
Scottish
Engineering
Awards 2022

Aine Finlayson
President of Scottish Engineering

A very warm welcome to everyone attending our 2022 Awards Dinner this evening.

If the last few years have taught us anything it's that our industry is truly remarkable, and as another Awards dinner is eagerly anticipated, we are delighted to have your company tonight and appreciate the effort and support shown for our awards each year. We are here tonight to recognise both inspiring individuals and exceptional organisations, who are the epitome of Scottish excellence. Over the course of the evening, we will recognise:

- Young engineers who have led innovative, commercially and socially crucial projects for our Young Engineer of the Year Award (YEYA22)
- The companies who in 2021/2022 have stood out in their performance, growth, innovation, and resilience.

We hope you leave tonight feeling inspired by the innovation on display, and a sense of pride after an evening of celebrating the very best of our home-grown talent. We're delighted to be here with you once again.

Scottish Engineering Awards 2022

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Award Nominees 2022

Alexander Dennis Limited

Alexander Dennis Limited (ADL) is a global leader in the design and manufacture of double deck buses and is also the UK's largest bus and coach manufacturer. ADL offers single and double deck vehicles under the brands of Alexander Dennis and Plaxton with over 31,000 vehicles in service in the UK, Europe, Hong Kong, Singapore, New Zealand, Mexico, Canada and the United States. ADL has a well-invested product range aligned to the zero-emission age. ADL is part of NFI Group Inc., one of the world's largest independent global bus manufacturers.

Ballard Motive Solutions

Ballard Motive Solutions (BMS) is a specialist in hydrogen and fuel cell system engineering and integration and has more than 10 years of industry experience in technology development and testing to support the implementation of decarbonisation strategies – transforming heavy-duty fleets to zero-emission alternatives. BMS Ballard is passionate about creating opportunities for the Scottish supply chain and their recent projects have created a demand for fabrication and ancillary equipment and general automotive and rail supply. BMS Ballard is also committed to educating young people on future careers and skills in the clean energy sector – and has delivered hands-on hydrogen programmes to more than 100,000 students over the past decade.

Award Nominees 2022

EDF (UK) Hunterston B Power Station

On the 7th January this year, Hunterston B Power station was shut down for the final time, ending a remarkable 46 years of baseload electricity generation, enough electricity to power over 76 million homes since 1976 (297.4 TWhs). An initial planned life of 25 years was safely extended through detailed and dedicated engineering expertise to nearly double its design life, and by doing so avoided more than 100m tonnes of carbon dioxide from entering the atmosphere. During its generating lifetime Hunterston excelled in providing energy security, something that we took for granted until recently, yet is now clearly more important than ever.

Farid Hillend Engineering Limited

Farid Hillend Engineering are UK specialists in the design, engineering and manufacture of vehicles for the waste management industry. With a heritage of over 50 years in manufacturing, they are one of the leading European manufacturers of waste and recycling vehicles. Their 7,500 m2 operation produces bodies from sheet steel to finished units, with meticulous detail applied to every vehicle. Over the past year working with several customers, Hillend has undertaken a major review of their products and those of their industry competitors, implementing new efficient working practices and manufacturing improvements to continue to confidently deliver high quality market-leading products and services.

Award Nominees 2022

Findlay Irvine Ltd

Findlay Irvine are a multi-sector provider of innovative electro-mechanical and software products primarily for the Transport Industries. Trading for almost 62 years, this family-owned and operated company has developed a reputation for innovation with a recent example for the rail sector in their 3 axis, 5-year battery powered tilt sensor adopted by Network Rail to detect potentially catastrophic land slips at rail embankments. Partnerships with Universities and research establishments have led to a range of ground-breaking technologies and several industry awards, helping this small Penicuik based company to become an international provider of specialised transport safety-related products and services.

