Where the Sunlight Fades: Voyager's Journey Into the Unknown

THE Tech Magazine

The magazine for, and made by, the technical community.

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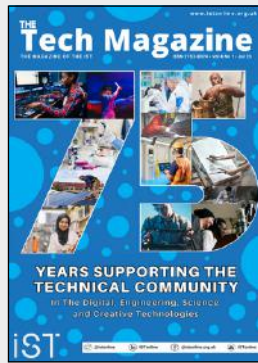
The Tech Magazine continues to grow as a dynamic platform for the professional technical community. With its fresh design and evolving content, the magazine celebrates the contributions of professionals across a wide range of sectors. It's more than a publication; it's a space where voices from the STEMM, Creative and AI workforces are heard, recognised, and valued. We're committed to keeping the magazine relevant, engaging, and impactful; supporting your professional growth and career development every step of the way. Your insights help shape what we do, so we always welcome your feedback and ideas for future content. We hope you enjoy this edition of the Magazine on all-things technical.

IST members can contribute with articles of interest / opinion pieces or research and information blogs. Members can advertise their projects, awards, or even advertise or offer an advert for their organisation. Below are some of the contents topics in our magazines:

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Giving professionals the visibility & recognition they deserve

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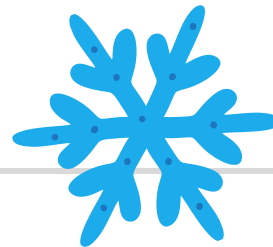

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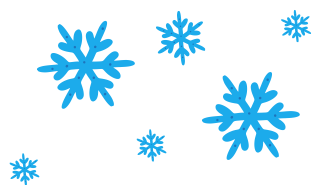in ISTonline   X @istonline   f www.facebook.com/istonline.org.uk   🌐 istonline.org.uk

Welcome

Terry Croft MBE, CSci FIScT
IST Chair

"Powered by Technicians, Driven by You. Please Contact us to Contribute to Our Technical Community: office@istonline.org.uk"

Welcome to the latest edition of The Tech Magazine, the technical publication of the Institute of Science and Technology. I always find Autumn one of the best seasons of the year with all the colours and changes that nature brings to us at this time of year. Early Autumn heralded conference time and brought us this year's IST Annual Conference from the University of Birmingham, and well folks if you didn't make it, you missed a treat! Our conference team put on a brilliant programme with three outstanding keynote speakers, (more about the conference from J-P later).

Professor Tracy Harwood, Professor of Digital Culture gave the first keynote of the day. A fascinating insight into Creativity, AI and the Future of Innovation focusing on one of our key areas of activity – Creative Professional and the Creative Industries. Following the morning workshop sessions came, what I believe to be the best part of the day, the lunchtime break! Not because of the excellent lunch provided by Birmingham University's Catering team, but because this gave me the chance to stop and speak to many delegates. I also had the opportunity to get their views on the conference programme and what they would like to see in Liverpool next year (Note the Date: 15th September 2026) and what further support they would like to see from the IST. Delegates also took the opportunity to network with fellow technicians, specialists and managers and the excellent mixture of sponsors and exhibitors demonstrating their products and services, that

attended the conference. (delegates once again highlighting this networking opportunity as excellent in their feedback).

Figure 2. Delegates milling around at the lunch break with exhibitors at the Technical Conference 2025 in Birmingham

Back to the second keynote and what an interactive session it was, as Professor Kit Windows-Yule gave us such an insight into AI. Titled Artificial Intelligence: the Good, the Bad, and the Grey Area, I think we all learned so much about this fascinating area that is affecting all aspects of our lives at such a rapid pace.

Before, the final keynote, we had the opportunity to thank all the people that had made the day, award prizes and acknowledge our new Fellows and others that had outstanding achievements. I was really pleased as the IST acknowledged one of our leading Fellows, Allison Hunter. Allison was receiving the International Lifetime Achievement Award for Lab Sustainability from My Green Lab later that day following the conference. She kindly agreed to share her good news with our delegates, which they warmly appreciated.

WELL DONE ALLISON!

Figure 1. Visiting the exhibitor stalls.

So into the final keynote. Will it be another great lecture? Well we weren't disappointed. Another brilliant interactive keynote. Dr Raj Persaud talk was entitled "Workplace survival skills or managing your manager because adulting is hard". The content applied to everyone in the audience, they were so engaged. What a way to finish the day!

Figure 3. Dr Raj Persaud Keynote talk at the IST Technical Conference 2025.

So that's another conference over. A great example of how the conference is about our members and the wider community. Where we still retain the "IST Family" approach, where each individual's opinion and concerns matter to YOUR professional body.

It's worth mentioning that I was stopped several times during the day and asked how a person could become more involved in the IST and how to volunteer. The answer is as simple as just contact me directly at the email address below or contact office@istonline.org.uk where the team and I will give you complete support and training as necessary to allow you to open-up a new and rewarding chapter in your career and related activities.

As we start to move through November, the Conference Team for Liverpool'26 is already working on your behalf ensuring the delivery of another high-quality conference experience for 2026. So if you wish to let us know what you liked, maybe didn't like at Birmingham or something completely new that you would like to see then please let me know and I will raise it

Figure 4. Sustainability champion Allison Hunter has won an international award for her work advancing laboratory sustainability in the university sector.

on your behalf. Simply email me at t.croft@istonline.org.uk and help us to deliver yet another excellent Annual Conference.

Before we very quickly move into the festive season and preparing for Christmas, I come back to my opening remarks about Autumn. For many reasons we can all struggle from time to time with pressures from work or home or just feeling low. So take advantage of Mother Nature, one of the best medicines around, especially in Autumn. Just get yourself out there in the local park or woods, the colours and the sounds are uplifting.

So just take that time out for you, you won't be disappointed. Always look after your and your colleague's mental health and well-being. We are a special community that cares, so remember, it's good to talk.

Finally, Christmas is rapidly approaching and it's time for family and friends. So from the team and myself, we wish you a wonderful Christmas and a peaceful New Year and look forward to supporting you once again in 2026. Enjoy a well-deserved festive break.

With best wishes, *Terry.*

Christmas Message

IST PRESIDENT'S CHRISTMAS MESSAGE 2025

Dr Helen Sharman,
OBE CMG FIScT FRSC
IST President

As Christmas approaches, another busy year for the IST comes towards an end. With everything from big events like the annual Technical Conference, through to individual mentoring sessions and representing members nationally, the IST has been working hard on behalf of members. Thank you to all our members who make the IST what it is, to everyone who has participated and provided feedback and ideas, and to those who have been involved in organising and supporting what we do. (See January's Journal for more details of activities.)

Looking out to the rest of the world, the news has been full of tribulation, as we have come to expect. Global climate change, international geopolitics and national budget deficits affect us all. Closer to home, many technical staff in universities are experiencing uncertainty as the drop in international student fee income bites. I hope you will all find some peace in the chaos towards the end of the year, even if you will be working through it.

In some respects, a technician is never completely off duty. We can't 'unlearn' a good health and safety training, for instance, and Christmas time often reminds me of this. How many of us, visiting family and friends, find ourselves tidying away training cables, turning away saucepan handles from the cooker edge, moving paper hats away from candles and using our powers of persuasion to allow ancient, fraying electrics to be discarded? Last year, while retrieving from the top of a wardrobe some decorations that had been carefully stored there for the previous 11 months, in a flash I was transported back to a discussion where a H&S officer was telling me that more people have died due to lasers falling on them from a height than have died from the laser beams themselves. (They didn't mention being blinded or electrocuted, but I took the message anyway.)

So be true to yourself at Christmas and make full use of the wider applications of H&S training, wherever you are. As ever, I wish you a safe and peaceful Christmas.

