraged to

These elections will fill key positions on the Trustee Board and the Professional Sector Councils

apply. Elected Trustee Board members will be registered as Directors of the Society, which provides both leadership experience and a platform to influence SOE's long-term vision. Additionally, there were two honorary Trustee Board roles open, ratified by the Governance and Nominations Committee, who will recommend suitable candidates to the board.

The Professional Sector Councils provide essential guidance in sector-specific areas, ensuring that the SOE's resources and programs meet the distinct needs of

various industries. Members of these councils do not serve as directors or trustees but contribute vital expertise to advance their fields.

The councils are seeking new representatives for the following sectors:

- **IRTE (Institute of Road Transport Engineers)** were looking for candidates with experience in transport fields, including waste management, bus and coach services, and vehicle bodywork.
- **IPlantE and BES (Institution of Plant Engineers and Bureau of Engineer Surveyors)** were looking for candidates with backgrounds in plant engineering or engineering surveying, areas crucial for infrastructure and industrial safety.
- **Environmental and Operations** were looking for candidates with experience in environmental and operational sectors, reflecting the SOE's commitment to sustainable and safe operational practices.

The SOE election process includes several stages, beginning with the submission

of nomination forms, personal statements, and photos by candidates. Following this, members receive voting instructions and candidate information. Ballots are then submitted to an independent service provider. Using a single transferable vote (STV) system, members can rank multiple candidates, ensuring a fair representation. Eligible voters include members at the MSOE level or above, who can vote in elections relevant to their specific sector, strengthening SOE's democratic engagement across professional fields.

This year's election is an important opportunity for SOE members to influence the Society's focus and ensure it remains responsive to industry needs. The elected individuals will shape SOE's approach to industry challenges, including technological advancements, sustainability, and regulatory compliance. By voting, members help select leaders who will advocate for resources, training, and standards that directly impact their professional development and the future of engineering.

Stay on top of the updates from the elections at soe.org.uk/agm

SOE Appoints Emma Thompson MSOE as New Executive Director

The Society of Operations Engineers is pleased to announce the appointment of Emma Thompson MSOE as its new Executive Director, effective from October 2024. With over 21 years of experience working in engineering, both in Professional Engineering Institutions and in corporate engineering environments, Emma brings a wealth of knowledge and leadership expertise to the role.

Her appointment marks a significant milestone for SOE, as she steps in to guide the organisation at a critical moment in the evolution of the engineering profession.

While not an engineer herself, Emma has extensive experience cultivated by years of working closely with engineering professionals and institutions. Her career includes key roles in driving organisational efficiency, fostering growth, and optimising business processes in the engineering space. Most recently, she served as Head of Business Operations and Designate Executive Director at the SOE, where she spearheaded a number of initiatives that improved operational performance and established strong industry partnerships.

Emma's expertise includes reengineering business processes to improve efficiency, developing strategic plans to align operations with broader organisational goals, and working collaboratively with stakeholders to drive growth



and market expansion. She is also known for her ability to cultivate high-performing teams and instil a culture of continuous improvement.

As Executive Director, Emma Thompson will usher the SOE into a new era, ensuring the organisation remains a valuable resource for its members and a leader within the engineering community. Her appointment comes at a time of significant transformation for the engineering profession, as new

technologies, sustainability goals, and safety requirements continue to reshape the industry.

"I am honoured to be taking on this role at such an important time for the engineering profession," Emma stated. "Engineers and technicians are at the forefront of solving the world's most pressing challenges, and it's essential that we support their professional growth and development."

Emma is particularly

focused on expanding SOE's professional development offerings. Under her leadership, SOE will continue to enhance its training and certification programs to help engineers stay at the cutting edge of their fields. She also plans to promote greater collaboration within the industry, providing platforms for professionals to share knowledge, best practices, and innovative solutions.

A key part of Emma's vision for SOE is ensuring that members feel supported and connected. Recognising that SOE's diverse membership of accomplished engineers and budding new talent is its greatest strength, Emma is committed to creating an environment where all members – from seasoned professionals to those just starting their careers – can benefit from the Society's offerings.

"Our members are the heart of SOE," Emma said. "My goal is to ensure that we are providing them with the resources they need, while also creating a vibrant, engaged community where they can share knowledge and grow together."

Emma plans to prioritise initiatives that foster networking, mentorship, and Continuous Professional Development (CPD), at SOE. By building a strong sense of community, she aims to create an organisation where members feel supported in their professional journeys.

Emma's appointment as Executive Director marks an exciting new chapter for the Society of Operations Engineers. Her extensive leadership experience, combined with her deep understanding of operational efficiency and organisational growth, makes her well-suited to lead SOE as it continues to support engineers and technicians in navigating the challenges of today's fast-evolving industry.

"Our members are the heart of SOE, my goal is to ensure that we are providing them with the resources they need, while also creating a vibrant, engaged community where they can share knowledge and grow together"

For the sake of safety...

SOE has launched an exciting new podcast series, For the Sake of Safety, hosted by yours truly. Within this series we aim to delve deep into essential safety topics across the engineering landscape starting with road transport.

In the debut episode, Nick Elliott MSOE MIRTE, Chair of the IRTE Professional Sector Council, shares his insights into building a safety-centred culture within organisations. Drawing on his extensive career, Elliott discusses how embedding safety

at every level of a business not only enhances wellbeing but can bring unexpected advantages to the workplace as well.

Looking ahead, For the Sake of Safety will feature upcoming episodes with Emma Thompson MSOE, Executive Director of SOE, and Caroline Hamilton MBE CEng MIMechE, Chief Executive of the Safety Assessment Federation Limited. They'll explore broader themes in safety leadership and regulatory insights, continuing to highlight best practices in the field.