John Jenkins & Son (Scotland) Ltd

This third-generation family business began as a traditional Blacksmith and Fabricating Company. Fast-forward 60 years and the company is implementing some serious innovation with the goal to be recognised as an industry leader for steel fabrication in the housebuilding and construction sector. Adopting ERP software has allowed the company to control workflow and provide useful data to manage their business effectively, whilst investing in new CNC equipment and CAD/SolidWorks Drawing Software has improved efficiency, increased capacity and overall production. This has allowed the company to enter new sectors and cope with larger structural projects, with plans for the company to double their production facility in Falkirk to cope with current demand.

Award Nominees 2022

Peak Scientific Instruments Ltd

PEAK Scientific is a leading innovator in the design, manufacture and support of high-performance gas generators for analytical laboratories. Established in 1997 near Glasgow, where its corporate Headquarters, and high-tech manufacturing and R&D facilities reside, PEAK Scientific boasts a significant local presence on every continent – including major operations in North America, China and India. Investment in the next generation of engineers is important to PEAK, having recently become a funding partner for Primary Engineer's Leader Award as well as funding 30 places at the NuVuX Summer Camp – both offering opportunities for kids to have hands-on engineering experiences and learn from professionals in the field. PEAK is pleased to offer a great graduate program and recently, created 14 new engineering graduate positions.

Texo

TEXO is an industrial services provider based in Aberdeen and working across Scotland, the UK and Europe. Delivering services through seven dedicated business units, TEXO serves a wide number of customers across key sectors including onshore and offshore oil and gas, renewable energy, construction and asset maintenance. Although still a relatively young company, recent facility upgrades, capital expenditure and local recruitment have positioned the company well to secure new business moving forward. Continued investment in R&D helps to produce innovative technologies to meet customer requirements and has been crucial in building TEXO's enviable reputation for its results approach to complex customer requirements.

Xandor Plastics

Xandor has firmly established its position as a leading supplier of precision injection mouldings and value-added services. From their 140,000 sq. ft facility at Larkhall near Glasgow, they offer a full service from mould tool design, through to value added painting and assembly on high specification plastic components. Investing in their future, Xandor has invested £5M to support the manufacture of the new hot foil process for the MY22 Range Rover and MY22 Range Rover Sport at their Larkhall facility, marking the first hot foil grille assembly within the UK. This site is truly a world-class manufacturing facility specialising in precision injection moulding, painting plastic and decorative finishing assembly.

Intelligent Growth Solutions Ltd
2021 Scottish Engineering Company of the Year

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Paul Sheerin

Chief Executive Officer

Welcome all to our 2022 Awards Dinner, where once again we look forward to celebrating individual and personal excellence in engineering and manufacturing in Scotland.

When we last met our positive was a healthy demand, and our challenges could be broadly categorised as pandemic, and everything else. Since then, the Covid risk seems to have receded, whilst the everything else has added the devastating humanitarian cost of Russia's aggression against Ukraine, bringing an unthinkable land war to Europe once again. In business, not for the first time, we are reminded of the reliance we have on others as we learn of the significance of Ukraine's grain, steel and argon production, and the impact when they are no longer available.

For Scottish Engineering, thanks to our existing and new members we are in good health, growing our membership, widening our representation, building stronger clusters essential to the sustainability of industry, and speaking up on behalf of our sector as a critical friend to those who can help us grow and flourish.

Looking ahead, we continue working with Skills Development Scotland, our partners at Primary Engineer, and our Colleges and Universities to develop our future talent pipeline; Our successful Mentoring programme continues to grow thanks once again to our time-generous volunteers; and our Future Leaders forum is shaping who we are by listening to the direction of Scotland's leaders of tomorrow.

We are proud to be able to support you and hope you enjoy your evening.

Young Engineer of the Year Award

Celebrating the best young engineers in Scotland for over 25 years

In partnership with The Incorporation of Hammermen of Glasgow, the award is given to a young engineer who has shown excellence, innovation and imagination in their industry

Aidan Wood

Bellrock Technology Ltd

This project saw Aidan take the lead in the development and ongoing delivery of advanced methods for remote condition monitoring in passenger rail for one of Bellrock Technology's largest customers. Using automated approaches, this project identifies and notifies undetected failures within sensor data, allowing for early detection of asset failures. The key technologies involved in this project are principally digital technologies: connected sensors to collect and transmit the data, and cloud-based platforms to automate the processing, storage, and security of the analysis running on this data. These automated approaches are helping Bellrock Technology's clients increase efficiency by using their data more effectively.