Helen.

Figure 1. Dr Helen Sharman and Terry Croft MBE with Professor Tracy Harwood; IST Technical Conference 2025 Keynote and Chair of the IST Creative Steering Group.
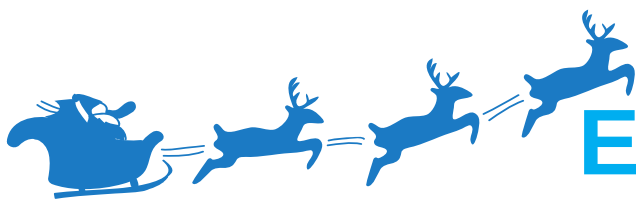
Editor's Welcome

Dear Readers,

As we move through the final weeks of the year, I'm delighted to welcome you to this Winter edition of The Tech Magazine. With the Chair's reflections and the President's Christmas message in this issue, it feels especially important that our editorial voice stands alongside theirs, celebrating our community, acknowledging the challenges we face, and looking ahead with purpose.

This edition arrives following another outstanding IST Annual Conference, hosted this year by the University of Birmingham. As many of you will have read in Terry Croft's Chair's message, it was a day rich with learning, connection, and shared enthusiasm. From Professor Tracy Harwood's inspiring exploration of creativity and AI, to the interactive insights from Professor Kit Windows-Yule and Dr Raj Persaud, the programme offered exactly what makes our technical community so unique: curiosity, generosity, and an appetite for innovation. The energy in the room, through the workshops, networking, and conversations with exhibitors, reminded us once again that the IST conference is not just an event, but a gathering of like-minded professionals seeking to better themselves and others.

As our President notes in her message, this year has not been without difficulty. Across the world and closer to home, uncertainty continues to shape our work, our sector, and the communities we serve. But adversity also reminds us of who we are. Technicians, specialists, creatives and innovators are, by nature, problem-solvers. We adapt, we persevere, and we support one another. Even when times feel heavy, our strength lies in continuing to learn, to contribute, and to lift those around us. As we step toward a new year, I hope each of us can carry that resilience forward, with pride in what we've already overcome and confidence in what still lies ahead.

Inside this issue, you'll find a diverse mix of features that reflect the breadth of our sector. From the future of smart agriculture and NASA's Voyager discoveries at the edge of our solar system, through backstage theatre insights to practical tools like Gantt charts for productivity monitoring, and a deep dive into career pathways that enhance recognition and reward, every article highlights how technical professionals shape the world in ways often unseen but always essential.

As ever, The Tech Magazine exists because of you. Your feedback shapes our direction, your insight enriches our work, and your stories remind us why our community matters. We continue to welcome contributions from all backgrounds, all disciplines, and all career stages. If you've ever wondered whether your experience or perspective belongs here, let me reassure you: it does.

As we look forward to 2026, with preparations for the Liverpool IST Annual Conference already underway, I encourage you to stay connected, stay involved, and continue to let us know what you want to see, from events to publications to professional development opportunities across STEMM, Creative, and AI disciplines.

The festive season is nearly upon us, and I hope you find moments of rest, reflection, and joy among family, friends, and colleagues. From all of us here, thank you for reading, engaging, contributing, and being part of this incredible community.

Wishing you a peaceful Christmas and a hopeful, inspiring New Year.

J.P. AK

JP Ashton-Kinlin, RSci FIScT
Editor / IST Marketing and Development Officer

"A big thank you to everyone who contributed to this edition!"

Voyager's Final Frontier: What NASA's Deep Space Probes Found at the Edge of the Solar System

Amro Heikal

When NASA launched the twin Voyager probes in 1977, their primary mission was to explore the outer planets. But as the years passed, and the spacecraft continued their silent journey, they ventured into an uncharted realm no human instrument had ever reached, the boundary between our Solar System and the rest of the galaxy.

The Edge of the Sun's Influence

The Sun constantly emits a stream of charged particles known as the solar wind, creating a vast bubble that surrounds all the planets; the heliosphere. This bubble carves out a cavity in the interstellar medium, the thin soup of gas and plasma that fills the space between stars.

The heliopause marks the outermost boundary of this bubble, the point where the solar wind slows, weakens, and finally yields to the pressure of interstellar space. Inside lies the domain of the Sun; beyond it begins the galaxy itself.

Crossing Into Interstellar Space

Voyager 1 crossed the heliopause on August 25, 2012, at a distance of about 18 billion kilometres (121 astronomical units) from the Sun. Voyager 2 followed in November 2018, confirming that this boundary is not a fixed shell but a shifting frontier that expands and contracts with the Sun's magnetic activity.

Both spacecraft recorded dramatic changes in particle density, magnetic field orientation, and plasma temperature, confirming they had entered interstellar space.

A Hot, Sparse Frontier

Perhaps the most surprising finding was the discovery of a region of super-heated plasma just beyond the heliopause. Data

suggest temperatures of 30,000 – 50,000 Kelvin (roughly 54,000 – 90,000 °F).

However, despite these extreme temperatures, the region is incredibly tenuous, with only a few particles per cubic centimetre. Because there are so few collisions between particles, this "heat" cannot actually transfer efficiently to a spacecraft. In other words, the Voyagers are flying through a hot but nearly empty medium.

NASA scientists warn against calling it a "wall of fire," as some popular reports have. The heliopause is not a solid boundary, but a dynamic plasma interface where the Sun's influence gradually fades into that of the galaxy.

Magnetic Fields that Defy Expectation

Another revelation came from the measurement of magnetic field alignment. When Voyager 1 crossed the heliopause, researchers expected the interstellar magnetic field to tilt sharply away from the solar field, yet the two appeared surprisingly aligned.

Voyager 2 confirmed this in 2018, suggesting that the Sun's magnetic influence may extend farther into interstellar space than previously thought, or that the local interstellar field has been shaped by the heliosphere itself.

Humanity's Farthest Ambassadors

More than 47 years after launch, both Voyagers continue to send back faint signals from interstellar space, powered by their fading radio-isotope generators. Each carries the Golden Record - a time capsule of sounds and images of Earth - a greeting from humanity to any distant intelligence that might one day find them.

Their journey is a reminder that even as our technology grows old, our curiosity does not. The Voyagers have shown us that the Solar System has no hard edge; only a shifting, living frontier between the breath of our Sun and the vast ocean of the Milky Way.

References:
- *NASA Jet Propulsion Laboratory (JPL) Voyager Mission Data*
- *Richardson et al., Nature Astronomy (2019) — Plasma Observations at the Heliopause*
- *NASA Heliophysics Division, "The Sun's Heliosphere and Interstellar Space"*
- *IFLScience, "NASA's Voyager Spacecraft Found a 30,000–50,000 K Region at the Edge of the Solar System"(2025)*

Author:
Amro Heikal FIScT CSci has many years of experience working in the Oil and Gas Industry.

Life Backstage: Insight into Sheffield Theatre Land
Alice Beasley

Figure 1. Image of the Sheffield Theatre-land Centre with the Crucible (Left) and Lyceum (Right).

Working as a creative technician at Sheffield Theatres' group often feels a little like living inside a storybook with the pages constantly shuffling themselves. Each day I step through the stage door, past the familiar posters and the slightly scuffed corridor walls, and I'm reminded that this place breathes with its own kind of magic. People often imagine theatre as a world of velvet curtains and glamorous spotlights, but behind those curtains is a world that hums, clatters, flickers and sparkles with life; and it's there, in the shadows and the scaffold towers, that I feel most at home.