Listen to **For the Sake of Safety** on Spotify, and keep an eye out for future episodes! <https://open.spotify.com/episode/0bcdekF9Y S6WTIdMhGx110>

By bringing in experts from an extensive range of professional backgrounds, the podcast will offer listeners a rich spectrum of perspectives on operational safety, all of which counting towards your CPD. Through these discussions, For the Sake of Safety aims to foster a culture of safety awareness and innovation across sectors.

INDUSTRY UPDATES

DRIVING CHANGE: £500M INVESTMENT POWERS UK'S PUSH FOR 1,300 ZERO-EMISSION BUSES AND GREEN JOBS

The UK government is set to invest £500m in a significant initiative aimed at supporting jobs and reducing emissions through the deployment of 1,300 new zero-emission buses. The funding is part of the wider "Bus Back Better" strategy, which seeks to modernise the bus industry while also contributing to the UK's net-zero targets. This initiative is expected to not only boost employment within the manufacturing and infrastructure sectors but also help local authorities and operators transition towards cleaner, more sustainable public transport. The investment follows previous commitments to expand electric and hydrogen bus fleets across the country. Ultimately, this move will help reduce air pollution in cities while ensuring the UK remains at the forefront of green public transport innovation.

TRANSPORT ENGINEER NAMED EXCLUSIVE MEDIA PARTNER FOR 2025 MICROLISE

Transport Engineer, the official journal of the IRTE, has been named the exclusive media partner for the 2025 Microlise Transport Conference. Set to take place on the 18th of March at the Coventry Building Society Arena, the Microlise Transport Conference is Europe's largest event of its kind, attracting over 1,200 professionals from the transport and logistics sectors. With more than 40 expert speakers addressing key industry topics, as well as workshops and networking within an exhibition area featuring over 50 exhibitors, the Microlise Transport Conference is not to be missed.

Transport Engineer will provide detailed coverage in print and online, sharing event updates, announcements, and insights in the months leading up to the conference. Jon Benson, publisher of Transport Engineer, expressed enthusiasm for the partnership, emphasising the magazine's commitment to supporting the engineering community and keeping commercial vehicles on the road.

Emma Thompson MSOE, Executive Director of the Society of Operations Engineers, highlighted the significance of this collaboration, noting it as a crucial opportunity to showcase advancements in engineering and to encourage the sector's use of innovative technologies. The conference begins the night before with the prestigious Microlise Driver of the Year Awards, honouring outstanding drivers nationwide.

GOOD MONTH **NEW RESEARCH REVEALS PLANTS ABSORB 31% MORE CO₂, OFFERING HOPE FOR CLIMATE CHANGE MITIGATION**

Plants are absorbing 31% more carbon dioxide than previously estimated, according to new research published in *Nature*. This discovery, led by scientists from Cornell University and Oak Ridge National Laboratory, offers a clearer picture of how much CO₂ is removed from the atmosphere by plants through photosynthesis, a process known as Terrestrial Gross Primary Production (GPP). The updated figure is 157 petagrams of carbon per year, compared to the previous estimate of 120 petagrams.

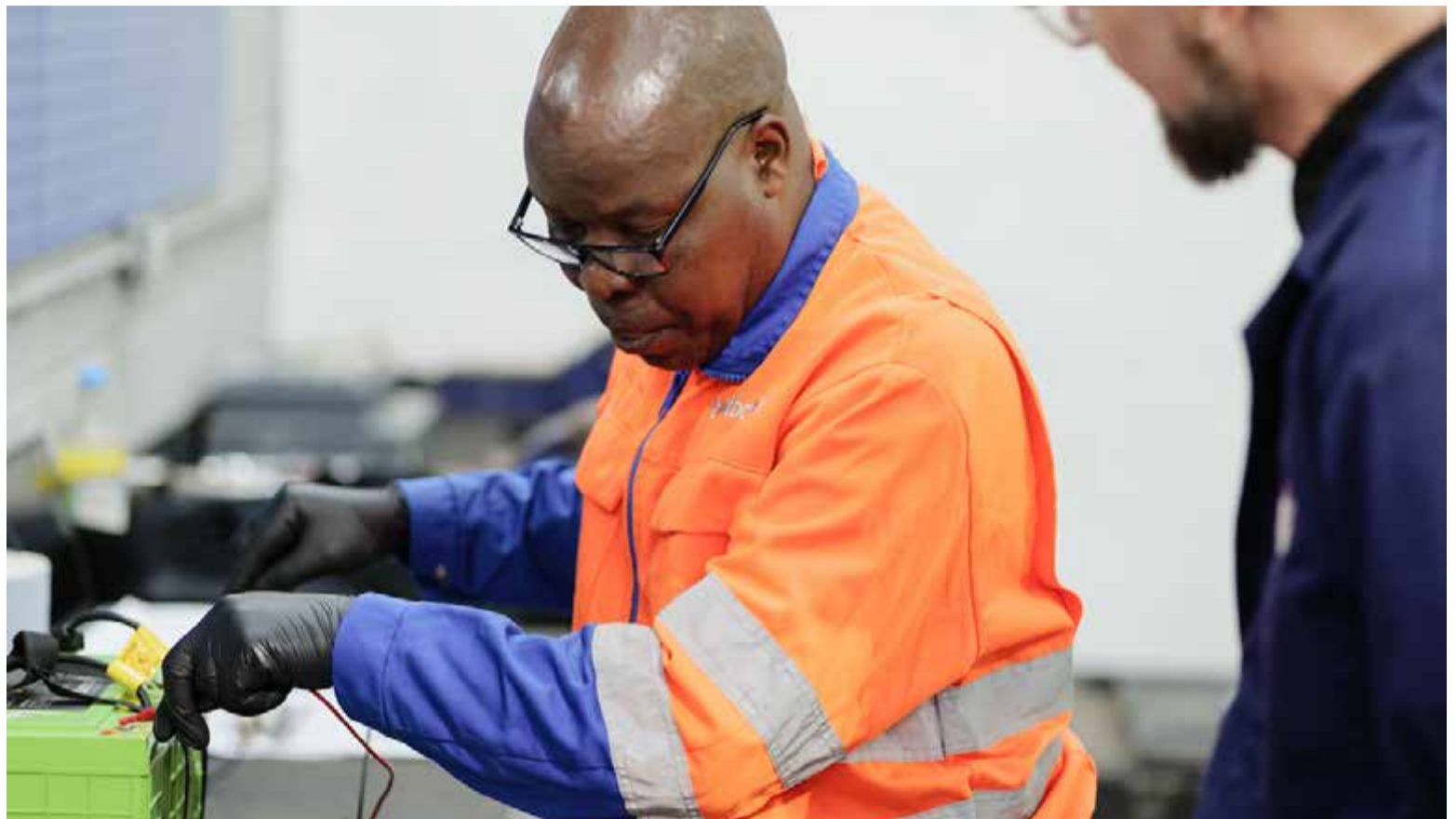
The study used carbonyl sulfide (OCS), a compound that follows a similar path to CO₂, in plant leaves but is easier to track, to refine these estimates. By tracing OCS movement into leaf chloroplasts, the researchers were able to better gauge global photosynthetic activity. This approach, combined with high-resolution environmental data, significantly improves models of the Earth's carbon cycle.