Calum McCormack

Aggreko

Calum's project will enable Machine Learning (ML) analytics and intelligent control on all Aggreko worksites by creating a solution for ML at the Edge. Calum leads the development of all aspects of the Edge IoT solution, from selection and procurement of hardware to development of software and practices. This project will see a number of benefits for the company, in particular, it will allow Aggreko to extend their current suite of ML models to assets in remote locations. This will significantly increase cost savings through more sophisticated predictive maintenance and could eliminate wasted power with integration of intelligent grid-scale software.

Daryl Taylor

Spirit AeroSystems

Daryl's project focuses on necessary engineering and the introduction of a new manufacturing process into Spirit AeroSystems Prestwick facility aiming to in-source work, reduce costs, improve quality and increase headcount demands. Daryl's role included implementation of Engineering Change Management Process, Liaising with suppliers and the development of new assembly fixtures for the Prestwick Facility among other responsibilities. The utilisation of 3D modelling software to "show" the operators the tasks required significantly reduced the likelihood of scrap, rework and repairs due to new manufacturing processes, as well as improvements in graphical work instruction, competitiveness in assembly work, costs, and quality with better control of supply.

Euan McLean

Chemring Energetics UK Ltd

Euan is the Engineering & Technology Manager for Chemring Energetics. During his time with the company, Euan has been involved in the design, development, and trial work conducted to produce the C-IED Wire Cutter. His role includes establishing and maintaining relationships to benefit from collective innovation, solving the novel and complex problems presented by this and other projects, developing products to penetrate new markets, exhibiting technical and commercial diligence, and managing technology and capability improvements. The C-IED Wire Cutter has a patent pending and will be profitable for Chemring Energetics whilst also providing humanitarian demining NGOs with significantly improved capability.

Greg Barnard

Allied Vehicles Ltd

Greg was tasked with leading the mechanical design and testing of the Peugeot Rifter Drive-From WAV (Branded: Peugeot Inspire). The new vehicles required significantly more automation than conventional vehicles, including powered Ramps, powered Tailgates, Automatic and lowering suspension with the complexity of the product increasing build time from 15 to 150 hours. Greg's design and testing process allowed Allied Vehicles to match the leading competitor on sales within 3 months of launch with enhanced quality of vehicle interior finish, which has set a new customer standard whilst, most importantly, having an immeasurable impact on its users, providing a new level of independence and inclusion that wasn't previously possible.

Gregor Boyd

Thales UK

Gregor led the Industrialisation and transfer of the "Airborne Electronic Products" (AEP), a project which secured existing jobs in Glasgow and led to the creation of new jobs to satisfy the demands that the manufacture of these products generated. Success was measured against the "Production Readiness". Gregor assessed the MRL level at 3 initially and progressed the product through to Level 8. Gregor then accepted a lead role in investigation and resolving product design issues. The implementation of his proposed solutions and associated manufacturing documentation was completed and re-qualified in less than 8 weeks to meet top level system qualification. The customer contract was critical in that national defence infrastructure and was dependent on this product manufacture.

Dr Jack James Marlow

Skyrora

Skyrora is a private company vying to offer space transportation services to the global small satellite market. Dr Marlow designed Skyrora's development plan and developed their sustainability-focused rocket engine testing facility, creating unique infrastructure that will benefit the whole of the UK space sector. As Head of Engineering, Dr Marlow assumed the role of project executive for the in-house work that included the design and construction of a 120,000 square foot rocket testing facility for the Skyrora XL 70kN rocket engine. In 2022 he was delighted to report the first rocket engine test of the Skyrora XL 70kN had been a success. Additionally, Dr Marlow created Scotland's first rocket internship programme for 10 students as well as a science apprentice scheme.