My job covers a bit of everything: sound, lighting, stage management, or basically whatever the production needs. I sometimes joke that my toolkit weighs more than I do and contains about as many mysteries as a wizard's spellbook. One moment I'm programming lighting cues to chase across the stage like a sunrise, the next I'm balancing the delicate microphone levels so an actor's whisper can reach the back row to ensure audience satisfaction. And then there are the days I'm calling the show, headset on, cue sheets in hand, heart beating in sync with every

entrance, blackout and scenic change. The best way to describe this is it's 'controlled chaos'.

What keeps the job endlessly interesting is how different each production is. Having carried out quite a lot of work at the Lyceum, Sheffield, this venue hosts everything; from touring musicals to local collaborations, and every company brings a new flavour to the place. One week I might be working with a large-scale musical theatre crew, all sequins and tap shoes, the next with a small drama company who want intimate lighting and sounds.

The building transforms constantly; one day it's a Victorian parlour, the next a far-flung galaxy. I love watching the students who come through our doors try to wrap their heads around that level of changeability. Their amazement reminds me never to take it for granted. Working with students is one of the most rewarding parts of the job. There's something infectious about the way they barrel into a project with a mix of enthusiasm, nerves and fresh ideas. They ask questions that even seasoned professionals sometimes forget to

ask, "Why can't we light it from there?" or "What if that cue happened slightly earlier?" and suddenly the whole team is considering a new possibility. I'm constantly reminded that theatre is an art form that thrives on curiosity. When I'm teaching them a new piece of kit or explaining how to run a scene change smoothly, I can see the spark in their eyes when it clicks. Those are the moments that make the long technical days absolutely worth it.

Figure 2. Theatre mixing console soundboard.

Of course, it's not all glamour. There are nights when we're climbing ladders at ridiculous hours, or wrestling with cables that simply refuse to behave. There's gaffer tape in places where no gaffer tape should ever end up. There's the occasional heart-stopping moment when a cue doesn't fire, and you have to make a split-second decision to keep the show alive. But it's precisely those moments that create the strange bond we have backstage, a kind of family forged through shared chaos, shared triumphs, and an awful lot of shared tea and biscuits. I enjoy watching the students learn to embrace those tricky moments too. They quickly realise that technical theatre isn't just about 'pressing buttons'; it's about problem-solving, communication, staying calm when everything around you is on the brink of going sideways. When they come out the other side of a challenging rehearsal or a fraught tech run, you can see the pride settle in. It's the same

pride that hooked me into this line of work years ago.

One of my favourite memories is from a student matinee performance we hosted last year; 'The Lion, the Witch and the Wardrobe'. We'd been rehearsing with a group of college students for weeks, and they'd thrown themselves into every part of the process, not just performing, but helping on crew, trying out sound desks, focusing lanterns, learning how to spike scenery. On the final performance day, just before curtain up, one of the students stood in the wings next to me, gripping their cue sheet with trembling hands. "I'm terrified," they whispered. "Good," I replied, "that means you care." They smiled, and then went out there and nailed it. When the audience applauded at the end, that moment reminded me why I love working with young people: they rediscover for me the wonder I sometimes forget to notice.

The Lyceum, Crucible, Montgomery and Library Theatres themselves are a special place to work. I still get a thrill standing alone in the auditorium before a show, staring up at the chandeliers and the ornate plasterwork. The Lyceum is a building steeped in history, but not frozen in time; it feels like every production leaves behind tiny traces of itself, layering the walls with stories. Being part of that continuum, helping to create moments that will sit in someone's memory for years, is a privilege I don't take lightly.

" What does the job feel like? ... "

It feels like standing in the half-dark with your headset on, listening to the audience hush as the house lights fade. It feels like the rumble of a bass note vibrating through the wooden stage boards. It feels like the warm glow of the lighting desk under your fingers, like a ship's helm guiding the story forward. It feels like the

soft rustle of scripts, the scent of dust and fresh paint, the quiet thrill of knowing you've helped create something ephemeral and extraordinary. Most of all, it feels like belonging. Theatre people are a strange, wonderful breed, where we thrive on collaboration, creativity and a shared sense of purpose. When I'm working with students, I see them finding that sense of belonging too, discovering the joy of being part of a team that builds something greater than the sum of its parts. Watching them grow, learn, struggle, succeed and knowing I've played a small part in helping them along, is one of the best feelings in the world.

So yes, the job is demanding. It's unpredictable, sometimes exhausting, often messy. But it's also the most fulfilling work I can imagine. Every show, every rehearsal, every new group of students reminds me that I'm exactly where I'm meant to be: **backstage, helping to bring stories to life**.

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Author:
Alice Beasley is a Sound and Lighting Technician, as well as Stage Manager at Sheffield Theatres.
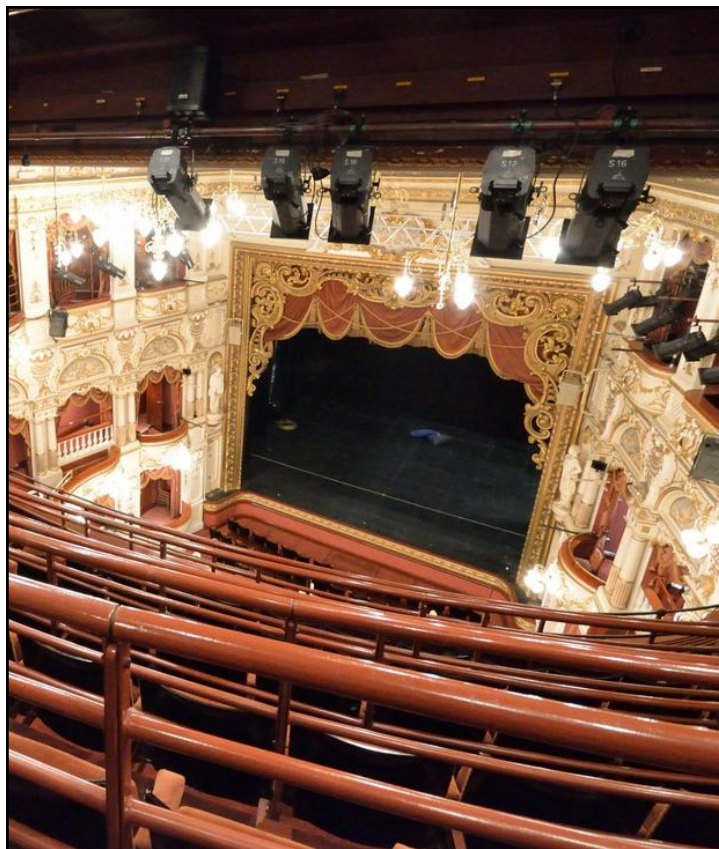
Figure 3: Lyceum Theatre Sheffield Balcony onlooking the stage and lighting surround. Credit to https://theatreplan.com

Apprentice Training Opportunity through the, Nationally Recognised, Innovation Literacy Programme

4th & 5th MAR 2026

This unique, 2-day training programme is available, free of charge, to apprentices pursuing careers in Science, Engineering, Creative Industries and AI.

Interactive workshops will equip apprentices to impact on their workplace with fresh perspectives and ideas, deliver valuable CPD and count towards off-the-job training.

Location: Campfield Manchester, Liverpool Road, Manchester M3 4FP
Participant Investment: Travel* + accommodation cost, if required.

Travel costs will be funded by IST for participants who hold an IST Membership on 1st January 2026

Day 1: 9.00 AM – 5.00 PM

Module 1: Foundations of Innovation
What is Innovation?
Where Do Good Ideas Come From?