The findings highlight the vital role plants play in absorbing CO₂, and mitigating greenhouse gases, providing essential insights for future climate predictions. Improved understanding of photosynthesis and plant adaptation could influence how scientists address climate change moving forward.

BAD MONTH **IEA WORLD ENERGY CALLS FOR URGENT ACCELERATED CLEAN ENERGY TRANSITION AMID GEOPOLITICAL CHALLENGES**

The International Energy Agency's (IEA) World Energy Outlook 2024 report warns of increasing geopolitical risks and emphasises the need for a faster transition to clean energy to tackle the climate crisis. The report highlights that the current pace of renewable energy expansion is insufficient to meet global climate goals and calls for urgent acceleration in the deployment of solar, wind, and other low-carbon technologies. Geopolitical tensions, including energy security concerns, are seen as significant barriers to this transition, particularly in the context of the Russia-Ukraine war, which has disrupted energy markets.

The IEA stresses that accelerating the clean energy shift is crucial not only for reducing emissions but also for stabilising energy prices and improving energy independence. It recommends policy reforms, investments, and international cooperation to speed up the transition.



Fostering Growth Across Engineering and Beyond

Mentoring is a professional relationship where a more experienced individual (the mentor) provides guidance, support, and advice to a less experienced person (the mentee). This relationship is embedded in mutual respect and focuses on both personal and professional development.

Unlike formal training, which typically targets specific skills, mentoring takes a broader, more holistic view. It helps mentees navigate their career paths, develop self-awareness, and build both technical and soft skills. Successful mentoring not only benefits the mentee by offering real-world learning experiences but also allows mentors to reinforce their knowledge while contributing to the growth of their profession.

Across the engineering landscape, mentoring has always played a pivotal role in shaping the next generation of professionals. It encompasses far more than the mere transfer of technical expertise. It fosters critical thinking, leadership, and adaptability essential skills critical for tackling the complex challenges of today. Engineers operate in a constantly evolving environment, where rapid technological advancements and ever-changing industry regulations require a continuous mindset of learning and adaptability. A good mentor bridges the gap between formal education and the practical demands of the profession, offering insights and support that classroom training often cannot provide.

Recent research highlights the tangible benefits of

mentoring. A five-year study by Gartner revealed that 25% of employees who partook in mentoring programmes experienced a salary increase, compared to just 5% of those without mentors. Additionally, mentees were promoted five times more frequently than non-participants. Perhaps even more compelling, retention rates were 22% higher for mentees and 20% higher for mentors. These figures show that mentoring is not just about career development – it also fosters strong, long-lasting professional relationships, benefitting both parties involved (The Mentor Coach Foundation).

Mentoring is evolving, moving beyond the traditional senior-junior dynamics to become a multifaceted exchange that crosses boundaries of discipline, geography, and even seniority. Engineering, as a global profession, often requires cross-disciplinary thinking and international collaboration to solve complex problems. With the rise of virtual and remote working, mentoring is no longer constrained by physical proximity. A mentor in one country can now guide a mentee in another, enriching the experience with diverse perspectives and experiences.

To maximise the benefits of mentoring within the engineering field, consider these practical strategies:

- **Set Clear Expectations**
Define specific goals for the mentoring relationship, whether it's achieving professional registration, acquiring a new technical skill, or honing leadership qualities. Clear expectations help keep the relationship focused and productive.

“Across the engineering landscape, mentoring has always played a pivotal role in shaping the next generation of professionals”

- **Balance Technical and Soft Skills**

While technical skills are crucial in engineering, do not neglect the importance of soft skills like communication, teamwork, and decision-making. These attributes often distinguish exceptional engineers from competent ones.

