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BUNCEFIELD 20 YEARS ON: LESSONS LEARNED

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INSTMC AND EQUALENGINEERS ANNOUNCE NEW PARTNERSHIP

EqualEngineers and the Institute of Measurement and Control are delighted to announce a new partnership focused on strengthening inclusive and safe cultures across the engineering profession.

This collaboration reflects a shared belief that engineering excellence is built not only on technical skill but also on environments where everyone can contribute confidently, feel they belong, and work without barriers to their safety or wellbeing. Together, the organisations will champion inclusive practice throughout the measurement, control and systems engineering community, from early careers to senior leadership and professional registration.

By bringing together their complementary expertise, networks, and commitment to cultural progress, EqualEngineers and InstMC will collaborate on initiatives designed to widen access to opportunities, support under-represented groups, and embed inclusive engineering design principles within professional standards. The partnership will strengthen knowledge-sharing across the sector, highlighting measurable progress and supporting member engagement at all levels.

Throughout 2026, EqualEngineers and InstMC will also work together to deliver institution-related events, creating spaces for discussion, leadership development, and collective learning on what safe and inclusive engineering looks like in practice.

Dr Mark McBride-Wright MBE, Founder and CEO, EqualEngineers, said:

"We are very pleased to be partnering with the Institute of Measurement and Control. Creating safe and inclusive cultures is essential for high-integrity engineering disciplines. By working together, we can help ensure that people across the measurement and control community feel valued, supported, and empowered to thrive."

Steff Smith, Chief Executive, Institute of Measurement and Control (InstMC), said:

"We fully support the goals and objectives of EqualEngineers and believe a strong, safe and effective engineering workforce must be representative of the people it serves. More diverse voices benefit everyone, and that's why we are excited about this partnership."

As an early milestone in this new collaboration, EqualEngineers and InstMC will co-host a webinar, "The Role of Engineers in Creating a Safe Environment", on Wednesday 18th March 2026. This inaugural joint event will introduce the partnership's aims, invite member participation, and explore how the profession can continue to build inclusive and safe cultures. Drawing on EqualEngineers' and Dr Mark McBride-Wright's "The SAFE Leader" approach, the webinar will include interactive elements, helping attendees reflect on what "safe" really means in modern engineering environments and what individuals and organisations can do to strengthen it.

This partnership builds on the growing collaboration between EqualEngineers and professional institutions committed to shaping a more inclusive future for engineering, one that better reflects the society it serves and strengthens the profession for years to come.

CONTENTS

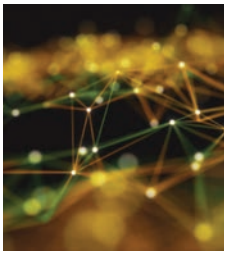
ARTICLES

INSTMC AND EQUALENGINEERS ANNOUNCE NEW PARTNERSHIP

EqualEngineers and the Institute of Measurement and Control are delighted to announce a new partnership focused on strengthening inclusive and safe cultures across the engineering profession. 3

MAKING SENSOR NETWORKS TRUSTWORTHY 6-8

A European project is improving measurement assurance for increasingly prevalent sensor networks.



BUNCEFIELD 20 YEARS ON: LESSONS LEARNED

December 2025 marked the 20th anniversary of the Buncefield explosion and fires, a significant event that shaped the future of the bulk storage and energy infrastructure sector.

10-12

Q&A 14-15

Under the spotlight this issue is Jonathan Alexander, EC&I and Software Design Lead, Bilfinger nZero and new Central North-West Local Section Chair. Jon shares his vision of the future of engineering and how automation and AI tools can encourage creative thinking in the sector.

INSTMC WELCOMES NEW PRESIDENT, PROFESSOR ANDY AUGOUSTI

For those of you who do not know me, I am a Professor of Applied Physics and Instrumentation at Kingston University London, where I teach and carry out research. 16-17

USING AUTOMATED DATA SOLUTIONS TO TREAT SEWAGE PRIOR TO RIVER DISPOSAL

In the future, clean and wastewater treatment systems will be operated by AI and new computerised applicable methods.

18

UPCOMING AMENDMENT TO BS 7671:2018 WIRING STANDARD (IET WIRING REGULATIONS 18TH EDITION)

A new BS 7671:2018 +A4:2026 book will soon replace the existing BS 7671:2018+ A2:2022. Here, we outline the key changes expected in Amendment 4 of BS 7671:2018, which will go on sale in the UK on 15 April 2026.

20-21

FLOWING FORWARD: EMBRACING CLAMP-ON ULTRASONIC METERING FOR AMP8 AND BEYOND

Unlocking network insight without disruption. 23

WHY YOU SHOULD PURSUE A CAREER AS AN APPLICATION CONSULTANT FOR FLOW

Tomorrow's Engineers Week is an annual event in November, organised by EngineeringUK, with the aim of inspiring young people towards a career in engineering.

26-27

WCSIM SIMPOSIUM 2026

You are invited to attend SIMposium - a showcase of research and innovation supported by WCSIM. 28

FOCUS ON A SIG NATIONAL METROLOGY SKILLS ALLIANCE (NMSA)

Behind the Scenes of NMSA-3 29

A NEW CHAPTER WITH INSTMC: SUPPORTING CAREERS ACROSS THE EC&I COMMUNITY

I'm delighted to introduce myself to the InstMC community and even more excited to begin my role on the Central Northwest Local Section Committee. 30

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BY J.V. PEARCE,[1] P.F. ØSTERGAARD,[2] M. VAA,[3] M. ITURRATE-GARCIA,[4] A. XHONNEUX,[5] S. TABANDEH[6]

MAKING SENSOR NETWORKS TRUSTWORTHY

A European project is improving measurement assurance for increasingly prevalent sensor networks.

In general, sensors have transitioned from expensive, specialised instruments to cheap, ubiquitous devices. That democratisation is good news because it gives us far more detail about the world than the old sparse measurement networks ever could. But there's a catch. Low-cost sensors drift, they're affected by the environment, they're deployed in different ways, and they sometimes fail in correlated ways. When you aggregate thousands of imperfect measurements, naively combining them can give a false sense of security.

The FunSNM project (Fundamental principles of sensor network metrology) was created to improve the situation. Launched as a three-year 'European Partnership on Metrology' project in September 2023, FunSNM brings together national metrology institutes, universities and industry partners to build the science, software and standards that let us judge how reliable entire sensor networks are, instead of just treating one sensor at a time [Tabandeh 2025].

The project aims to answer questions such as: How do you quantify uncertainty and traceability for whole networks of sensors? How do you propagate uncertainty across devices and across time? How do you design automated software that flags when networks – or parts of them – become unreliable? And how do you make those methods useful to sectors that depend on distributed sensing, from energy utilities to industrial manufacturers to inner city air quality monitoring?

Developing the metrology

Key underpinning technical themes include:

- **Uncertainty propagation for networks** – generalising classical metrology methods (which work well for single instruments) to complex webs of sensors where measurements are interdependent. These include model-based tree-structured mesh networks; Laplace domain tools for uncertainty analysis and propagation under dynamic conditions; uncertainty evaluation in cases where correlations in the sensor data exist [Kok 2025]; and a method for estimating the relative drift of sensors in a sensor network involving correlated sensor data, and the associated uncertainty [Harris 2025].
- **Data quality metrics** – designing automated indicators that flag when a sensor or subnetwork is drifting or when the collective data cannot be trusted. This includes a systematic approach to defining the data quality requirements [ISO/IEC 5259] for sensor networks, the metrics applied in the relevant data quality dimensions, and the processes for achieving and maintaining the data quality.
- **SI traceability for low-cost sensors** – creating measurement chains so that even cheap devices can be related to standard units in a documented, reproducible way. Methods

for in situ self-/co-calibration with reference sensors in sensor networks and tools for uncertainty-aware sensor fusion to detect drift and deterioration of sensors in sensor networks have been developed [Vedurmudi 2025].

- **Automated software tools and frameworks** – moving the new methods into user-friendly software that utilities, manufacturers and environmental monitors can adopt. For automation of uncertainty evaluation and data fusion, simulation environments have been extended to permit real-time changes of the topology [Vedurmudi 2025]. This approach relies on an 'agent-based' sensor network – a distributed system where autonomous software agents manage the operation of sensors and the processing of their data. Practical examples are provided in the context of the freely available 'agentMET4FOF' Python package [MET4FOF 2025], which offers open-source tools for rapid prototyping and deployment. Agent-based sensor networks represent a paradigm shift towards intelligent, self-organising systems.

Partners and scale: a European effort

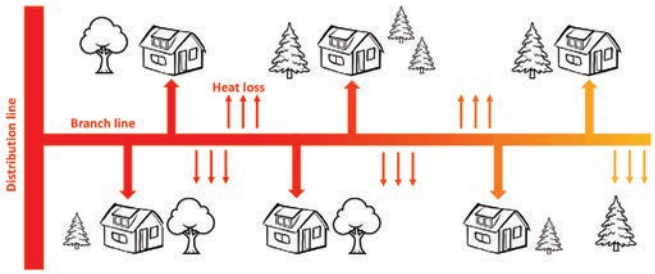
The project assembles 19 institutes – 15 national metrology institutes, two universities and two industrial partners – combining world-class metrology with domain expertise in energy systems, manufacturing and air quality. Participants include VTT (Finland) as project coordinator and NPL (UK) as coordinator of real-world case studies to demonstrate practical use of the developments. There are also specialised partners such as Airparif (Paris air quality observatory), CCPI Europe (UK thermocouple manufacturer) and industry technology providers. The breadth of partners reflects the fact that the project needs both metrology rigour and real operational contexts to prove its methods.