Module 2: Prototyping & Problem Solving
Exploring Innovation Physically
Evaluating & Testing Innovation

Day 2: 9.00 AM – 5.00 PM

Module 3: Strategic Thinking & Proposal
Knowing Your Context
Consolidating Your Proposal

Module 4: Communication & Culture of Innovation
Effective Communication
Creating the Culture

To register interest and further information visit https://istonline.org.uk/apprentice-training-opportunity/
Registration Closes on 30.01.2026.

Can Technology Make Agriculture Smarter?
Dinesh Chacko

Agriculture is responsible for around 11 per cent of the UK's total greenhouse gas emissions typically in the last ten years. Globally, an estimated 25 to 30 per cent of emissions come from food systems.
As the world's population continues to grow in the coming decades, so will demand for food, which is forecast to rise by 50 per cent or more by 2050. With rising incomes come growing appetites for meat and dairy, which consume more resources than arable crops.

> **Could technology do the heavy lifting, cutting agricultural emissions and making farming more efficient?**

A combination of sophisticated technology underpinned by the Internet of Things (IoT) and enhanced by machine learning and artificial intelligence (AI) is helping innovators make strides towards a cleaner, more productive and sustainable food industry. Around the world, efforts are underway to apply cutting-edge technology to transform outdated farming practices.

IoT devices connect various technologies, such as robots, drones, remote sensors and computer imaging systems for use in agriculture. Machine learning and analytics make sense of the vast amount of data these generate, allowing farmers to act upon insights e.g. assessing the health of crops and atmospheric conditions, mapping and surveying land or deciding when to harvest. Cloud computing allows vast amounts of agricultural data to be managed and stored.

With more and finer data available, combined with better connections between different farming systems and AI to make sense of it all, will farmers be able to do more with less and get food to consumers in the fastest time possible?

Agricultural Robots

In the UK, the agri-robotics revolution is gathering pace. Autonomous agricultural machines could play a key role in the future in assisting farmers and replacing physically taxing labour. Robotics are beginning to perform tasks such as sowing, transplanting, fertilising, spraying, irrigating and harvesting delicate crops such as lettuce, and other crops such as apples, berries and more. Researchers in Cambridge have built a computer-vision-powered robot which 'learns' to avoid immature or diseased lettuce as it harvests – and other harvesting prototypes are undergoing trials. Small fleets of autonomous vehicles can carry equipment to undertake operations such as assessing soil condition, plant and weed identification and readiness for harvest. Regular tasks such as milking and feeding cattle are undertaken by increasingly automated machinery.

Mapping of Crops and Soil Conditions

IoT-based sensors are capturing crucial environmental data, such as temperature, humidity, levels of CO2, light intensity, moisture in the soil and pH values in real time. AI can help farmers to use this detailed real-time information to monitor crops and determine the optimum time to use pesticides, fertilisers, irrigation and more. Hyperspectral imaging can help farmers understand the nutrient levels of grazing areas and needs of their crops.

Precision Livestock Farming

Today livestock can be managed using virtual fencing technology. Geofencing allows farmers to control animals' movements, such as where and for how long livestock graze upon a certain area – and move them on to pastures new. Remote sensors can also reveal grass quality, and assess feed composition. Livestock are fitted with collar tags – sensors on these, comprising various types such as cameras through to microphones, thermistors and accelerometers, give detailed information about rumination, and the cattles' location and movements. This alerts farmers if an animal goes astray, and helps them monitor the health of their cattle.

Drones in Agriculture

Drones used in conjunction with the IoT are transforming agriculture and are widely used to survey land. Images taken by on-board cameras can capture different spectral intensities. These images can be compared and analysed by AI to give farmers insights into crop health, ambient conditions and nutrient levels and to spot anomalies. This helps farmers make better use of fertilisers and helps cut chemical runoff from fields, improving the quality of groundwater.

Water Management

Innovative smart systems can help farmers drastically cut their use of water. These combine information from sensors relaying ground conditions such as temperature, humidity and soil moisture, and use it to automatically control irrigation according to need and weather conditions, making for healthier crops with less water wasted.

Smart Energy Planning

The agriculture sector could benefit from use of predictive analytics to allow farmers to use and conserve energy more efficiently – making better use of renewables for instance, and cutting use of fossil fuels. A combination of information from IoT sensors, advanced weather forecasting and satellite images, allows AI to harness these insights and predictions to manage agricultural energy systems.

What challenges does agriculture face in deploying AI and IoT?

Use of these technologies is not a done deal within the sector, despite encouraging progress to date. Barriers to adoption that the farming industry faces include:

- Heavy upfront costs and investment
- Expensive and fragile equipment – sensors, robots, drones and cameras must be acquired and maintained
- A need for skilled staff to operate and manage technology, such as manual operators for drones deploying cameras
- Not scalable – data for each farm must be managed separately
- Unreliable or intermittent power supply
- Incompatibility with existing technology, machinery and devices
- No all-encompassing dashboard to reveal all data
- Wireless connectivity over a wide area is not guaranteed across remote farmland, inhibiting transmission of timely IoT data

Despite such challenges, IoT solutions are incredibly powerful tools that can enable farmers and ranchers to go for smart farming. It is a technique that is capital-intensive and high-tech that can vary from farm to farm depending on the market segment, climate, and region. With smart farming, large and small farmers alike enjoy the benefits of less time in the fields and higher crop yields. The IoT-based ecosystem has several applications in the agricultural sector. With its many applications, benefits, and future potential, it is clear that IoT will continue to play a major role in agricultural production for years to come.

Author:
Dinesh Chacko MIScT RPAi is a Coder, Tech Advisor and Digital Apprentice Assessor.

SiSO

What should you expect when you talk to us?

Understanding your needs

Our first conversations are about you. Current and future needs, objectives and timing requirements. We want to make sure that our product is right for you.

Supported onboarding

We understand that some have limited time to devote to setup. So we will assist in the transition process, helping you get started, liaising with your team, and ensuring you gain maximum benefits from your system.

No obligation, free product evaluation

Start with our trial system to evaluate if the system is able to solve your issues. We will help set up your main configuration controls, train a key user and help you load a sample of your data to perform an accurate test.

Live Product training

Face-to-face, bespoke training for your crucial admin users. Training is typically done via group video sessions but can be at your premises.

Integration expertise

If you decide to use our available third-party integrations one of our support team will help you through the entire process so you can get the data flow you need.

Ongoing friendly and responsive support

Dedicated account managers will be there to help you resolve issues and give advice to help you unlock our systems full potential and overcome any potential learning curves.

siso.co.uk

2026 HEaTED Course - Mental Health and Wellbeing

How to Handle Conversations about Mental Health and Wellbeing

Duration: One day
Hosting Mode: Online
CPD Points: 6

Date: 20.01.2026

"Gain the skills needed to effectively support students around their mental health and wellbeing."

HOW TO HANDLE CONVERSATIONS ABOUT MENTAL HEALTH & WELLBEING

Online - Onsite
HOC-022 - HFFC-023

www.HEaTED.org.uk

AIM & OBJECTIVES

AIM

The course will provide participants with the chance to discuss the sorts of 'pastoral' care conversations that they find most challenging and will focus on the key skills needed to provide the type of support that is appropriate within their role as a technician.

OBJECTIVES

- Clarify the roles and responsibilities of technicians in relation to the mental wellbeing of students;
- Develop practical skills and helpful approaches to handling conversations around mental health and wellbeing;
- Explore the ways that technicians can better support these type of conversations without overstepping the remit of their role;
- Enable participants to identify what they can do to find out about the types of support available within their own institutions.

This session has been designed to accommodate various learning styles and to allow participants to learn from group discussion and individual reflection on their current practice. The participants will be encouraged to implement learnt skills within their work.