- **Embrace Curiosity and Openness**

Engineering is constantly evolving. A successful mentoring relationship should encourage both the mentor and mentee to maintain a curious mindset. Exploring new software, innovative methodologies, or regulatory changes benefits both parties. Mentoring offers benefits at every stage of an engineer's career. For early-career professionals, it provides direction, builds confidence, and helps navigate complex

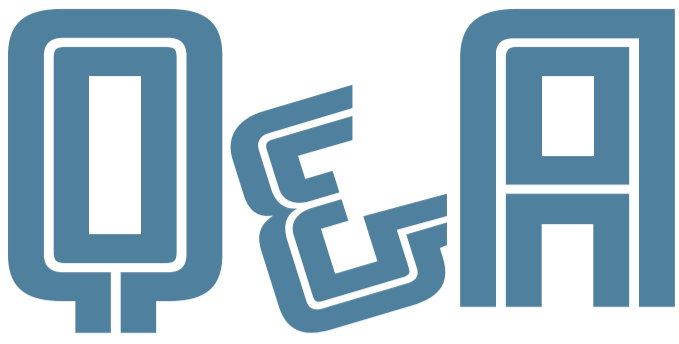
certification and registration processes. Senior engineers gain the opportunity to give back to the profession, refine their leadership abilities, and gain fresh perspectives from emerging talent.

Mentoring is also essential for addressing broader industry challenges, such as improving diversity within engineering roles. According to a report by the National Academies, effective mentoring significantly boosts the retention and advancement of underrepresented groups in STEM fields, making it a powerful tool for driving inclusion and equity in the profession (National Academies).

Mentoring knows no bounds – whether professional, geographical, or even in terms of purpose. For engineers, mentoring nurtures talent capable of tackling today's challenges and preparing for tomorrow's uncertainties. As the engineering profession becomes more interconnected and complex, mentoring will be the foundation for building future leaders.

To support this, the Society of Operations Engineers (SOE) is launching a new mentor-matching service for members. This initiative aims to foster meaningful connections, promote professional development, and ensure that engineers at all levels have access to the guidance and support they need.

By embracing these evolving mentoring dynamics, we ensure that mentoring is not just a tool for career growth but also a lifelong commitment to professional excellence and community building.



Dr. Salim Barbhuiya

Meet Dr. Salim Barbhuiya: Senior Lecturer in Civil Engineering at the University of East London

Can you tell us about your educational background and how you got into engineering?

I hold a PhD in Material Technology for Sustainable Concrete from Queen's University Belfast, a Master's in Structural Engineering from the Asian Institute of Technology, and a Bachelor's in Civil Engineering from the National Institute of Technology Silchar. I started my career in engineering through research roles, which later developed into academic positions focusing on sustainable materials and resilience in construction.

What inspired you to pursue a career in engineering?

My passion for engineering was sparked by a fascination with how innovative materials and structures can address real-world challenges. Witnessing the impact of engineering on sustainable development and resilience in construction fueled my desire to contribute to advancing these fields and solving complex engineering problems.

Can you outline your career journey?

I began as a Research Fellow at Queen's University Belfast, working on corrosion monitoring systems. My research continued at the University of the West of Scotland and Loughborough University, where I studied advanced cementitious materials. I then moved to Curtin University and the University of Leeds, securing notable funding and international projects, before becoming a Senior Lecturer at the University of East London, specialising in sustainable construction and climate resilience.

What are some key milestones or achievements in your career?

Key milestones include developing early corrosion monitoring systems at Queen's University Belfast and researching advanced materials in Scotland. At Curtin University, I received the Pro VC Award for Internationalisation



in 2015 for enhancing global university visibility. At Leeds, I secured funding from the Royal Academy of Engineering, and today, I focus on sustainable construction and resilience, publish high-impact research, and contribute to international conferences.

What is your current role, and what are your primary responsibilities?

As a Senior Lecturer at the University of East London, I design and deliver lectures on engineering materials and analytical skills in the built environment. My day includes lecturing, supervising student projects, curriculum development, marking assessments, and securing research funding. Balancing teaching, research, and student support is central to my work.

What are some challenges you face in your position?

The biggest challenges in my current position include balancing teaching, research, and administrative duties, securing ongoing research funding, and adapting to evolving educational

technologies. Additionally, addressing diverse student needs and keeping up with rapid advancements in engineering materials and sustainable practices presents ongoing challenges.

Can you tell us about a project you are particularly proud of?

I'm proud of my project on climate-resilient concrete for marine environments, funded by the Royal Academy of Engineering. This involved creating concrete mixtures that withstand harsh marine conditions, enhancing infrastructure durability. Leading a multidisciplinary team, I generated publications that advance sustainable practices, reflecting my commitment to addressing practical engineering challenges.

How do you approach problem-solving and innovation in projects?

I use a collaborative, iterative approach. First, I analyze the problem in-depth, engaging multidisciplinary teams to gather diverse perspectives. I

rely on data-driven methods, experimenting with solutions while ensuring sustainability. Continuous assessment and feedback loops refine our solutions to meet real-world needs effectively.

What skills are essential for success in your field?

Key skills include analytical ability, creativity in problem-solving, and expertise in sustainable technologies. Communication and teamwork are also crucial for collaboration, while adaptability to industry trends supports ongoing innovation.

What motivated you to join the Society of Operations Engineers (SOE)?

SOE's emphasis on operational efficiency and professional development aligns with my career goals. I joined to connect with professionals, gain insights on best practices, and enhance both my research and practical engineering approaches. SOE provides valuable resources and a platform for collaboration.

What advice would you give to aspiring engineers?