Real-world demonstrations and case studies

FunSNM is testing its concepts in real-world settings [Pearce 2025]. Examples include:

- **District heating systems** – European district heating networks (especially in Scandinavia) strive to lose as little heat energy as possible, allowing for lower supply temperatures in the system. Improving sensor network metrology can help operators find poorly insulated or leaky pipes, improve process control and ensure fair billing. By using the Unscented Kalman Filter, which is well suited to district heating's tree-structured networks [Østergaard 2025], it has been possible to identify systematic temperature offsets in consumer meters and detect insulation degradation in service pipes, all based on in situ operational data. A schematic is shown in Figure 1. By reducing uncertainty in operational data, the approach enhances billing accuracy, optimises energy distribution, and supports targeted infrastructure investments.

Figure 1: Small branch of a district heating network. Warm water enters from the left and is distributed to the connected houses, cooling as it moves from the trunk.



- **Gas metering** – A significant fraction of flow meters tested during recalibration are found to have drifted out of tolerance, which is a costly problem for both consumers and suppliers. Better uncertainty characterisation and in situ checks can reduce unnecessary replacements and correct billing. Sensor fusion combines data from multiple sensors using mathematical models to produce a more accurate and robust estimate of the flow rate than any single sensor can provide. Newly developed approaches include uncertainty-aware fusion that can detect hidden sensor drifts.
- **High temperature furnace control** – In aerospace and other high value manufacturing, the project is developing ways to correct temperature sensor drift at temperatures above 1100°C by using thermocouple networks together with physical and statistical modelling to detect drift. A multi-wire thermocouple is used to make up a network of thermocouples in one unit, with each wire having a different composition and all joined at the tip. The fact that a) each wire drifts at a different rate b) the thermocouples have wires in common and c) they are observing the same temperature at the tip, has been exploited to enable detection of drift and correction, improving process efficiency and product consistency [Harris 2025].
- **Air quality sensor networks** – Atmospheric observations serve a multitude of societal needs, including air quality in urban areas, emissions in industrial hotspots, atmospheric hazards, validation of earth observations from space, climate change variables, evaluation and validation of models, and data assimilation. Using deployments of hundreds of mobile and static low-cost sensors, together with a small number of high-quality reference sensors (Figure 2), FunSNM is refining SI-traceability approaches and modelling to deliver more reliable maps of pollution at urban scales [Harris 2025]. The aim is to exploit new real-time recalibration, self-calibration and co-calibration methods for mixed-quality air quality monitoring sensor networks, including under non-static (i.e. dynamic) conditions.

Figure 2: Stylised diagram of an air quality sensor network in the Greater Paris region. A few high-quality reference sensors (large points) metrologically anchor a large number of low-cost fixed and mobile sensors (small points), which improves resolution.

- **Smart buildings** – Buildings consume roughly one third of global energy and emit a similar share of CO2, with heating, ventilation and air conditioning (HVAC) systems being major contributors. If sensors are in error, indoor air quality and comfort may degrade, and energy usage and emissions can increase unnecessarily. Modern buildings now host dense networks of low-cost sensors tracking temperature, humidity, CO2, occupancy, air flow, volatile organic compounds and more; these networks feed building management systems that automate heating, ventilation and cooling. Network-level methods can treat a building not as a set of isolated devices but as a distributed metrology s system, where redundancy, correlations and drift patterns can be used to infer uncertainty and flag issues automatically. Dedicated test buildings at Forschungszentrum Jülich (Germany) are enabling validation of the new analytical techniques [Mork 2024].

Cheaper sensors, smarter software

One implication of FunSNM's approach is that you don't always need better hardware to get better data. By carefully modelling how sensors relate to one another – exploiting redundancy, relative drift patterns and correlations – the project aims to lift the value of existing installed sensors with software and method improvements. For many applications, this approach is much more cost-effective than wholesale hardware replacement. It's the difference between 'buying a new sensor' and 'using statistics to know if the old one is still good enough'.

FunSNM is communicating its progress through publications and project newsletters, including openly accessible technical publications and software. Information is available on the project website at https://funsnm.eu.

The project 22DIT02 FunSNM has received funding from the European Partnership on Metrology, co-financed by the European Union's Horizon Europe research and innovation programme and by the participating states.

Buildings consume roughly one third of global energy and emit a similar share of CO2, with heating, ventilation and air conditioning (HVAC) systems being major contributors. If sensors are in error, indoor air quality and comfort may degrade, and energy usage and emissions can increase unnecessarily.

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BUNCEFIELD 20 YEARS ON: LESSONS LEARNED

BY PETER DAVIDSON, CEO, TANK STORAGE ASSOCIATION

December 2025 marked the 20th anniversary of the Buncefield explosion and fires, a significant event that shaped the future of the bulk storage and energy infrastructure sector.

Since the incident, broad improvements have been introduced within the sector and across other major hazard industries. In addition, the role that our industry plays in leading the process safety narrative has changed dramatically, with an improved working partnership between industry, regulators and trade unions resulting in a more collaborative approach to continuous improvement.

The Buncefield incident

Early on Sunday 11 December 2005, a petrol storage tank was being filled from a pipeline at the Buncefield oil storage depot in Hemel Hempstead, Hertfordshire. The safety systems in place to shut off the petrol supply to the tank failed to operate. The tank overfilled, and petrol began to spill from the vents of the tank roof. The cascading petrol formed a flammable vapour cloud which, when ignited by a spark, caused a series of large explosions and subsequent fires.

It took approximately 32 hours to extinguish the main blaze and much longer to extinguish all other fires at the site. Forty-three minor injuries were reported. There was extensive damage to surrounding commercial and domestic properties, and local environmental pollution from fire-fighting foam and the loss of petrol and diesel from the storage tanks. The damage to the terminal also resulted in a temporary disruption of fuel supplies in the South East of England.

Following a joint investigation by the Health and Safety Executive (HSE) and the Environment Agency (EA), five companies were prosecuted and collectively ordered to pay nearly £10 million in fines and costs.

Many contributing factors led to the incident: technical failures, such as a faulty automatic tank gauging system (ATG), an inoperative high-level switch, and defective bunds and run-offs. The incident also revealed organisational and management failures, including a lack of knowledge about process safety and safety critical equipment, as well as a poor safety culture and inadequate board level focus.

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It is important to emphasise that the incident did not result from a single equipment or process failure, rather several weaknesses across the design operation and maintenance of the site. For example, the automatic tank gauge (ATG) was known to be faulty and, while the independent high-level switch did not fail, it had been left in an inoperable state. Process safety performance should have been measured and reported, and early signs of weakness should have been addressed. Critically, the management team should have understood the complexity and constant attention required in managing major hazard risks.

Key learnings and recommendations

On 20 December 2005, the HSE announced an independently chaired Major Incident Investigation Board (MIIB) had been tasked with investigating the causes of the incident and the measures to prevent or mitigate the risk of similar incidents. Through a novel and collaborative approach, in September 2007, industry, regulators and trade unions joined together to establish the Process Safety Leadership Group (PSLG), responsible for developing, progressing and implementing effective recommendations and practices aimed at improving safety within the industry. The PSLG addressed all 25 recommendations from the Buncefield MIIB report on the design and operation of fuel storage sites[1] and published a comprehensive response in a publication titled 'Safety and Environmental Standards for Fuel Storage Sites'.[2]

The key recommendations in the PSLG report are structured into six sections focusing on systematic assessment of safety integrity-level requirements, protecting against loss of primary containment using high-integrity systems, engineering against loss of primary containment, engineering against loss of secondary and tertiary containment, operating with high-reliability organisations and delivering high performance through culture and leadership.

The publication of the PSLG report in 2009 initiated a programme of improvements and regulatory interventions, and significant progress has been made since. Most in-scope tanks are now fitted with a safety instrumented system for overfill protection, designed and proof-tested in accordance with standard IEC 61511.[3] Upgrades have been made to bunds and run-offs, with extensive work carried out to comply with the COMAH Competent Authority Policy, such as installing water stops and strapping in bunds and upgrading bund lining systems. Tank inspection programmes have now been established and follow standards including EEMUA 159 and API 653. There is ongoing review of Dangerous Substances and Explosive Atmospheres Regulations (DSEAR)[4] area classifications to comply with the regulations, and of emergency plans both internally and with the local fire and rescue service.

Understanding and managing risks is critical to any business, whether those risks are operational, financial, safety-related, environmental, ethical or reputational. If not managed, these risks have the potential to harm people, damage the environment, and compromise both facilities and corporate reputation. Good major hazard leadership helps organisations give risks the resources, priority and attention to reduce the likelihood of a major accident. Accordingly, key parts of the PSLG report centred on high-reliability organisations, culture and leadership. In 2009, to promote understanding in this area, the PSLG developed eight Process Safety Leadership Principles. These principles underscore the critical importance of good leadership to sustained management of risks. Leaders are expected to understand – and be able to demonstrate – what can go wrong that could cause a major accident and what systems are in place to prevent such an event. Leaders are also expected to provide continued assurance that those systems are working effectively and ensure employees remain appropriately skilled and competent.

In addition to being a signatory to the PSLG's principles of process safety leadership, the Tank Storage Association (TSA) reasserted its support of the principles in 2020 through the launch of its Safety Leadership Charter, aimed at promoting a positive and cooperative safety culture within member organisations.[5] Twenty years following the Buncefield incident, and to reaffirm the TSA's continued commitment to good process safety leadership, the Charter was relaunched in 2025.