OUTCOMES

By the end of this course, participants will be able to:

- Draw on a range of essential interpersonal skills to support conversation with a student who discloses mental health and wellbeing concerns.
- Describe a simple framework that serves as a reminder of the key steps to an effective conversation.
- Recognise the importance of boundaries and what participants can do to proactively look after their own wellbeing.
- Describe what they will do to find out more about the support that's available for students within their own institution.

Promotion Pathways Delivering Visibility, Recognition and Reward
Dr Ian Tidmarsh
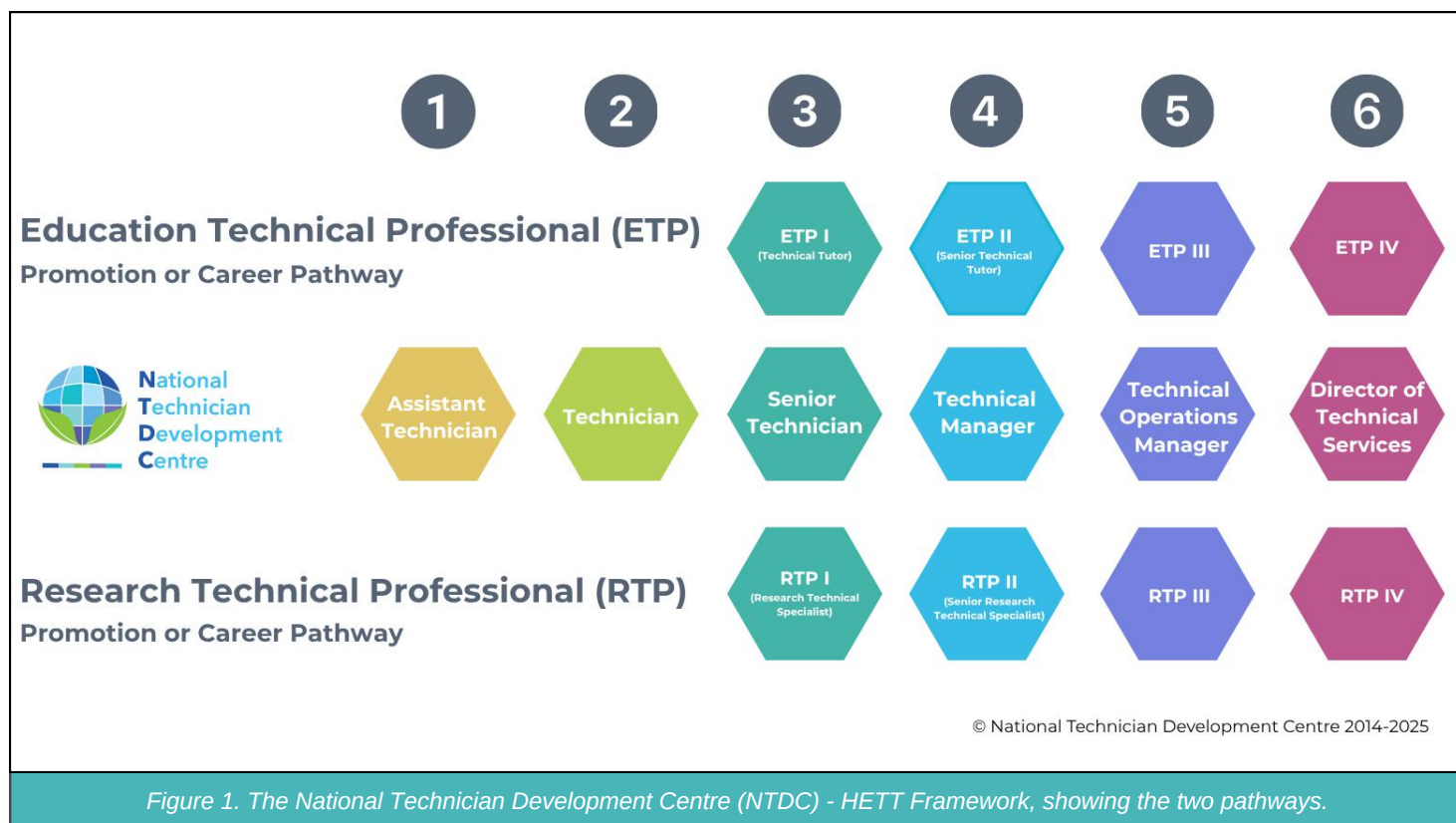
Figure 1. The National Technician Development Centre (NTDC) - HETT Framework, showing the two pathways.

Introduction

The ongoing national technical skills shortage is linked to the absence of clear progression pathways, leaving highly skilled technicians feeling unrecognised and undervalued. New sector-leading promotion pathways for Research and Education Technical Professionals (RTPs/ETPs) provide the crucial framework needed to deliver visibility, recognition, and reward. Manchester Metropolitan University (Manchester Met) is leading this change, being the first to implement both pathways, setting a new standard for the sector.

The Technician Recruitment Challenge

The struggle to recruit and retain skilled technicians isn't a new story; it's a decade-old problem highlighted by many including the Gatsby Charitable Foundation (2016, Gatsby, Technical Education Reform). A major culprit? A lack of clear, progression pathways. This absence is a significant barrier, feeding directly into the persistent technical skills shortage facing the UK. On top of that, many technicians report feeling undervalued and unrecognised, factors that align with the broader "Great Resignation" and "quiet quitting" trends. When technicians feel seen and rewarded, they are more engaged, more motivated, and ultimately, contribute more significantly to their organisations and the wider sector.

The Missing Rungs on the Ladder

Technicians in higher education contribute to multiple university strategies across various activities and responsibilities. Technicians typically focus on technical (skills-based) and technology activity or management and

leadership (although hybrid roles do exist at some universities). The number of technicians can vary wildly between institutions, sometimes exceeding a thousand in larger universities.

Here's the rub: while management and leadership pathways are typically well-defined across the sector, technical and technology-focused pathways often hit a dead end prematurely. This forces highly skilled technical and technology specialists to either transition into management or leadership roles (which might not be their forte or desire) or leave higher education altogether.

Research Technical Professionals

UK Research and Innovation (UKRI) has acknowledged the crucial role of Research Technical Professionals (RTPs)in delivering cutting-edge research. In 2020, UKRI issued expectations for employers of Technology and Skills Specialists (Statement of expectations for technology and skills specialists), including RTPs, calling for clear progression pathways and recognition of their research outputs. Following this, the University of Liverpool trailblazed in 2023, developing and implementing the first dedicated RTP promotion pathway. Crucially, these promotion pathways don't require a vacancy or the establishment of a new role; technicians can apply for promotion by demonstrating they meet specific criteria, much like academics transition from lecturer to professor.

Paving the Way for Education Technical Professionals

The NTDC, the Office for Students' national body for the higher education sector, has been the driving force behind the Higher Education Technical Taxonomy (HETT) Framework since 2014. The HETT Framework provides a national structure of technical roles and has been used to support over 70 universities in improving their technician pathways.

A comprehensive survey by the NTDC (The Survey by the NTDC), involving 3,500 technicians from 35 universities, revealed that 46 per cent of roles were primarily education-focused, with a striking 67 per cent reporting a direct contribution to education success. Given that 54 per cent of university income in 2022/23 came from course fees and education contracts, it's clear that education-focused technicians, typically core-funded, are a significant cohort. Further analysis showed these technicians were undertaking higher-capability duties with a direct positive impact on key university education metrics, including student outcomes, satisfaction, and employability. These duties included teaching academic reasoning, leading practical sessions, assessing work, designing innovative practical sessions, analysing outcome data, and leading the design and delivery of innovative learning spaces.

Concerned that education-focused technicians weren't receiving the same attention, the NTDC stepped in to design a parallel promotion pathway.