For aspiring engineers, I recommend focusing on building a strong foundation in technical skills and seeking hands-on experience through internships or projects. Cultivate a mindset of continuous learning and adaptability, as the field evolves rapidly with new technologies and methods. Networking with professionals and joining industry organizations can provide valuable insights and career opportunities. Emphasize problem-solving, creativity, and effective communication, as these skills are crucial for addressing complex challenges. Lastly, pursue passions within engineering that align with your values, such as sustainability or innovation, to find fulfilling and impactful career paths.

Can you share any memorable career experiences or lessons?

One memorable experience was leading a project on climate-resilient concrete funded by the Royal Academy of Engineering. This project taught me the value of interdisciplinary collaboration and perseverance. Navigating complex research challenges and integrating feedback from diverse experts highlighted the importance of flexibility and communication. Another key lesson was learning to balance research with

teaching responsibilities, which underscored the need for effective time management and prioritization. These experiences reinforced the importance of staying adaptable and continuously seeking improvement, both in personal skills and in project execution, ultimately shaping a more comprehensive and resilient approach to engineering challenges.

What are your professional goals for the future?

I aim to advance research in sustainable materials and climate resilience, lead projects that push engineering boundaries, and mentor future engineers. Securing international funding and expanding collaborations are also goals. Ultimately, I want to contribute meaningfully through my research and teaching.

How do you see the field of engineering evolving over the next decade?

Engineering will increasingly focus on sustainability and digital transformation. AI, machine learning, and automation will drive innovations in design and efficiency. Resilient infrastructure will be essential to address climate change, and interdisciplinary approaches will integrate engineering with data and environmental science.

Are there any upcoming projects or initiatives you're excited about?

I am excited about an upcoming project focused on developing low-cost precast concrete panels for housing in North-East India, funded by the Ministry of Human Resources Department, Government of India. This initiative aims to provide affordable, durable, and climate-resilient housing solutions, addressing both economic and environmental challenges. Additionally, I am involved in research exploring innovative sustainable materials and digital manufacturing techniques, which promise to revolutionize construction practices. These projects align with my commitment to sustainability and technological advancement, offering opportunities to make a significant impact on both local and global scales.

Explore the full case study and other insights from engineering professionals here: <https://www.soe.org.uk/membership/who-are-soe-members/case-studies.html>

“Leading the climate-resilient concrete project taught me the value of interdisciplinary collaboration and flexibility. Balancing research with teaching highlighted the importance of time management and prioritization”

SOE 2024: A Year of Impact, Innovation, and Influence in Engineering

IMPACTING AND INFLUENCING engineers responsible for a safer and ethical tomorrow

SOE is at the forefront of elevating standards in engineering, raising the profile of professional registration and guiding members through their career aspirations. With the support of you, our members, we have made a huge impact in the sector through events, webinars, new content and innovative solutions with more to come.

Key areas where SOE invests your membership fees

Product innovation

In 2024, we worked round the clock to bring forth two big innovations to support your career transformation: Mentoring (out in 2024), and CPD platform (out in 2025).

Events

Through initiatives like the IRTE Bus & Coach Skills Challenge and the Safety & Resilience Awards, SOE is actively supporting our community by promoting upskilling, recognising outstanding achievements, and celebrating successes with peers.

Content

This year we launched the 'Navigating Engineering: Pathways to Progress' guide – a peer-reviewed career guide which is all about helping you map your career progression, featuring real-life case studies and ideas to develop your own career pathway.

Campaigns

Working with the Engineering Council, Royal Academy of Engineering, EngineeringUK, the Society for the Environment, and our Professional Sector Councils (PSCs), we are actively advocating for professional standards to become a must-have in engineering.

People

While doing all of this, we're also ensuring that the people who serve you are supported through internal training and engagement schemes, our newly developed EDI (Equality, Diversity, and Inclusion) working group, and continuous professional development (CPD). This helps us stay ahead of industry trends and deliver the best service possible.

Raising the profile of our industry

Speaking engagements:

Spokespeople of the SOE represented us across these conferences raising awareness of our sectors' work and sharing their thought leadership:

- Commercial Vehicle Show 2024
- IRTE Bus & Coach Skills Challenge 2024
- APSE Conference 2024
- Net Zero Week 2024
- Industrial Maintenance Solutions Summit 2024
- AMPS Industry Day
- Safety & Resilience in Engineering Awards 2024
- Energy Security & Green Infrastructure Week 2024

Regional coverage:

Our volunteer network ran CPD lectures, demonstrations and meetings across the country. Check out our popular regions.

- Ireland North
- London
- North Eastern
- North London
- Northern
- Scottish Ayrshire
- South Wales Regional Group
- Wiltshire

Championing skills and standards in the media

SOE's work on IRTE Skills Challenge, Safety Awards, new alliances to tackle the ongoing skills challenge and efforts in raising professional standards has been covered across several media publications including:

Press coverage:	Press mentions:	
<ul style="list-style-type: none"> LAPV RouteOne Bus and Coach Buyer Coach & Bus Week The Engineer Transport Operator Transport Engineer Operations Engineer 	<ul style="list-style-type: none"> The British Army SMMT CPT Lincolnshire World Biggleswade Today MRC Laboratory of Molecular Biology Yahoo 	<ul style="list-style-type: none"> Bude & Stratton Post Capita CEO Insights Asia Missouri S&T This is Wiltshire

Growing community engagement

We are proud to see our community thriving with increased engagement and participation across our platforms and events.