To address the challenge of competency in process safety leadership, an extensive programme of process safety training has also been established through the Process Safety Management Competence Programme Board. To date, over 25,000 people have been trained as part of this important initiative.

The COMAH Competent Authority continues to carry out leadership interventions across the high-hazard sector, and best practice is actively shared and promoted through the COMAH Strategic Forum (CSF) Leadership Working Group, chaired by the TSA.

Looking ahead

As a defining moment in the bulk storage and energy infrastructure sector, the lessons from the Buncefield incident continue to inform and drive ongoing improvements within high-hazard industries. The PSLG final report on safety and environmental standards for fuel storage sites represents current best practice in the design and operation of bulk storage terminals, as well as other high-hazard potential businesses. Our sector is a much safer one because of the lessons learned from Buncefield. However, we must avoid complacency and maintain a key focus on continuous review and learning.

We need to work ever more closely together with our peers, regulators and Government to strike the right balance between managing our risks and ensuring a healthy, resilient sector, particularly today, against the backdrop of changing inventories and processes in the journey towards net zero. We should also be prepared to share what we have learnt and how we work with other sectors and operators. The Chemical and Downstream Oil Industries Forum, the Process Safety Forum and the COMAH Strategic Forum are good examples of how this can be achieved. The Tank Storage Association considers safety its top priority and will continue to work openly and collaboratively to further promote and improve the safety agenda.

What involvement does the InstMC have in functional safety and what has happened since the Buncefield incident?

Safety functions and systems are the focus of the Institute of Measurement and Control (InstMC) Functional Safety Special Interest Group (FS-SIG).[6] Since the Buncefield incident, the InstMC FS-SIG has worked to improve the knowledge of industry through events, briefing notes, standards committees and the Registered Functional Safety Engineer qualification (RFSE).

Implementing the systems is only the start in maintaining safety that relies on instrumentation. The work of the FS-SIG strives to share knowledge across the full safety life cycle, including management, competence and technical requirements. The Buncefield incident cemented the good work of the former Safety Panel to ensure learnings were shared across not only the process sector but also other sectors which employ safety functions, including machinery safety, product development and railways.

The FS-SIG continues to share the essential activities to improve and maintain safety as a professional engineering institute across the membership, industries and companies engaged with the work of the InstMC.

Our sector is a much safer one because of the lessons learned from Buncefield. However, we must avoid complacency and maintain a key focus on continuous review and learning.

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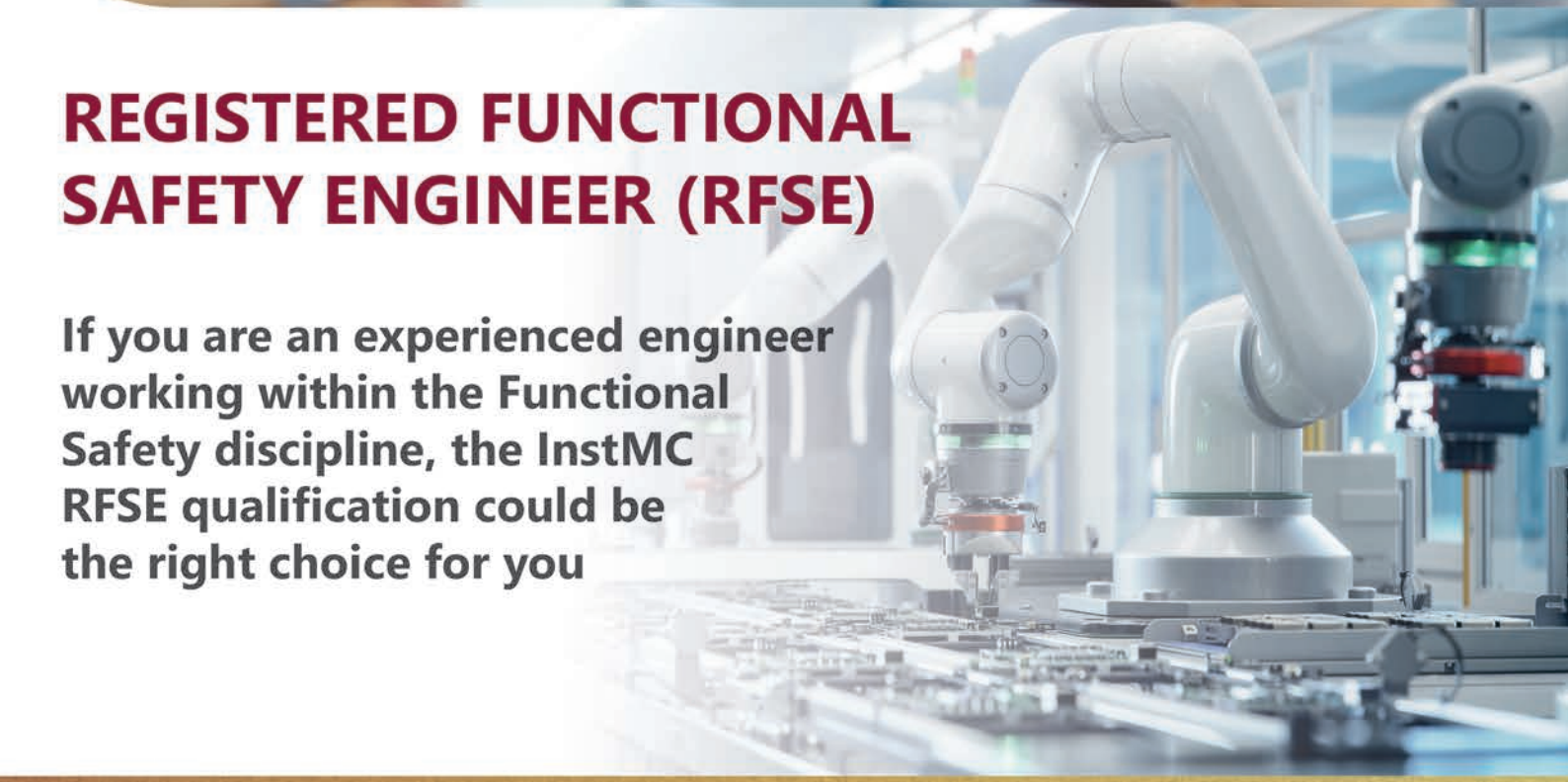
[5]Tank Storage Association. (2020). Safety Leadership Charter.

[6]The FS-SIG is the current version of the former Safety Panel.

REGISTERED FUNCTIONAL SAFETY ENGINEER (RFSE)



If you are an experienced engineer working within the Functional Safety discipline, the InstMC RFSE qualification could be the right choice for you

This professional level qualification is aimed at those that can demonstrate competence & commitment with a professional level of engagement within the relevant field. They cannot be gained through attendance on a short course. Registration as CEng with the Engineering Council UK is a pre-requisite in demonstration of professional standing. It is also a requirement that you are, or become, a member of the Institute of Measurement and Control.

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To find out if you qualify and for further information on applying, please or visit:
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Q&A

Jonathan Alexander

Under the spotlight this issue is **Jonathan Alexander**, EC&I and Software Design Lead, Bilfinger nZero and new Central North-West Local Section Chair. Jon shares his vision of the future of engineering and how automation and AI tools can encourage creative thinking in the sector.

> ...as a hiring manager, I see a huge trend towards skilled engineers becoming contractors, so it would be beneficial for the government to review how the recent IR35/ off-payroll changes have impacted on the UK engineering workforce's ability to grow and remain dynamic.

What was the root of your interest in Engineering?

I've always been an extremely curious person. My parents used to hide the TV remotes from me as I would dismantle them and try to rebuild them, usually with a few screws left over… I think my interest really took off when I got into PC gaming. I always wanted the best, fastest, most reliable experience, so I dived into the realms of electronics and coding, often spending more time fiddling with settings than actually playing games.

Unknowingly to me, this provided me with a strong grounding in the principles of how hardware and software systems link together, and fed my insatiable need to solve problems. Going to university then enabled me to channel that passion for problem solving into real-world industrial scenarios.

I also have a passion for cars and will usually jump into fixing any issues myself before admitting defeat and going to a garage.

What is your vision of Engineering in Britain for the next ten years?

I would love to see a real drive towards paperless work environments, complete digitisation of the design process for both electrical and mechanical, and for companies to continue the great work they are doing in reducing their carbon footprints by investing in carbon capture and renewable energy systems.

In 10 years' time, AI will have changed the way engineering is perceived. I don't think it will take people's jobs to the extent the media would lead us to believe, but I do think engineers will use AI tools more

effectively and essentially become the 'checkers' rather than the 'doers'.

My blue-sky vision is that all engineers will be R&D engineers, and that introducing AI and other automation tools will eradicate the need to reinvent the wheel – enabling engineers the time and resources to think outside the box and come up with new and exciting ideas.

What should the UK government do to address the shortage of UK engineers?

I don't claim to be knowledgeable enough about this to comment on what the government should do. I do, however, as a hiring manager, see a huge trend towards skilled engineers becoming contractors, so it would be beneficial for the government to review how the recent IR35/off-payroll changes have impacted on the UK engineering workforce's ability to grow and remain dynamic. Those who have been involved in an 'inside/outside' IR35 debate know that the waters are muddy enough and that UK engineers and businesses deserve clarity.

A more poignant question might be "where are the UK engineers going?" Once we answer that, the solution will become clear.

What do you do in your free time to relax?

I spend most of my free time with my amazing wife and three-year-old son. We have another on the way in May, so there isn't much time to relax. I am, however, a hobby hoarder – I love recording music (heavy metal!), mountain biking, camping, going to festivals, and anything to do with new technology. I still find myself dismantling things just to see how they work, but I like to think there are fewer screws left over now.