NTDC National Education Technical Professional Pathway Working Group

A national working group, comprising 20 universities (including top QS World Ranking UK institutions) and the Institute of Science and Technology, was formed. This group co-created and delivered the NTDC National ETP Pathway, concluding in April 2025 (Project Report).

The group defined Education Technical Professionals (ETPs) as technicians who make vital contributions to student education, deliver excellence in technical and technology education and its innovation, and work collaboratively with academic colleagues to

provide a comprehensive education.
Professor Sir Keith Burnett CBE FRS CPhys FInstP FLSW, Chair of the NTDC Board, stated,

> " Education has the power to transform lives; Education Technical Professionals are a key contributor to this transformation. "

The ETP pathway's primary purpose is to attract, develop, and retain ETPs with the cutting-edge technical, technology, and innovation skills essential for educating current and future generations of students. The pathway consists of four clear, progressive roles, up to professor equivalent, each with a role outline, expected capabilities, and promotion criteria. This structured approach allows technicians to easily see how requirements evolve as they progress, making it clear what they need to evidence for promotion.

The pathway champions technical and technology education delivery and innovation, recognising that education is a team effort. By formalising and recognising the impact of ETPs, it provides a crucial mechanism for promoting and rewarding their critical contributions. This move significantly boosts the visibility of ETP roles and impact, pushing towards greater parity of esteem with academic colleagues and those on RTP pathways.

With employers continually citing a technical and technology skills gap between education and employment (2024, Institute of Student Employers, Student Recruitment Survey), ETPs, with their highly refined skills, are best placed to equip students with the capabilities needed to close this gap and enhance graduate employability.

ETP NET

The national working group established ETP NET (join the email discussion list). ETP NET's

is uniting education technicians (ETPs) from all disciplines, fostering community, networking and the sharing of best practice. The network is supporting exploration and promotion of education focused technical roles (including the National ETP Pathway). It provides a critical spotlight and a national showcase for the work of education technicians.

Manchester Met: Leading the Charge

In July 2025, Manchester Met implemented both ETP and RTP Promotion Pathways, developed in partnership with the NTDC. Manchester Met, a TEF Gold institution, and ranked 11th in the National Student Survey (NSS) for student satisfaction by The Times, is the first university in the UK to introduce a dedicated ETP promotion pathway, and only the third to introduce an RTP promotion pathway.

These pathways align with the recommendations of the NTDC, UKRI, and the Midlands Innovation (MI) TALENT Commission focused on advancing technician careers.

Professor Karen Moore, Chief Operating Officer and Deputy Vice-Chancellor, Manchester Met, stated:

> " Our highly skilled Technical Services teams work alongside our academic colleagues to ensure we deliver an outstand-ing student experience and world class impactful research. Our innovative promotion pathways are another example of the importance Manchester Met. places on people and their career development. "

In recognition of their success Manchester Met was awarded the NTDC 'Promotion Pathway Significant ProgressAward' in July and in October, the Promotion Pathways Project Team won the University's Research Culture Award.

A Brighter Outlook for Technicians

The foundations are laid, and the path is clearer than ever. The lack of promotion pathways, the limited opportunities, the feeling of being unrecognised, can now be actively tackled. With pioneers like Manchester Met demonstrating what's possible, alongside the robust framework from the NTDC (HETT Framework; brochure), there's no longer an excuse to leave our Technical Professionals in the shadows. It's time for every university to seize this momentum and invest in these vital careers.

Author:
Dr Ian Tidmarsh CSci FIScT is the NTDC Strategic Lead and IST Executive Board Member.

Figure 2. Members of the Manchester Met Promotion Pathways Project Team receiving the Research Culture Award from Professor Steve Rothberg, Provost and Deputy Vice-Chancellor, Manchester Met. The full Project Team comprised: Dr Ian Tidmarsh (SRO & Co-Lead), Dr Jane Eagling (Co-Lead), Esther Umoren (project Manager) Heather Atkins-Whitehead (Workstream Lead), Abigail Acheson, Ben Dobson, Professor Chris Fox, Professor Craig Banks, Dan Swain, Dave Camlin, David Harmes, Ffion Evans, Gill Dorey, Dr Helen McCormick, Kate Rowland, Professor Jamie McPhee, Dr Judy Brook, Dr Lisa Simmons, Professor Mike Coldwell, Nichola Ellis, Orlagh McCabe, Rebecca Bradley, Sam Gray and Yogita Patel.

Monitoring Efficiency and Productivity with Gantt Charts
Michael N. Quigley

Introduction

A recent article "The Science and Practice of Efficiency" The Tech Magazine, Vol 6(1) 10, drew attention to influences on efficiency in our work as science technologists. Acknowledging that the influences may be positive or negative, the goal for all of us should be to eliminate the negative while striving to accentuate the more positive influences in our work life. In this way, our workload can be streamlined with maximised output for reduced or minimised effort.

Gantt Charts

Gantt charts are a perfect complement to written plans or mental resolutions to perform tasks efficiently. American mechanical engineer Henry Gantt (1861-1919) developed his horizontal bar charts in the early 1900s for use in his production control work. It wasn't long before his concept was appropriated for use by others as a project management tool. It was then that the charts were adapted to feature what is now a familiar horizontal timeline, with a vertical breakdown in tasks. These adapted charts have since become the standard against which other means of comprehending progress data are compared. You can read a free Google Books copy of "The Gantt Chart, a Working Tool of Management", by Henry Wallace Clark published in 1922. Gantt charts can be used for monitoring tasks or activities involving just you, or members of a group or groups working at the same location or across the world using a file stored on a cloud server. Gantt charts are used for projects involving science, technology and engineering, to name but a few fields.

For those who might be interested in project management theory in general, handbooks such as the Project Management Body of Knowledge (PMBOK) Guide published by the Project Management Institute are good sources of information.

Origins

Graphs and charts in general are so useful that most of us don't give a thought to their original introduction or how innovative they once were. Consistent with his abilities as a polymath, and in his role as a historian, the famous chemist Joseph Priestley (1733-1804) is often credited with the introduction of the prototypical horizontal bar chart, with an associated timeline. In these early examples, the charts would be best described as displaying thick horizontal lines rather than the bars we are all so familiar with. Scottish engineer William Playfair (1759-1823) later introduced different graphical means of presentation, including pie-charts. Regardless of the exact means of presentation, these graphs and charts provided (and of course still provide) the same ease of processing information faster than reading a description or consulting a table. With our innate human ability to discern patterns and see trends, it's an easy transition to create and understand Gantt charts.

Although rudimentary progress charts developed by Polish engineer Karol Adamieki (1866-1933) were already available in the early 1900s, they were largely unknown outside of Russia and Eastern Europe. It was Gantt's independent creation of a similar scheme some years later that led to his charts becoming more widely accepted when first introduced. In the early days, the charts were typically composed on gridded sheets somewhat akin to the cells in a spreadsheet file.

Modern Era Gantt Charts

With modern spreadsheet software, the fill colour or design associated with a given task bar is usually accompanied by a calculated and displayed figure for the percentage completion. Modern charts also stress the importance and illustration of dependencies or links between tasks. For instance, before one task can be started, another task might require full completion. In another scenario, one task might not be dependent on another task's completion at all (i.e. the tasks are independent). Another important characteristic of modern Gantt charts is the inclusion of a vertical line indicating the current point (typically day or date) at which the chart is being viewed. In the early days through to the 1980s, major project Gantt charts were typically pinned to walls for key personnel and others to see the full scope of a project. With the advent of modern era spreadsheet software, it became possible to easily scroll through the timeline on a regular sized monitor.