This year, we gained on average 99 new LinkedIn followers per month

We've had 6,000+ reactions on LinkedIn and a reach of almost 20K on Facebook

We were joined by more than 1,000 individuals across our webinars and events this year

We held over 70 events, with 60+ hours of CPD associated with them

Key topics covered included:

- Impact of electric commercial vehicles (ECVs) on depot and distribution hub energy requirements
- Preparing for Net Zero
- Utilising Digital Twin Technology
- Bridge Strikes
- Laser Scanning and Collision Investigation
- Real-Time Tyre Pressure Monitoring
- Preparing for Engineering Council Professional Registration
- Career-related webinars

Guiding new members

To date we have awarded membership to **385 members in 2024**

We have supported **121 students & apprentices** by granting them student or apprentice membership. (included in the 385 figure)

1 month the average time it takes to process an EngTech application

6 months the average time it takes to complete a CEng application

We ratified and approved **79** professional registration applications

Expanding content library

We have been busy growing our library of technical content, career advice and real-life stories as well as bringing the latest technical advancements, legislation and compliance updates.

- Navigating Engineering: Pathways to Progress guide
- Navigating Engineering videos
- For the Sake of Safety podcast
- Inspiring case studies from our members
- Transport Engineer
- Operations Engineer
- SOE News

Raising and upholding Professional Standards

New innovations

- Mentoring scheme offering a matching service to connect experienced professionals with those looking to advance their careers.
- CPD platform (coming early 2025) providing world-class content to support you in developing and maintaining your engineering competence.
- REnvTech in collaboration with the Society for the Environment offering professional registration for environmental technicians.
- Training courses – From 2025, SOE members in the IRTE sector will benefit from a 10% discount on select training courses offered by Beverley Bell Consulting.

Accreditations and CPD

- Approved and accredited the training at Infinis to meet the academic and competence requirements for EngTech. This was one of the first activities under the Engineering Council's updated AAQA first edition, done in collaboration with our Professional Affiliate, IPowerE.
- Approved the CLP Power Emerging Professional Development Programme Training Scheme as meeting the competence requirements for CEng, providing a streamlined route to professional registration for employees who complete the training.
- Approved 5 CPD schemes as delivering high-quality content against set learning outcomes, serving as a badge of excellence.
- Provided training to over 30 volunteers to ensure they have up-to-date knowledge, skills and experience across all membership and registration activities.
- Audited and reviewed the CPD logs of over 130 members, ensuring their engineering competence remains current and promoting professionalism within the industry.

irtec

Over 15,000 active irtec technicians, with 257 irtec Accredited Assessors and 59 irtec Assessment Centres globally. Steady growth since 2010 reflects the industry's commitment to professional standards. The upcoming BSI Flex Standards present an opportunity for alignment with irtec's long-term strategy, particularly around zero-emission HGV maintenance.

IRTE Workshop accreditation

310 active Workshop Accreditations, with 65 completed in 2024. We will have 20 auditors by the end of 2024. Our accreditations have expanded internationally, with audits in Ireland and Singapore, continuing to raise workshop standards globally.

With your continued support, together we can shape the future of our sector

Stay Connected with Membership Renewal

As we approach the final few months of the year, we remind you that your membership subscription is due for renewal soon.

Over the last year, the SOE has continued to provide support for our members through the popular webinar series of technical presentations, professional development opportunities and thought leadership.

As we continue to develop our benefits for members we are delighted to announce the launch of several new initiatives, including our Mentoring and CPD Platforms.

To pay your 2025 fees, log

in to 'MySOE', and click on 'Subscriptions & payments' and then 'Pay now' to make the payment online if you pay by Credit Card. If you pay by Direct Debit you will see your payment schedule. You will also be able to view and update your personal details, which includes addresses, job information and contact preferences in the 'My SOE' area of the website.

If you have any problems accessing these pages, or you prefer to pay your fees by debit or credit card over the phone, our membership team is happy to help. Call us on +44 (0) 20 7630 6666. You can also contact us by email at membership@soe.org.uk

WE NEED YOUR HELP!

We invite you to share your news and accomplishments for a chance to be featured in our upcoming publications. Whether you've completed an innovative project, achieved a significant milestone, or have insights to share, we want to hear from you!

Showcase your expertise and inspire others in the engineering community. Submit your stories and let your achievements shine. Don't miss this opportunity to gain recognition and contribute to our collective knowledge.

Contact us at editor@soe.org.uk



SUBMIT YOUR NEWS TODAY AND BE A PART OF SOMETHING GREAT!

IRTE Northern Centre Kicks Off New Season with Traffic Law Solutions Presentation

IRTE NORTHERN CENTRE

The IRTE Northern Centre began its new season of CPD lectures with a presentation by David Collins and Neil Lever of Traffic Law Solutions at the Barton Manor Hotel, Preston.

David and Neil introduced themselves, sharing their backgrounds as former Lancashire Police Traffic Officers and specialists in the commercial vehicle unit.

Following their retirement, they founded Traffic Law Solutions in 2011, using their extensive experience to provide consultancy, audits, and specialist training for the transport industry.

Their reputation grew quickly due to the thoroughness and integrity of their audits, particularly with operators previously found non-compliant. They outlined their audit

procedures, working with the Guide to Maintaining Roadworthiness and other compliance publications, covering all aspects of maintenance, driver hours, and operations.

The session concluded with a Q&A, followed by Vice Chairman Tom Reed thanking the speakers. Chairman Danny Fisher presented David and Neil with a commemorative certificate on behalf of the Northern Centre.

IRTE CORNWALL

Cornwall Centre Visits Dry Dock

On Thursday, 8th August, members of the IRTE Cornwall Centre had the rare opportunity to visit Penzance Dry Dock, historically known as Holmans Dry Dock.

Now owned by Jamie Murphy, the facility dates back to the early 1800s, and remnants of its original foundations are still visible. In the past, boats had direct sea access, but today they must navigate through a swing bridge and be winched into the dock.