Given one wish what would that be?

Can I wish for more wishes?

I would wish for UK engineering and manufacturing to be the powerhouse it once was. It's easy to focus on the negatives – such as refinery closures and outsourcing – but having recently presented the awards for Early Careers Engineer and Apprentice of the Year at our annual CNW awards dinner, it's clear there is phenomenal upcoming engineering talent in the UK, which we would be foolish to ignore.

INSTMC WELCOMES NEW PRESIDENT, PROFESSOR ANDY AUGOUSTI

I shall begin by thanking the Institute of Measurement and Control for bestowing on me the honour of the role of President. For those of you who do not know me, I am a Professor of Applied Physics and Instrumentation at Kingston University London, where I teach and carry out research.

I also hold an MBA. I have chaired professional groups within our own Institute, as well as in the Institute of Physics and the IET for over 30 years, and I organise conferences and one-day meetings for the instrumentation community. I have been a founding director of three limited companies – a multimedia company, an online optics goods and services portal, and a university spin-out.

I also serve as University Warden for The Worshipful Company of Scientific Instrument Makers. I have now stepped down as Chair of our Accreditation Committee, and I am very pleased that this role has been taken on by Dr Peter Iles-Smith.

I would like to thank Professor Sheila Smith, our outgoing President, for her leadership over the last three years and for guiding the development and modernisation of the Institute, championed by our CEO, Steff Smith, and her excellent, committed staff, with whom some of you may have already worked. Sheila has been a steady and safe pair of hands, reflecting her deep commitment to the Institute. She has created wider involvement in our Institutional Strategy by developing four Strategic Groups, has strengthened our relationship with academia, grown our membership, revenue and visibility, and upheld our principles of equality, diversity and inclusivity. The work of these Strategic Groups relies on you – the Institute's members and volunteers – so, if you would like to be involved, please let us know. We value your contribution to these efforts.

I am very grateful to Dr Billy Milligan, our outgoing Honorary Secretary. This is a challenging role, and his influence on the work of the Institute has been enormous. I have worked alongside Billy on the Trustees Board and elsewhere and observed his energy, commitment and professional approach. Thank you, Billy.

Thanks also go to Richard Leng, who is stepping down as Vice President, for his input into policy development as a member of the Trustee Board and the Council. Richard made a huge contribution to member registrations during his role on the Professional Registration Committee over many years.

I welcome EUR ING Dave Green and Oliver Grievson into their respective roles as Vice President and Honorary Secretary. Dave and Oliver have already made an impact through

their roles on the Council and the Trustee Board.

The Institute faces a serious threat due to the slow reduction of its membership base in recent years. Growing out of the work of the Strategic Groups, we will be creating two new staff positions: a Business Development Manager and a Digital Marketing role, whose main efforts will be to reverse this trend and to help us to grow. Our opportunities are almost limitless, as virtually every technology in the 21st century relies on measurement and control principles and applications to function – these underpin all aspects of our everyday lives, and we have huge potential for growth. The Institute has responded by being highly active, helping form the Early Careers Network and WiMAC, as well as several SIGs.

In order to achieve the success we both desire and need, we need your help. This can take many forms, from attending and organising events to joining Local Sections and Special Interest Groups, as well as inviting colleagues to join us. We are launching a new annual event – the Institute of Measurement and Control Challenge – and the organising committee are looking for volunteers to help with planning and delivery. All contributions are viewed as positive, so don't worry if you don't have experience or you consider yourself relatively junior – all you need is enthusiasm and a willingness to get involved! Please email member.communication@instmc.org and your details will be passed on to Jeremy Stern, who is chairing the organising committee.

These are both challenging but exciting times, with plenty of opportunities if we are willing and committed to taking them. I hope we will do this together, and I look forward to meeting as many of you as I can over the next three years and beyond.

Professor Andy Augousti
President, InstMC

CLIVE BOSWORTH, 1935–2025 INSTMC PRESIDENT 1994

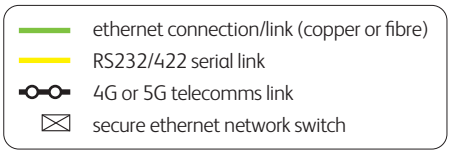
EUR ING Clive Bosworth CEng FInstMC FIMechE (InstMC President in 1994) passed away at the end of November 2025, after a short illness, aged 90. Clive retired from British Steel Tubes Division in 1991 and accepted the role of InstMC President in 1994. After thoroughly enjoying a hectic year of engagements, he devoted much of his time to his hobbies, notably model boating, tending his garden with his wife, and spending time with his family – lending a hand wherever he could. Clive leaves behind a son and a daughter, seven grandchildren and two great-granddaughters, many of whom work in engineering. His tireless dedication, patience and encouragement will be sadly missed by all his family.

Kevin Bosworth, son

Clive Bosworth began his career as a student apprentice at Stewarts & Lloyds before serving as a commissioned officer in the RAF, primarily at the Royal Radar Establishment. He later returned to the steel industry, leading research into instrumentation, control systems, and non destructive testing. He became Chief Research Engineer and then General Manager of R&D for British Steel's Tubes Division, overseeing large teams and international projects. A long time contributor to InstMC, he served as President in 1994, the same year the Institute celebrated its golden jubilee. After retiring, he held directorships with SIRA and Image Automation and supported engineering education through industry–university initiatives and college governance.

USING AUTOMATED DATA SOLUTIONS TO TREAT SEWAGE PRIOR TO RIVER DISPOSAL

BY EUR ING MARIOS ZACHARIADES CENG MINSTMC MIET MIED – PRINCIPAL PROJECT ENGINEERING CONSULTANT AT MZR ENGINEERING (INTERNATIONAL) LTD



In the future, clean and wastewater treatment systems will be operated by AI and new computerised applicable methods.

Water installations, up-to-date data and advanced technology will be employed to operate complex water systems – and eliminate human error.

Control systems will cover water plant instrumentation and equipment via the internet or fibre optic, and good network block diagrams will identify what software and network interfaces will contribute to automating water plants.

Companies will introduce new methods for preventing environmental disasters and try to provide good-quality water that meets British/international regulations and standards.

Managing the chemicals

Automating a water plant involves generating data for achieving the optimal chemical dosing rates for treatment.

Water and sewage treatment plants use developed networks in line with their clients' environmental requirements. Selecting and developing the network depends on the amount of input/output (I/O), the number of telemetry outstations, and the type of communication for supporting continuous operations and data expansion – for example, the number of programmable logic controllers (PLCs) and human machine interfaces (HMIs).

Engineering and design parameters

The fundamental criteria for designing a clean or wastewater project is a:

- Well-defined scope of work
- Process flow diagram (PFD)
- Piping & instrument diagram (P&ID)
- Block cable diagram (BCD)
- Single line diagram (SLD)
- Site plan network arrangement.

Of course, other tasks can be incorporated into the engineering and design, in accordance with the latest British and European water standards.

Figure 1 Architectural PLCs Network Arrangement (Simplified Overview)

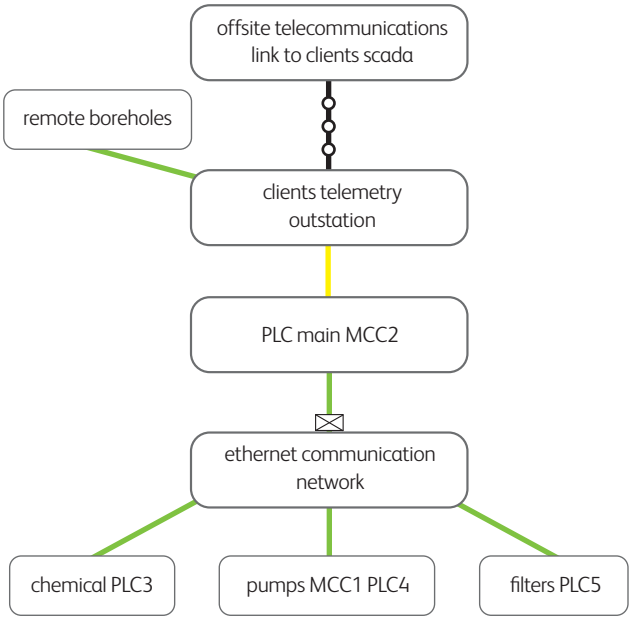


Figure 1 shows a typical network block diagram allowing communications between the various PLCs and equipment which carry vital information to the control equipment.

Conclusion

A well-developed network is vital for discharging good-quality water to our rivers and seas. Because of the high volume of transmission data, plant network equipment, devices and instrumentation must be aligned.

The future depends on everyone in the industry applying and installing the new automated technology. Most countries' governments are in discussion about stopping raw untreated sewage and chemicals from being discharged into our rivers. We also need more financial incentives to get private companies to invest in developing new technology and automated systems.

Marios Zachariades has spent many years in the field of electrical/ICA systems engineering in industries such as petrochemical, oil & gas, power (renewable energy), waste & clean water treatment, pharmaceutical, tunnels, rail, and building services. For further information, contact Marios at mzacdes@aol.com.

EqualEngineers & InstMC present a practical, industry-focused webinar

The Role of Engineers in Creating a Safe Environment

Join us on 18th March 2026 | 12.00pm – 1.00pm | Online MS Teams

In this session, we'll look at how safety is shaped not just by systems and processes, but by the everyday behaviours, leadership choices, and team cultures that engineers help create.