Software

Users of Microsoft Excel, Google Sheets and a number of similar spreadsheet products will already be familiar with the rows, columns and cells containing data and wording. Although Gantt charts are specifically concerned with the visualisation of a given project's progress

status, they are ideally suited to a spreadsheet format. For this reason, MS Excel and Google Sheets include Gantt chart templates that you can tailor to your own specifications. Additional templates are also available from other vendors. For more involved projects, either a basic template can be further adapted, or a new chart can be created from first principles. Although Gantt charts could be used to monitor your tasks for any given day, it's more likely that other means of organising and monitoring progress will provide a simpler alternative for so short a time period. Some of these alternatives are described below.

Two of the Gantt chart templates provided with the latest version of Excel serve as good examples of what is available. Depending on whether you are using Microsoft 365 for Home, Business, Education or Enterprise, you may see the Excel Gantt charts described for instance as project planners. Indeed, it's possible that you may have been using similar project planners previously and not realized that they qualify as Gantt charts. Regardless of the nomenclature, the charts are intended to be easily edited to suit your own application.

Archived copies of the charts can serve as evidence of your dedication to efficiency and productivity standards.
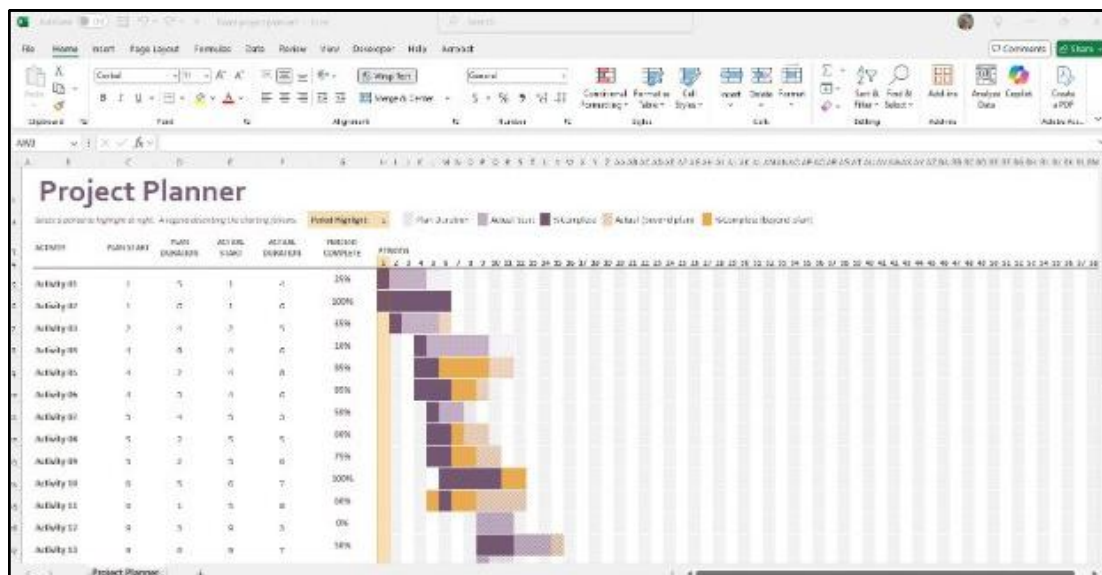

Figure 1. MS Excel Gantt chart template for use by an individual. Image shows a simple Excel template described as a project planner for use by an individual or group representative. In this case, the horizontal timeline is defined by default in terms of a unitary schedule.
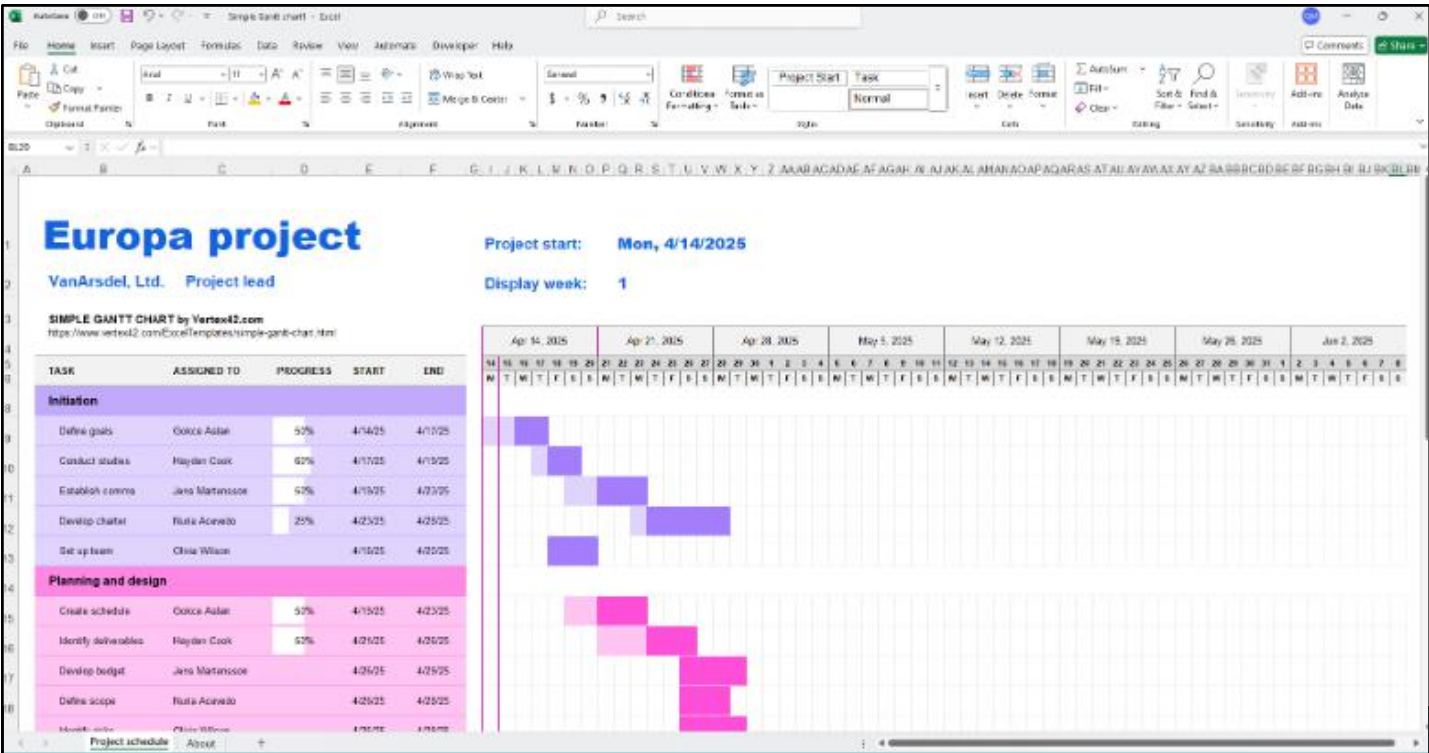
Figure 2. MS Excel Gantt chart template for use by a team. Image shows another Excel chart template for use with multiple staff members involved in the same (Europa) project. The horizontal timeline is defined by use of days and dates.

Alternative Means of Planning and Organising

It would be remiss not to mention that there are many other means of organising our work lives to increase efficiency. Three alternatives are described below; you can check online and investigate the other mentioned products.

Vertical Timeline Progress Charts

While Gantt charts typically use a day or dated horizontal timeline with a vertical task breakdown, there's no reason why progress charts based on a vertical timeline can't be created and used with similar visual fluency. **Fig. 3** illustrates a vertical timeline progress chart associated with the performance testing of different types of laboratory equipment. The chart was created with Excel and displays different types of equipment testing over the space of nearly three years. The testing frequency is indicated by the orange filled cells. Cells with an included "0" are taken to signify

testing that has been performed on schedule. Testing that is behind schedule would be signified by a red filled cell with an included figure of the number of months behind schedule.