Jamie guided the group through the workshops, stores, and the dry dock itself, showcasing new gates and recent refurbishment work. He also outlined his plans to modernise the facility by raising the workshop roof, adding overhead gantry cranes, and building new boat-building lanes.

Jamie, who began his career in a similar boat engineering shop, was an informative host. His passion for the site was clear, and IRTE members were grateful for the opportunity to explore this historic and evolving site.

Scottish Ayrshire Centre Hosts TIP Trailers Presentation

IRTE SCOTTISH AYRSHIRE CENTRE

On Tuesday, 8th October, Peter Whelan, Country Sales Manager, and Brian Robertson, Telematics Product Manager from TIP UK, presented to the IRTE Scottish Ayrshire Centre.

Peter gave an overview of TIP, founded in 1968, which now operates nearly 300,000 trailers worldwide, including 90,000 in Europe and 21,000 in the UK. TIP Scotland manages around 1,000 assets from two locations, with 15 technicians at its workshop site. TIP also runs a Mechanics Academy in Nuneaton, training future technicians. The company

focuses on sustainability, refurbishing trailers to reduce emissions and offering solutions for fridge trailers, which contribute significantly to emissions.

Brian introduced TIP's Electronic Brake Performance Monitoring System (EBPMS), designed to meet new brake testing regulations set for 2025. This plug-and-play system monitors brake efficiency and generates performance reports, offering a cost-effective alternative to traditional brake testing methods. The evening concluded with a vote of thanks from Chairman Joe Younger.

IRTE NORTH EASTERN

Centre Celebrates Engineering Excellence at Annual Industry Partners Lunch and Awards

The North Eastern Centre held its annual Industry Partners Lunch and Awards at the Delta Hotel in Gateshead on 18 October 2024.

The event, led by Centre Chairman Derek Atkinson, celebrated the achievements of members and industry partners and underscored the value of local and national support for the Centre, especially during challenging times for the transport industry. Special guests included Emma Thompson, Executive Director of the SOE, and Sir Moir Lockhead OBE, former SOE Patron.

A key highlight was a tribute to Bill Black, former committee member and retired Curriculum Manager for Automotive and Engineering at Gateshead College, for his longstanding contributions to the IRTE Apprenticeship Award Scheme. Gary Archer was also recognised for his 20 years as the Centre's Honorary Treasurer.

Scott Barker from Go-Ahead Group received the Student of the Year Award for completing his apprenticeship, with Go-Ahead's Engineering Director Simon Carlisle commending Barker's achievements. The Lecture of the Year Award went

to Vincent Ward from Clarios/Varta for his impactful 2023 technical presentation. Finally, a £1,000 cheque was presented to Northumbria Blood Bikes, a charity supporting the urgent transport of medical supplies.

In his closing remarks, Centre Chairman Derek Atkinson expressed his gratitude to the SOE for their ongoing national support and thanked everyone who contributed to the success of the event. He concluded by announcing the date for the Centre's next Annual Dinner and Dance, set for 17 October 2025, and encouraged attendees to mark it in their diaries.

IRTE Cornwall Visits Household Waste Incinerator and Hawkins Motors

IRTE CORNWALL

On 22nd August, IRTE Cornwall members visited Cornwall's Household Waste Incinerator and Energy Recovery System, operated by SUEZ on behalf of Cornwall Council.

The facility incinerates household waste at temperatures between 900-1100°C, running continuously 24/7. The heat generated is converted into superheated steam, driving turbines

to generate electricity. This process produces 20 megawatts of energy – enough to power 21,000 homes – while avoiding landfill. The remaining ash is used in building projects, primarily for road surfaces. Control Room Manager Dan McCoan guided members through the operation.

On 19th September, members visited Hawkins Motors in St Stephens, a family-run dealership. John

Hawkins hosted the event, offering insight into the company's vehicle spares, servicing supplies, and large van sales. A presentation on electric vehicles and hybrid alternatives prompted engaging discussions, with some members already using electric vehicles. The evening concluded with a tour of John Hawkins Snr's impressive motorcycle museum, where he shared detailed stories about each classic bike.

IRTE BRUNEL AND WILTSHIRE CENTRE

Brunel and Wiltshire Centres Visit Aerospace Museum

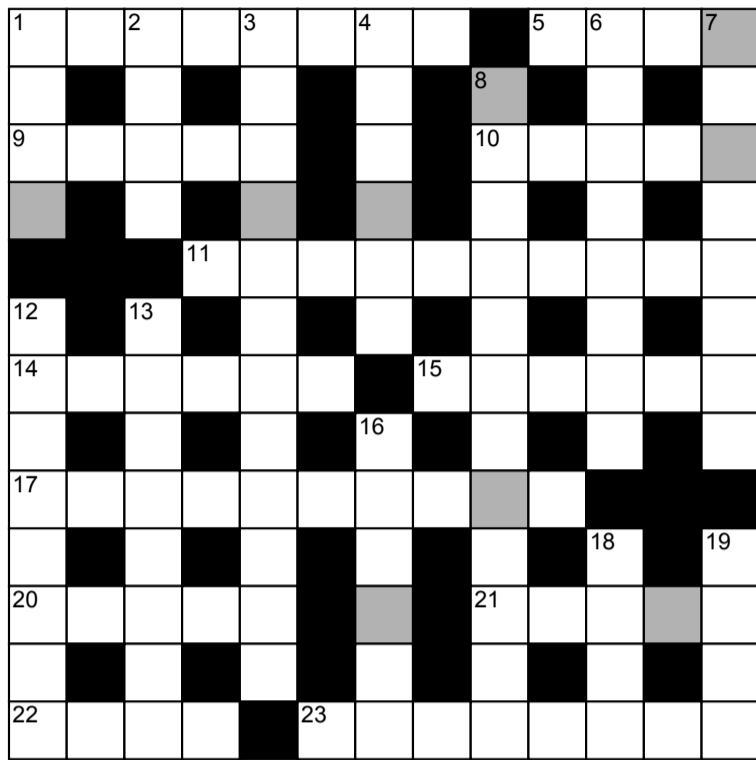
Members of the Brunel and Wiltshire IRTE centres recently enjoyed an insightful visit to the Aerospace Museum in Bristol. The day included a rich exploration of Bristol's aviation history, spanning early flight, both World Wars, the space race, and modern aerospace innovations.