Drawing on EqualEngineers' and Dr Mark McBride-Wright's "The SAFE Leader" approach, the webinar will include interactive elements, helping attendees reflect on what "safe" really means in modern engineering environments and what individuals and organisations can do to strengthen it.

The session will offer practical insights and takeaways that participants can apply in their teams and workplaces, with space for questions, shared experiences, and discussion throughout.

To register your place, please click the following link:

https://events.teams.microsoft.com/event/f7d8dc65-9988-4969-ac1b-632d931f80c7@45deaf47-bfde-4263-a2e3-0ecb9e28ac66

BY PETER NORMAN, MINSTMC, MIET

UPCOMING AMENDMENT TO BS 7671:2018 WIRING STANDARD (IET WIRING REGULATIONS 18TH EDITION)

A new BS 7671:2018 +A4:2026 book will soon replace the existing BS 7671:2018+ A2:2022. Here, we outline the key changes expected in Amendment 4 of BS 7671:2018, which will go on sale in the UK on 15 April 2026.

The amendment book can be pre-ordered and implemented immediately after its release date, or it can be held until the current amendment book is retired in October.

InstMC Standards SIG members will recall the many references to BS 7671 when reviewing BS 6739 for 2024 release by the British Standards Institution (BSI). Modern instrumentation and control engineering now require secure power supplies and safe earth bonding strategies for reliable electronic signalling functions, as well as protection for site personnel against electric shock.

What colour is the cover of the new book?

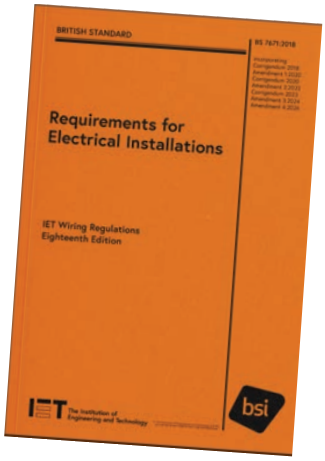
The BS book cover colour sequence began in 1981, with the introduction of the 15th edition, and followed the decision that the covers of reprints of the same edition (amendments) would be red, green, yellow, blue and brown (the current colour). The new book cover, however, will be orange. The current book will remain valid until 15 October 2026 to allow for a six-month overlap for electricians who are transitioning.

Why has there been yet another amendment to BS 7671 since 2018, 2022 and 2024?

BS 7671 is based on European standards, which are generally based on international standards. The previous +A3:2024 was a free PDF download amendment available from the BSI to augment the BS 7671:2018+A2:2022 brown book. Amendment 4 must embrace the history of the entire 18th edition.

What changes are included?

- Section 545: Functional earthing and functional equipotential bonding for information and communications technology (ICT) equipment and systems, such as broadcast, communication technology and computer network systems.
- Chapter 57: Stationary secondary battery installations.



- Section 716: Distribution of ELV DC power using balanced, information technology cables and accessories primarily designed for data transmission. Detailed requirements on low voltage generating sets.
- Section 710: Medical locations where modern healthcare provides life support and patient monitoring equipment.

New Section 545 Functional earthing and functional equipotential bonding for information and communications technology (ICT) equipment and systems

This section makes a clear distinction between functional earthing and protective earthing so that any interruption of the functional earthing does not impair the protective earthing. Section 545 includes requirements for minimum cross-sectional area, identification,

electrical continuity of functional bonding conductors, combined protective and functional bonding conductors, main functional earthing terminals, and equipotential bonding ring conductors.

This content will likely prove most relevant to large data centres and smart building networks, with protection against electromagnetic interference being an important design requirement for sensitive electronic circuits. This is well-known practice for sensitive instrumentation systems.

New Chapter 57 for Stationary secondary batteries

This deals with requirements for stationary secondary battery installations where the designed purpose is for storing and supplying electrical installations such as renewable energy systems.
Chapter 57 does not apply to those incorporated into products covered by product safety standards and within systems such as pluggable uninterruptable power supplies, fire and emergency lighting systems, and central safety power supply systems conforming to the appropriate standards.

The chapter was forecast to set out the main characteristics of secondary batteries, including the battery type and capacity to be selected, the nature of the demand, battery voltage, and load profiles.

New Section 716 for Power over Ethernet (PoE)

This introduces new guidance for safely dealing with the growing demand for connected technology where data and power combine within the same small cable, such as video/data/surveillance system cameras and smart sensors.
It includes requirements for distributing ELV DC power using balanced information technology cables and accessories designed for data transmission, as specified in BS EN 50173-1, using power feeding sourcing equipment in accordance with BS EN 62368-3. It also includes requirements for designing, erecting and verifying infrastructure for both telecommunications and distribution of ELV DC power feeding.

Power requirement levels tend to increase with equipment advances, such that safety in small power-carrying cables needs to be maintained by best design and installation practices.

Revised Section 710 for Medical Locations

Section 710 was originally published in 2011, amended in June 2013, and fully incorporated in 2015 when BS 7671 was evolving from the 2008 (17th) edition.

Medical locations include hospitals, private clinics, medical and dental practices, healthcare centres, dedicated medical rooms within workplaces, and veterinary clinics.

Section 710 has been regularly updated over the years, no doubt due to the increase in electrically powered patient monitoring and life support systems, with fluids being an electric shock hazard to both patients and medical staff. Advancements in body scanners and surgical robots have led to more UK hospitals adopting this equipment, especially since the current modular machines are now more portable than their heavier predecessors.

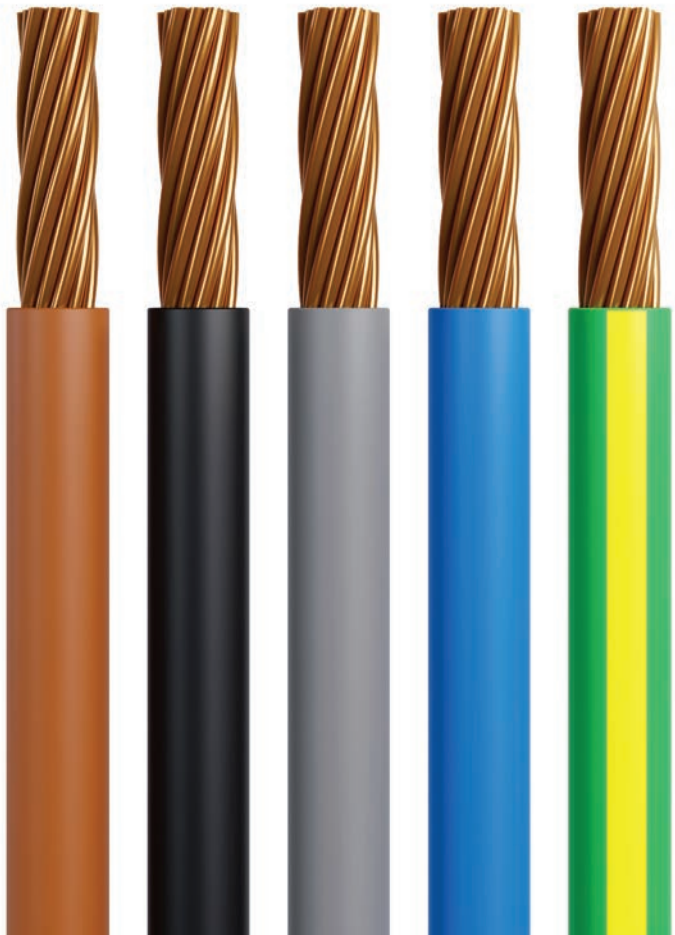
The latest update to Section 710 is said to be quite significant in Amendment 4.

Potential Changes

Often, changes are made to wording purely for clarification.

The +A2:2022 amendment already included changes for high-rise buildings – driven by the Grenfell Tower fire – particularly for the mechanical integrity of wiring systems in terms of secure erection and support above public spaces.

Any sections covering ‘selection and erection of wiring systems’; installation of cables; electromagnetic effects; and coordination of electrical equipment for protection, isolation, switching and control may well see further changes, along with periodic inspection and testing.



REGISTERED EXPLOSIVE ATMOSPHERES ENGINEER (REXE)

If you are an experienced engineer working within the explosive atmospheres discipline, the InstMC RExE qualification could be the right choice for you

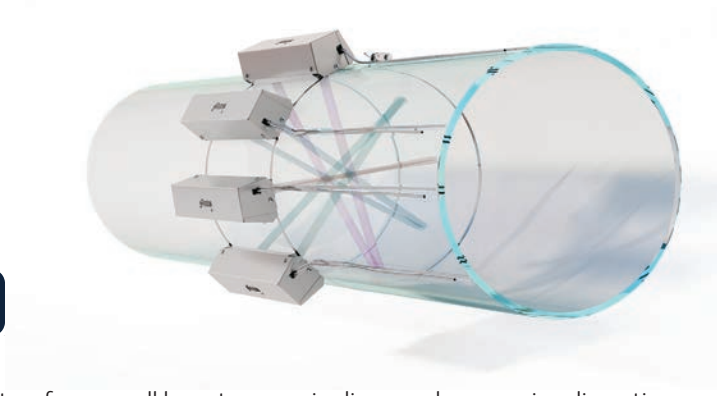
This professional level qualification is aimed at those that can demonstrate competence & commitment with a professional level of engagement within the relevant field. They cannot be gained through attendance on a short course. Registration as CEng with the Engineering Council UK is a pre-requisite in demonstration of professional standing. It is also a requirement that you are, or become, a member of the Institute of Measurement and Control.

www.instmc.org

To find out if you qualify and for further information on applying, please or visit:
www.instmc.org/careers_learning/professional_registration/rfse_rexe_qualifications.aspx

Scan QR Code for direct access to the RFSE web page

FLOWING FORWARD: EMBRACING CLAMP-ON ULTRASONIC METERING FOR AMP8 AND BEYOND



Unlocking Network Insight Without Disruption

As the water industry immerses itself in the challenges of AMP8, the pressure to deliver smarter, more resilient networks continues to build. With the lessons of AMP7 in mind – particularly around leakage reduction, network resilience and customer impact – water utilities are prioritising scalable solutions that can be deployed rapidly, cost-effectively, and without interrupting service.