John Sibbald

BAE Systems

John joined PM&C on the Canadian Surface Combatant (CSC) project during his fourth and final year as an apprentice – a project focusing on the next generation of complex warships for the Canadian fleet in its infancy. Since then, John has progressed into a Senior Engineer Role and took over as Lead Engineer for the C&I system and IPMS Hardware. Under his leadership, the project has successfully continually managed and updated the C&I Bill of Materials (BoM), updated and maintained the I/O signal schedule, incorporated essential changes and revalidated constraints and layouts for the IPMS hardware. John's expertise has helped to clear roadblocks, defuse disputes and add clarity on design deliverables to achieve an agreed way forward in progressing designs.

Juliette Goddard

Intelligent Growth Solutions Ltd

As a mechanical design engineer, Juliette works as part of the Research and Development team at IGS where she worked on the Shallow Water Culture project last year. Juliette's role covered trial coordination, development of a novel intelligent drain design and optimisation modelling, yielding valuable data. The project has increased the range of crops feasible in vertical farming and reduces both overall and peak energy consumption over conventional hydroponic techniques by an estimated 60-70%. System improvements reduced idle times from 40% to 4% over a 24 hour production period. Additionally, IGS's growth tower product was improved through a re-design of the drain hardware doubling the drainage per minute capability of the towers.

Lian Ming Goh

AAC Clyde Space

The xSPANCION project lays the groundwork for AAC Clyde Space to provide space data and services quickly, at low cost, to organisations who are eager to harness satellites to tackle problems on Earth, from climate change to maritime communications, without investing in space-based infrastructure or expertise themselves. In addition to overall systems engineering responsibilities, Ming leads and coordinates two (of three) constellation-enabling technology developments – Intersatellite Links (ISL) and Articulated Solar Array (ASA) technology. Ming's contributions to this transformational project have the potential to significantly advance small satellite technology and help address the global demand for simplified access to space.

Matt Green

Danfoss Scotland Ltd

Matt facilitates the development and deployment of Digital Displacement technology in excavator applications and has been directly responsible for two internal demonstration projects that played a major part in Danfoss' decision to invest in the technology, and their subsequent decision to invest in Scotland with a new facility and manufacturing plant, and 96 permanent members of staff. Matt is also responsible for two demonstration projects with a major OEM with another starting in Q3 '22, paving the way for an excavator product launch. Matt's work has demonstrated fuel savings of more than 30%, and with target market penetration, this has the potential to reduce annual excavator CO2 emissions by 60,000,000 Tons.

Neil Bowman

Caley Ocean Systems Ltd (Pryme Group)

Neil is the lead engineer on the Caley Pile Fixation Tool project; a tool that has been deployed on one of Europe's biggest commercial offshore wind farms. The farm is projected to output 480 MW using 80 wind turbines. As technical lead, Neil coordinated a dispersed interdisciplinary and interorganizational team of engineers, technicians and draughtsmen from project initiation through to offshore implementation. Neil also performed much of the detailed design, engineering and analysis whilst coordinating with project stakeholders to manage evolving design requirements and key interfaces on this unique and complex system. To date 85% of all monopile foundations in this project have been successfully installed several months ahead of schedule.

Rebecca Inglis

Mersen Scotland Holytown Ltd

Rebecca's project focuses on improving High Temperature Furnace Maintenance. The process entailed documenting each step to allow the development of an up-to-date new process, introducing high frequency maintenance actions, codifying safe operating parameters of key equipment and monitoring schedules as well as planned installation of remote sensors to monitor temperature and vibration variation analysis that deviate from set parameters. Through this, Rebecca successfully reduced the complexity of the current process and made the maintenance of this complex equipment more user friendly for all maintenance staff, which has created the potential to reduce downtime and lead times, ultimately producing a better quality product with an extended equipment lifetime.

Stewart Samson

Alexander Dennis Limited

Stewarts' project focuses on New Electrical & Software Controls Architecture & Global Product Electrification. Stewart initially joined the project as a design engineer and having been seen to take ownership of key design aspects then led a secondment, this eventually lead to a promotion to Lead Engineer, spearheading the further introduction of the new control architecture and vehicle electrification on ADL's E500 flag ship vehicle for Asia Pacific. Under Stewart's leadership, the new electrical and software controls architecture implementation will allow ADL's continued supply of products for at least the next decade while the project improves the reliability, safety and quality of the products.