Engaging displays featured aircraft, helicopters, missiles, engines, and space technology, highlighting the region's significant role in aerospace development.

The group also toured the iconic Concorde, with a standout presentation on its history, and had the unique opportunity to board the last Concorde ever to fly. The visit concluded with a behind-the-scenes look at the museum's conservation area, where historic aircraft are meticulously restored. Overall, the visit offered a comprehensive look at Bristol's extraordinary contributions to the aviation industry, leaving IRTE members highly impressed.

COFFEE BREAK

Crossword



- Across**
- 1 Measure of effectiveness (8)
 - 5 Fencing sword (4)
 - 9 Verse form (5)
 - 10 Sailing vessel (5)
 - 11 Depository (10)
 - 14 On a ship or train (6)
 - 15 Articulate; eloquent (6)
 - 17 Deter (10)
 - 20 Looking tired (5)
 - 21 Lead a discussion (5)
 - 22 Legendary creature (4)
 - 23 Immature (8)

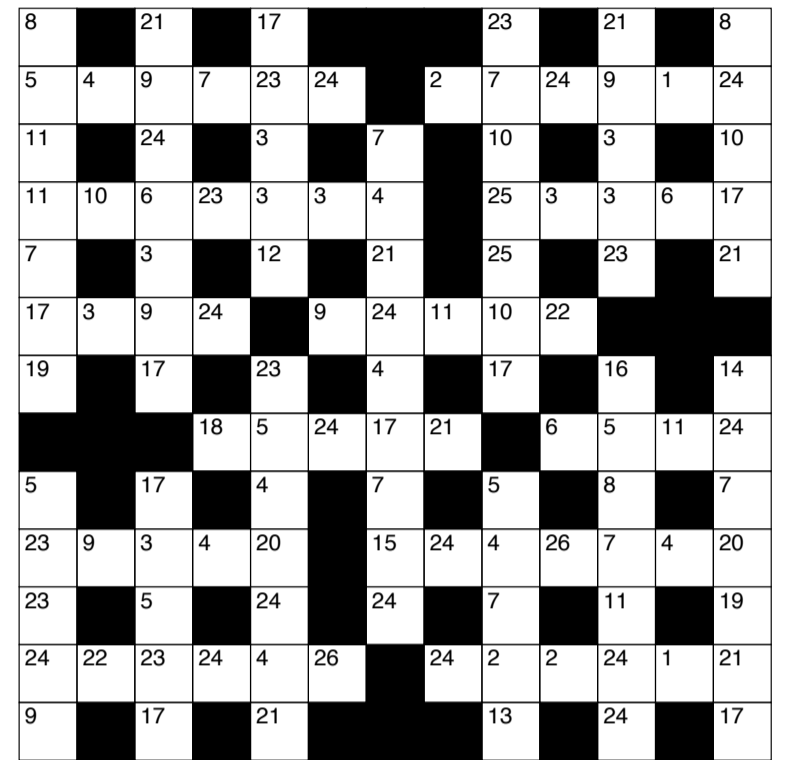
- Down**
- 1 Sound reflection (4)
 - 2 Opposite of pass (4)
 - 3 Compensate for (12)
 - 4 Small red fruit with a hard stone (6)
 - 6 Envisioned (8)
 - 7 Supplication (8)
 - 8 Based on legend (12)
 - 12 Frankly (8)
 - 13 Invariable (8)
 - 16 Language spoken in Paris (6)
 - 18 Indian dress (4)
 - 19 Curved shape (4)

Unscramble

Unscramble the letters in the shaded squares in the crossword to reveal a themed word:

--	--	--	--	--	--	--	--	--	--

Codeword



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

1	2	3	4	5	6	7	8	9	10	11	12	13
	F			U								
14	15	16	17	18	19	20	21	22	23	24	25	26
										E		

A codeword is a completed crossword grid where each letter of the alphabet has been substituted for a number from 1-26. There will be at least one occurrence of each letter of the alphabet. Certain letters are given as starters. The solver must decipher the rest of the code to discover the words in the completed puzzle.

SuDoku

The rules of the game are simple: each of the nine blocks has to contain all the numbers 1-9 within its squares. Each number can only appear once in a row, column or box. Each vertical nine-square column, or horizontal nine-square line across, within the larger square, must also contain the numbers 1-9, without repetition or omission.

Every puzzle has just one correct solution.

	7	6			9		1	
		1					7	
				8	1			5
2					3	5		
				2				
		3	1					9
9			6	3				
	4						1	
	6		9				3	8

Find this month's puzzle solutions on our website: soe.org.uk

WIN!

A £25 Amazon gift card



For your chance to win, simply complete all the puzzles and return to:
 SOE News, 22 Greencoat Place, Westminster, London, SW1P 1PR.

Name:

Address:

Tel:

Email:



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