One technology rising to the forefront of this transformation is clamp-on ultrasonic flow measurement. Unlike traditional inline metering, clamp-on systems provide a non-intrusive way to gain real-time visibility into the flow of water across critical infrastructure, including large-diameter trunk mains, aqueducts, and reservoir connections.

Why Clamp-On Ultrasonic Flow Meters?

Clamp-on ultrasonic flow meters measure flow from outside the pipe using transit-time technology. Transducers are mounted directly onto the pipe wall – no shutdowns and no civil works required. This makes them an ideal solution for the challenges of AMP8 compliance:

- Non-intrusive installation: Install during live operation with no disruption to supply
- Cost efficiency: Avoid expensive bypass lines, large isolation valves, or chamber construction
- Rapid deployment: Ideal for fast rollout of metering across legacy or hard-to-access assets
- Wide applicability: Suitable for pipe diameters from small bore to over 60 inches
- Zero maintenance: No moving parts, no contact with water, and IP68 options for submerged applications

Meeting AMP8 Objectives with Greater Agility

The shift towards smarter, digitally integrated water networks will define AMP8. Reliable high-quality data is essential for:

- Leakage detection and pressure management
- Accurate water balance reporting
- Regulatory compliance and performance benchmarking
- Early warning systems for asset failures.

Clamp-on ultrasonic meters enable utilities to gather the real-time flow data needed to support these outcomes – without the capital expense or complexity associated with traditional metering approaches.

In large-diameter trunk mains, where inline metering can be impractical or cost-prohibitive, clamp-on technology provides a clear path forward. Meters can be installed on steel, ductile iron, plastic, or concrete pipes, and modern 4- and 8-path configurations offer high accuracy even under complex flow conditions.

Proven in Practice, Ready for Scale

Across the UK, water companies have already deployed clamp-on ultrasonic meters, demonstrating both reliability and long-term performance. These systems are in use on strategic aqueducts, treatment works, and reservoir pipelines – where service disruption is not an option.

Verification and health-check tools allow operators to monitor meter performance over time – without needing to access the interior of the pipe or isolate the system.

Positioning for a Smarter, More Resilient Future

As water companies prepare their investment and delivery plans for AMP8, clamp-on ultrasonic flow meters should be considered a cornerstone technology. They align with the industry's need for:

- Smarter asset management
- Reduced operational risk
- Flexible, low-carbon infrastructure upgrades
- Fast-tracked leakage and performance improvements.

Whether for permanent network monitoring or temporary metering during commissioning, bypass, or diagnostics, clamp-on solutions offer versatility that supports both short- and long-term goals.

The opportunity to improve network intelligence – without disruption – is already here.

To find out more about the real-world benefits of clamp-on ultrasonic flow measurement in the water industry – for permanent mains-powered installation, or battery-powered rental meters available from one week to long term – contact Tim Warnett or Simon Millington – Flexim I Emerson GB I flexim-uk@emerson.com I +44 (0)1606 781 420.

Flexim Instruments UK is an InstMC Companion Company Scheme member.

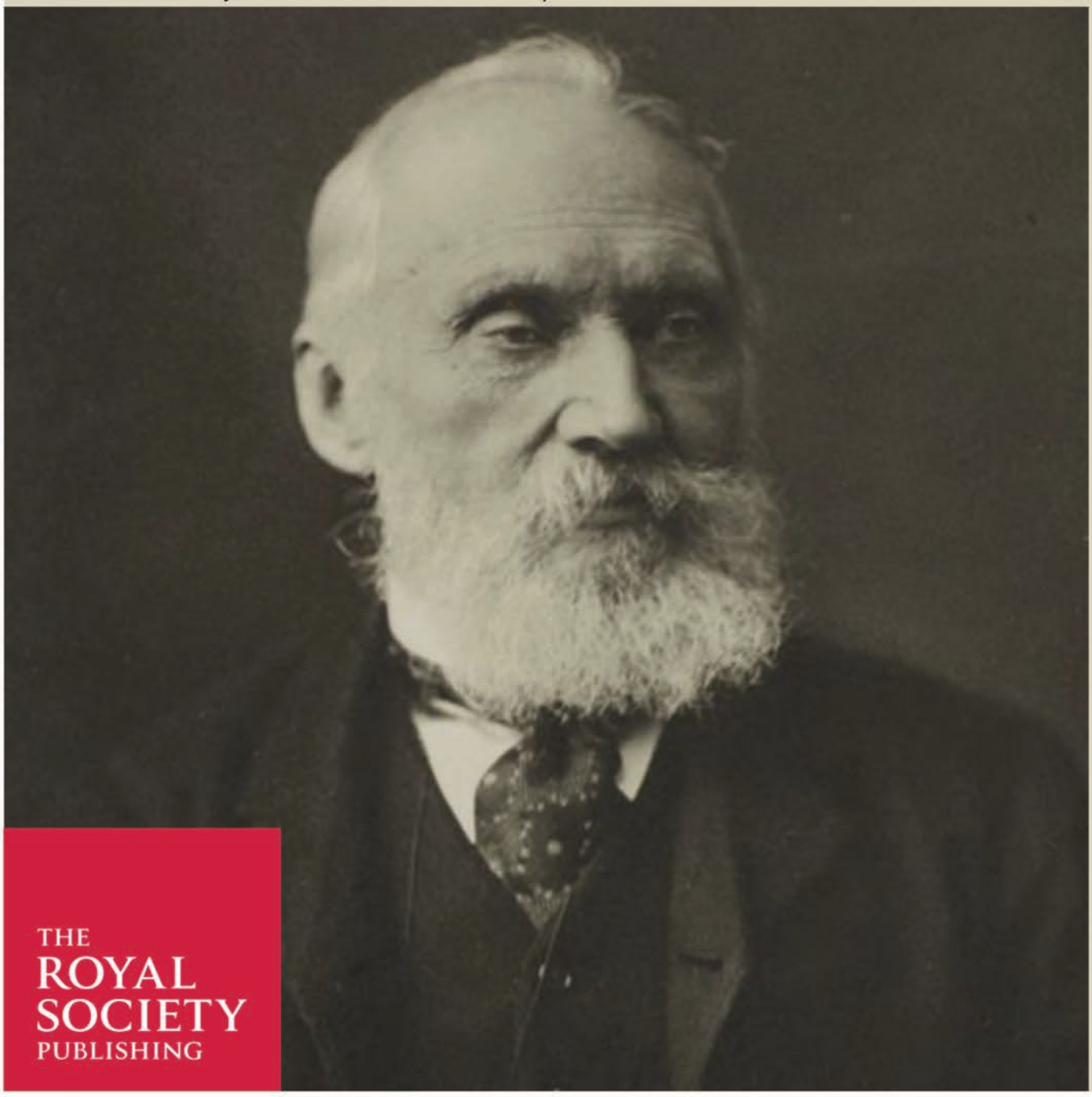
PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A

MATHEMATICAL, PHYSICAL AND ENGINEERING SCIENCES

The redefined kelvin: progress and prospects

Theo Murphy Meeting issue organized and edited by Professor Graham Machin FREng, FRS, Dr Christof Gaiser & Dr Patrick Rourke.

Published January 2026. Available online and in print.



THE ROYAL SOCIETY PUBLISHING

About this issue

Reliable temperature measurement is a vital part of our modern economy. Industrial production, efficient, safe aeroengines, effective operation of power plants and data centres, even the prosaic measurements in our homes all require reliable temperature measurement. This reliability is ultimately down to the hard work of dedicated temperature metrologists around the world ensuring that the temperature measurements we need (whether we know it or not) are able to be performed. This volume describes the current state of temperature metrology and several important ways in which reliable temperature measurement is likely to change in the next decades. The volume is a homage to Lord Kelvin, a founding father of thermodynamics, and was held in conjunction with the bicentenary of his birth.

Access content online at **bit.ly/TransA2312**

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To find out more about proposing a theme issue and becoming a Guest Editor of the journal, please visit: **bit.ly/TAGuestEd**

Image credit: Royal Society. Image of Lord Kelvin from 'Obituary notices of fellows deceased', Proceedings of the Royal Society A, 81, 543.