Alana Harrison
BAE Systems
2021 Young Engineer of the Year

The

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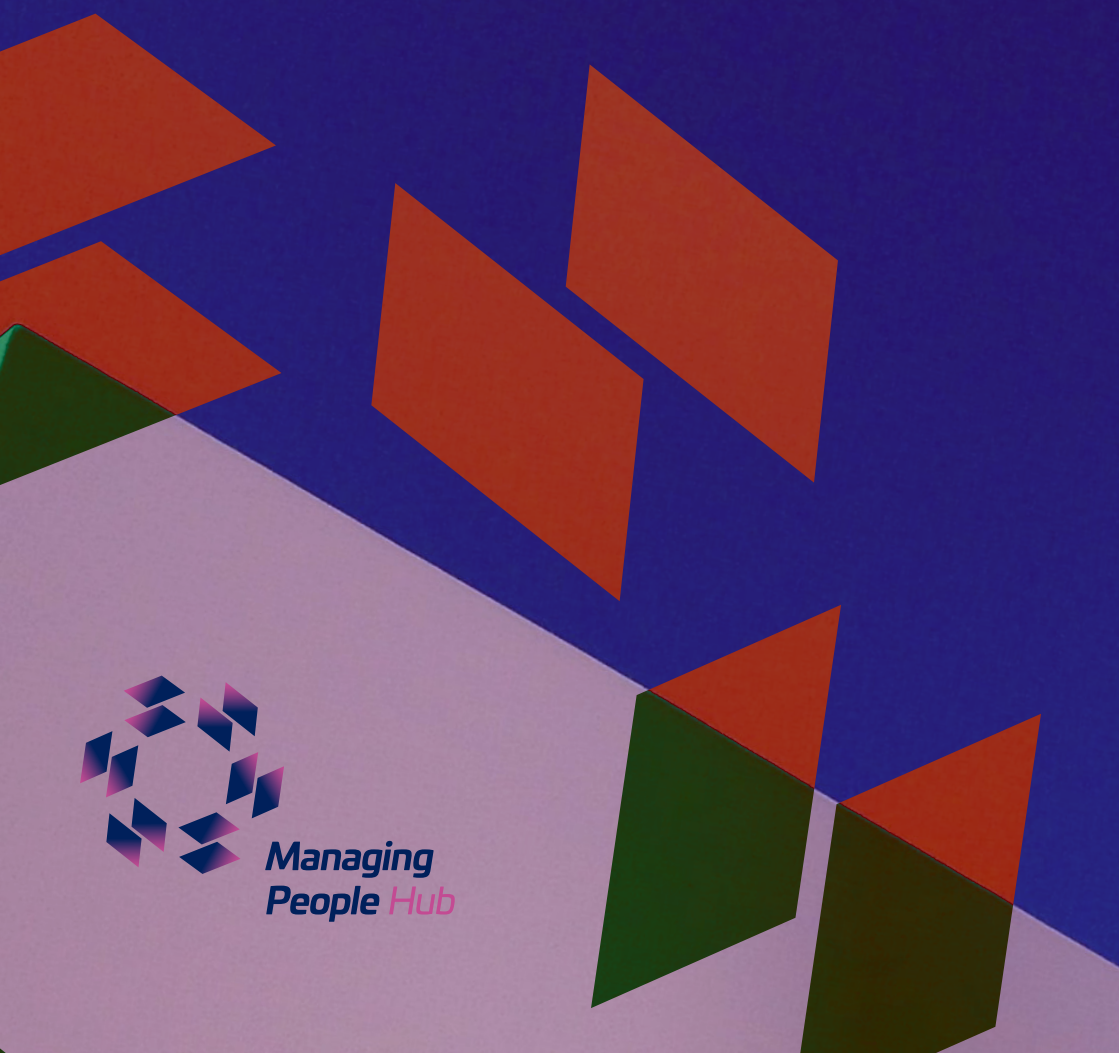

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