Dedication to Michael Robert Moldover
Keith Gillis & Robert Berg

Introduction: The redefined kelvin – progress and prospects
Graham Machin, Christof Gaiser & Patrick Rourke

The transition from ITS-90 to primary thermometry above 1235 K
Maria Jose Martin & Jose Manuel Mantilla

Challenges of primary thermometry above 300 K
Christof Gaiser & Bernd Fellmuth

Dissemination of thermodynamic temperature by gas thermometry below 300 K
Roberto M Gavioso, Peter P M Steur, Giuseppina Lopardo & Dario Imbraguglio

Primary thermometry below 25 K: a decade of low-uncertainty measurements linked to the new kelvin
Bo Gao *et al.*

Direct calibration of resistance thermometers between 10 K and 25 K by absolute acoustic gas thermometry in helium
Dario Imbraguglio, Peter P M Steur & Roberto M Gavioso

Future traceability of practical primary thermometry and self-validating thermometry
Jonathan Pearce *et al.*

Progress of acoustic gas thermometry using a cylindrical resonator at temperatures up to 809 K
Liu Xu *et al.*

Photonic contact thermometry based on 3 μm thick silicon cascaded ring resonators
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Practical primary thermometry via alkali-metal Doppler broadening
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Quantum technology: prospects for new thermometric and radiometric sensor development
Andrew Todd

Ensuring global interoperability in thermometry: challenges and strategic considerations
Dolores del Campo

The Triad of Trust: solutions to practical inconsistencies in T, T_{90} and in-situ *traceability*
Patrick Rourke, Andrew Todd, Sergey Dedyulin & Andrea Peruzzi

A prospectus on direct traceability to the kelvin for point-of-use applications
Weston Tew, Patrick Egan & Keith Gillis

BY CLAIRE JONES, APPLICATION CONSULTANT, ENDRESS+HAUSER UK

WHY YOU SHOULD PURSUE A CAREER AS AN APPLICATION CONSULTANT FOR FLOW

Tomorrow's Engineers Week is an annual event in November, organised by EngineeringUK, with the aim of inspiring young people towards a career in engineering.

The theme last year was #DaretoDiscover, focussing on those who have taken an unconventional path into the industry and how true innovation can emerge from setbacks, experimentation and perseverance.

I was asked to contribute to the initiative by sharing my own career journey, which didn't follow a traditional academic route, instead it was driven by curiosity and a strong desire to understand how things work and how they can be improved.

Dare to discover instrumentation engineering

When most people think of engineering, they picture bridges, buildings, or perhaps robots. However, some of the most critical engineering happens behind the scenes – in the instrumentation that keeps water clean, medicines safe, and food production running. Instrumentation engineering is a niche area, but one with enormous impact. Whether it's ensuring the correct ingredient dosage or monitoring steam or water usage, flow instrumentation plays a vital role in making systems safe, efficient and sustainable.

What does an application consultant for flow actually do?

An application consultant for flow specialises in helping industries measure and control the movement of liquids and gases using flow instrumentation. The role blends technical expertise, problem solving, and customer interaction, and is critical to ensuring safe, efficient, and compliant operations. Flow measurement is critical to industrial processes where precision directly impacts on performance, safety and compliance.

Application consultants:

- Advise on flow measurement solutions
- Support both internal teams and external customers
- Help industries meet safety and regulatory standards
- Ensure accurate, compliant and efficient use of instrumentation.

It's a discipline with real-world impact, often behind the scenes, but essential to keeping operations running smoothly and responsibly.

No two days are the same. One day, I might be at a food and beverage site advising how best to measure ABV%, sugar concentration and flow rates of products. The next, I could be ensuring hygienic dosing and compliance for a pharmaceutical application. It's a blend of technical expertise, problem solving and

communication – and it's deeply rewarding.

How can students get into this field?

There is no single pathway into this role. While some professionals begin with engineering degrees, that route isn't suitable for everyone – myself included. Today, there are entry points including T Levels, apprenticeships and technician roles, which all offer valuable hands-on experience and can lead to specialisation.

My own journey into engineering didn't follow the traditional academic route. Instead, it has been shaped by practical learning, a strong desire to grow, and the support of a company committed to nurturing development. What truly matters is curiosity – a drive to understand how things work and how they can be improved. Equally important are communication skills, especially when collaborating across teams or engaging with clients. Professional organisations such as the Institute of Measurement and Control provide excellent resources, mentoring and networking opportunities. Joining communities such as WiMAC (Women in Measurement, Automation & Control) can help students see themselves in the field – because visibility makes a difference. Don't feel disheartened if the start of your career doesn't go to plan.

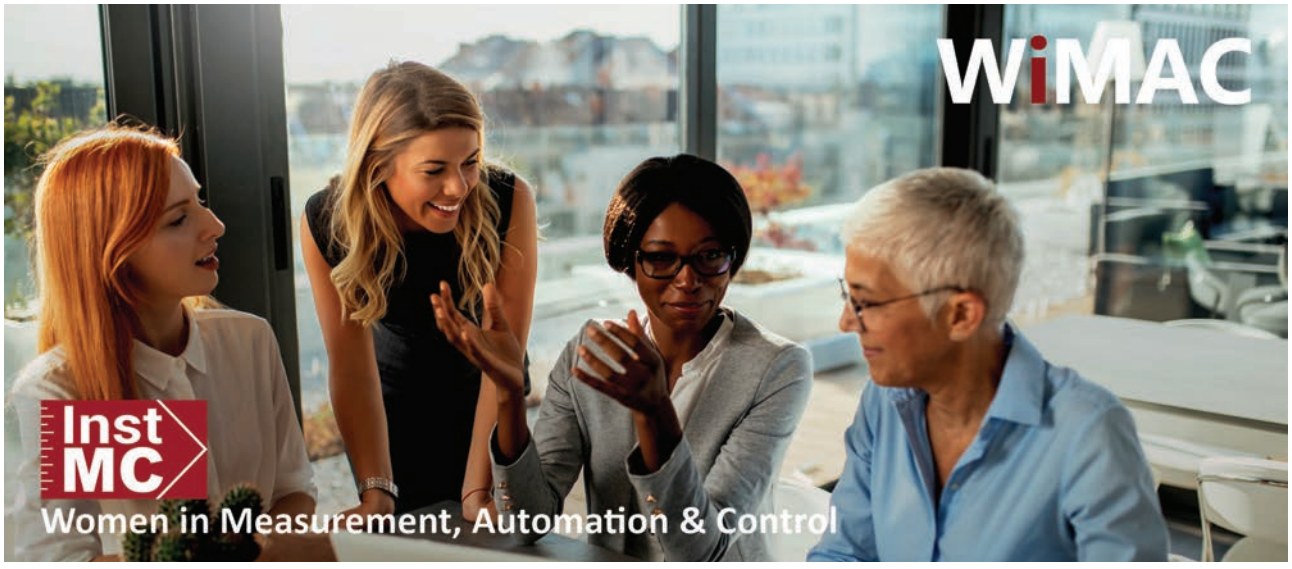
A career worth exploring

Instrumentation engineering may not be the most visible branch of engineering, but it's one of the most impactful. For students who enjoy solving puzzles, working with data, and making a tangible difference, it's a career worth exploring.

Claire Jones is an application consultant specialising in flow measurement solutions. She also serves as Chair of WiMAC (Women in Measurement, Automation & Control) within the InstMC and is a committee member of the Central North-West Local Section. Claire leads initiatives to promote diversity, professional development and collaboration across the measurement and control community.

> No two days are the same. One day, I might be at a food and beverage site advising how best to measure ABV %, sugar concentration and flow rates of products. The next, I could be ensuring hygienic dosing and compliance for a pharmaceutical application. It's a blend of technical expertise, problem solving and communication – and it's deeply rewarding.

JOIN WOMEN IN MEASUREMENT, AUTOMATION & CONTROL



WIMAC is an InstMC network aiming to raise the profile of women engineers. Join us to discuss and engage in a range of topics and activities including - leadership, professional development, mentoring, outreach, public speaking and much more!

For more information visit: www.instmc.org/sigs/womens_network

WCSIM SIMPOSIUM 2026

You are invited to attend SIMposium - a showcase of research and innovation supported by WCSIM.

Each year the Worshipful Company of Scientific Instrument Makers (WCSIM) provides a number of awards for postgraduate and postdoctoral researchers working at UK universities, as part of their charitable activities. The research and innovation in measurement, instrumentation and data analysis includes the awardees own novel applications to science or engineering. This breadth and quality reflects the excellence of research and innovation across the UK.

WCSIM are pleased to present a showcase of this work at their 2026 SIMposium on 13th April

2026, presented by the award holders themselves. This is a networking opportunity for those with an interest in leading-edge measurement and instrumentation, to receive an update on a wide range of projects reflected in the presentation titles. Presenters will be available to meet and discuss their research.

A certificate of attendance will be available on request and a light lunch provided.

Please register your place in advance at https://www.eventbrite.co.uk/e/simposium-a-showcase-of-research-and-innovation-supported-by-wcsim-tickets-1980374726116?aff=oddtdtcreator

PROGRAMME

TIME	& PRESENTER	TITLE OF PRESENTATION
10:15	**Arrival, Registration and Refreshments**	
10:45	Keynote Speaker: Dr. Varuna De Silva	The role of AI in Measurement and Instrumentation
11:25	Xinze Lyu	Integrated Sensing and Communication Prototype for Next Generation Wireless Communication
11:45	Ruben Ruiz-Mateos Serrano	Translating Wearable E-Textile Instrumentation from the Lab to the Clinic
12:05	Joanna Coote	Measuring the Monument
12:25	**Lunch, Posters and Networking**	
13:05	Amparo Guemes Gonzalez	Multimodal Brain Probe for Neural and Metabolic Interfacing
13:35	Huazhi Dong	Multi-modal perception systems for embodied intelligence
13:55	Zhe Liu	Natural-like exteroception and proprioception in soft robots using electrical tomography
14:15	Mahjabeen Fatima Yousafzai	Fabrication of robust hBN encapsulated graphene sensors; a path to practical Johnson Noise Thermometry
14:35	Seyed Ahmad Hosseini	Wet Gas Flow Measurement Through Data-Driven Modelling Using a Venturi Tube
14:55	Vinay Kopnar	Using oscillatory shear rheology to elucidate failure mechanics in tough hydrogels
15:15	**Short Break, Refreshments and Networking**	
15:30	Leo Wing Hong Fung	Utilising Low Earth Orbit Satellites for Occultation Imaging with Ground-Based Ultra-Fast Astronomical Cameras
15:50	Matthew Kibble	Bioprinting, Biomaterials, and Device Methodology: Engineering Tools for the Spine and Beyond
16:10	Matthew Green	Magnetic quantum sensing with coloured diamond centres
16:30	Siluni Gunathilake	A novel fluorescent sensing platform for monitoring copper (II) ions in water systems
16:50	Rachel Brady	Lung function imaging in a preclinical model of pulmonary fibrosis
17:10	Summary	
17:15	**End**	

FOCUS ON A SIG

NATIONAL METROLOGY SKILLS ALLIANCE (NMSA)

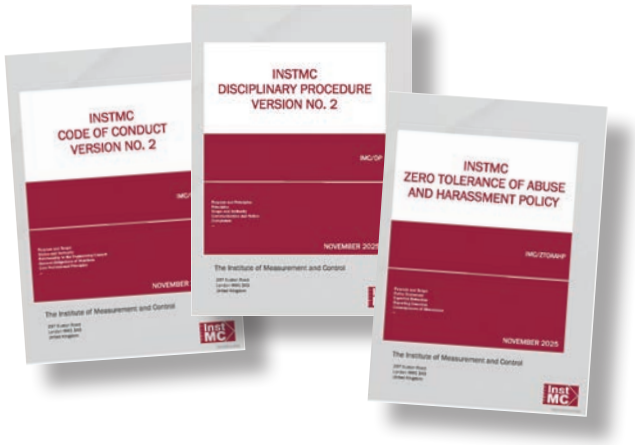
BEHIND THE SCENES OF NMSA-3

The National Metrology Skills Alliance (NMSA) standards define competency levels for metrology. Following the publication of the standards, the NMSA group is now working on the development of NMSA-3, which defines the qualification processes used to assess individuals and support skills development.

NMSA

AN INSTMC SPECIAL INTEREST GROUP

Metrology Skills Framework Standards available to download for free at https://www.instmc.org/sigs/national_metrology_skills_alliance/download_standard.aspx



Following workshops in 2025, the NMSA-3 application form and assessor workbook have been further refined, including the development of a clear marking rubric to support consistent and fair assessment. These materials were exchanged for peer review at the end of the year, allowing assessors to test the application and marking approach in practice. A number of trial application forms have been completed by members of the NMSA SIG to test the process. In January we focused on collating and reviewing this feedback in detail. An online get together with the NMSA-3 group took place in February, to walk through the remaining refinements and agree the final version of the Level 3 qualification process.

Watch this space for further news on when the Level 3 qualification process is expected to be launched during 2026, with work then progressing to roll out the same assessment approach across Levels 1 and 2 of the NMSA-1 Core Standard.

Phil Bamforth
Chair, NMSA

A NEW CHAPTER WITH INSTMC: SUPPORTING CAREERS ACROSS THE EC&I COMMUNITY

BY KIRSTY BREWER, MANAGING DIRECTOR, TECHNICAL PARTNERS

I'm delighted to introduce myself to the InstMC community and even more excited to begin my role on the Central Northwest Local Section Committee.

My background is in running specialist Electrical, Control & Instrumentation (EC&I) recruitment teams and now as Managing Director of Technical Partners, I'm proud that EC&I remains at the heart of what we do.

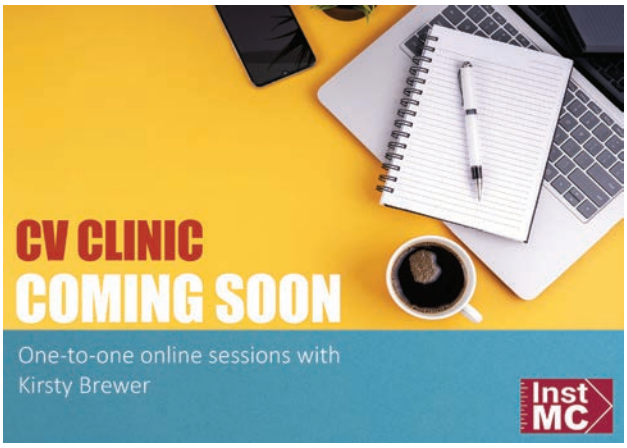
What draws me into this world is the variety and impact of the work. One day I'm speaking with an Automation Engineer upgrading a SCADA platform, the next it's a Functional Safety specialist designing systems for a COMAH facility, or a technician troubleshooting instrumentation on a processing line. This blend of safety, innovation, and problem-solving is unmatched.

Our recruitment work spans chemicals, refining, FMCG, energy transition, systems integration, utilities, pharmaceuticals, and emerging low-carbon sectors. Typical roles include EC&I Engineers, DCS/PLC/SCADA professionals, Instrument Technicians, Controls Engineers, Commissioning Engineers, TÜV-certified safety specialists, and project-focused EC&I roles.

As I join the InstMC team, my goal is to be accessible and genuinely helpful. I'll be offering CV guidance, CV clinics, career advice, insights into market conditions, support for early-career members, and honest observations about what employers are looking for right now. If you're navigating a job change or thinking about your next step, I hope I can make that journey a little easier.

I'd love InstMC members to tell me what topics they'd find useful - whether that's salary trends, demystifying job descriptions, career routes into functional safety, or simply how to make your CV reflect your real capability. Please send any comments or questions to member.communication@instmc.org.

And finally, I'm very much looking forward to getting closer to the InstMC - working with the team on the CNW committee and learning from the likes of Darren Glover on his podcast episodes and member interviews, Ben Thompson with the Early Careers Network and Claire Jones with the WiMAC SIG - it's going to be a great way to showcase the brilliant people within our community.



Kirsty will be offering InstMC members one-to-one online CV review sessions. Looking to customise your CV for a specific sector? Advice on layout or aligning your skills to a job description? Or perhaps your CV needs an overall polish! Consider booking a session with Kirsty.

Keep an eye out for further details to follow!

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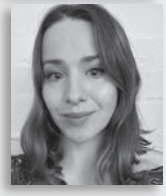

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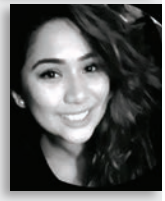

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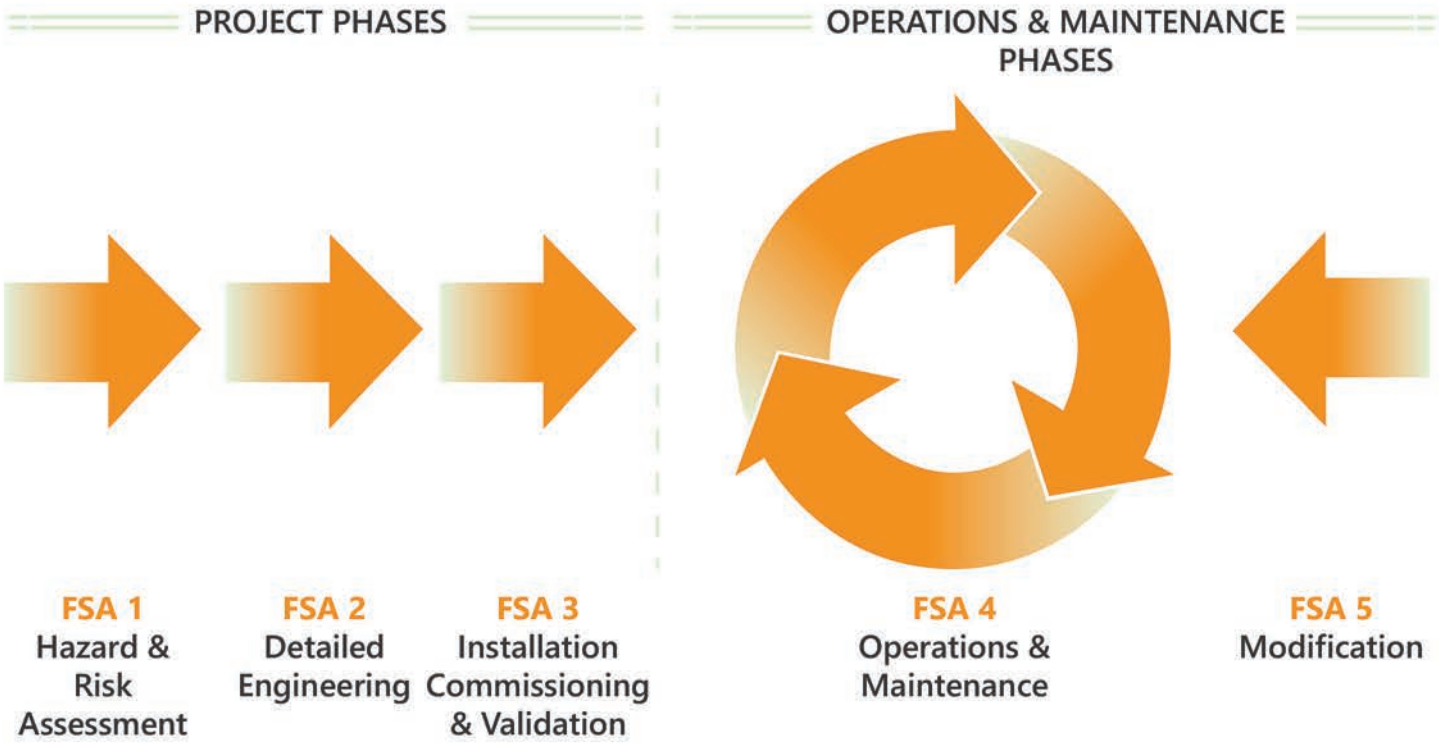

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