Whiteboards

Wall-mounted or mobile whiteboards are relatively inexpensive to purchase and install. The best use of a whiteboard for organising project information is to use a three-column format. For any given time period (but typically involving months), the centre column should display current tasks that are either scheduled to be performed in the current month or that have already been completed. The tasks should be written with a black marker. The left-side column should display tasks (taken to be from a previous month or months) that are behind schedule and written with a red marker. The right-side column should display tasks that are projected to be performed in an upcoming month or months, and be written with a blue marker.

Kanban Organisers

Kanban organising systems such as Trello and Kanban hybrids such as Notion rely on a board, columns (also referred to as lists) and cards style format to collect and organise data. You can read about Kanban's Japanese manufacturing origins and details elsewhere.

Trello and Notion are well suited to today's computer and smartphone displays. In these applications, it's easy to move virtual stackable cards around in order to better assure a project's smooth progress. Interestingly, Gantt charts can be inserted into Trello projects, and Notion allows for switching between a Trello-like Kanban format and a more tabular interface.

Miscellaneous Organisational Tools

Other tools include Timeline charts, PERT charts, the Evernote app, and heirloom products such as those manufactured by Rolodex and Day Runner.

Summary

Apart from their obvious uses as project management tools, Gantt charts serve as excellent visual cues for how to structure our work-lives, increasing efficiency and productivity. Especially useful for coordinating and monitoring the activities of multiple people, there are many potential uses.

With the ability to literally chart your successes, it's appropriate to keep one caveat in mind: anticipate what lies ahead. The reality of a project's outcome will hopefully be good, but being dynamic in your ability to respond to unforeseen challenges during the different stages of a project is a definite advantage.

Figure 3. Vertical timeline progress chart created with MS Excel.
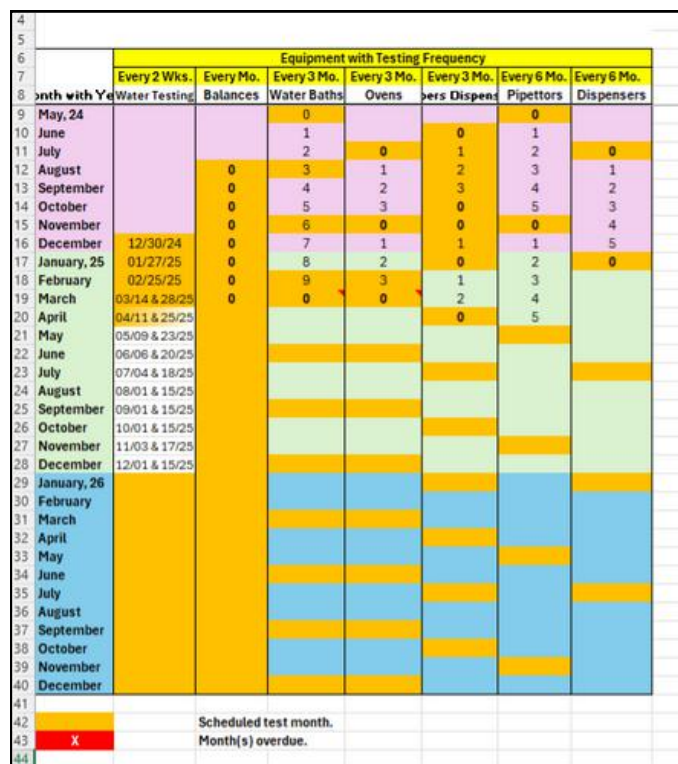
Author:

Michael N. Quigley FIScT is the CEO of Createc Corporation, Ithaca, NY 14850, USA.

CALL FOR ARTICLES

At the IST, we want to encourage all of our members to submit short articles for our publications; The Tech Magazine or The Journal. Our members would like to see more articles from our Fellows and from our early-career technicians.

If you work at a senior/managerial level, we would encourage you to allow your team members to contribute also, so that they also have the opportunity to publish articles.

These are how the IST will help you:

- **Incentives:** Offer rewards such as recognition in the publications and professional development opportunities for those who contribute. All authors are credited for their article submission. Submitting to the publications can also contribute to your annual CPD review.

- **Contents/Themes:** The wall of contents shows the areas and themes for submissions to provide direction and inspire members to write about relevant topics. We have many areas and themes for members to write about.

- **Ease of Submission:** Simplify the submission process with clear guidelines and an easy-to-use platform. We have simplified the process by giving documents and example articles. We have a template for members to use to submit their article.

- **Spotlight Features:** Highlight articles and authors in publications, websites, or social media to give contributors visibility. Our authors who submit articles will be highlighted across our publications and marketing platforms.

- **Collaborations:** Encourage collaborative articles among members to share different perspectives and reduce the individual writing load. If members are struggling to complete an article, we will assist to help bring the technical workforce together to collaborate.

- **Editorial Support:** Offer editorial assistance to help refine articles and ensure quality content. The Editorial Board will provide constructive feedback to contributors, showing that their work is valued and helping them improve.

- **Regular Reminders:** Send out regular calls for submissions, reminding members of deadlines and the importance of their contributions.

By implementing these strategies, the IST can create a supportive environment that motivates members to share their knowledge and experiences through short articles.

Please send your articles to:

office@istonline.org.uk

2026 PUBLICATIONS

The Journal 2026 - Winter Edition (Feb)

The Tech Magazine Vol. 7 No. 1 (May)

The Tech Magazine Vol. 7 No. 2 (Aug)

The Tech Magazine Vol. 7 No. 3 (Nov)

The Bulletin - Varies throughout year

You can find the forms below from:
www.istonline.org.uk/resources/the-tech-magazine/

Article Specifications

Sector Specific Articles	Industry, Business & Consultancy | Research Institutes | Higher Education | Schools & Colleges | Overseas	300 – 400 words
Technical Spotlight	*See individual specs for this on page 2*	230 – 270 words
Highlight articles	Special Highlight	300 – 400 words
E-Articles	Articles from all disciplines as Full Papers, Communications, Reviews	1,000 – 2,000 words
Technology Articles	Creative | Digital | Engineering | Science	300 – 500 words
Special Interest Articles	Equality, Diversity & Inclusion | Outreach & Engagement | Sustainability	300 – 500 words

Format and layout of your articles

Keep your writing clear and concise, avoiding repetition or embellishment. All submissions must be in English. You are welcome to use common or standard abbreviations; if your abbreviations are non-standard, please include a definition the first time you use them.

All articles accepted for publication in our magazines and journals are edited and typeset to our house style by professional editors: the manuscript will be formatted for you.

If you would like professional guidance on improving the standard and style of your writing, before submitting your article, we can offer help, support and advice.

Article Types

Articles fall into one of three main categories: Full papers, Communications and Reviews. However, each journal will have further, specific article types, so you should always refer to the publications specific specifications while preparing your manuscript.

Full papers are original, unpublished primary research. Extensions of work that has been published previously in short form such as a Communication are usually acceptable.

Communications must contain original and highly significant work whose high novelty warrants rapid publication.

Reviews may be an authoritative overveiw of a field, a comprehensive literature review, or tutorial-style reference materials. Reviews are usually invited by the editor, but a topic may be proposed by an author via the Editorial Board.

REMINDER: THE NEW ADDRESS OF THE IST
FROM SHEFFIELD TO STOCKPORT

The New IST Office Address

We're pleased to share some important updates with our members! The IST has recently moved into a new office space.

Our new address is located at Bank Chambers, Market Place, Stockport, SK1 1AR, and we also have a new phone number: 0333 772 3929.

Please update your records and feel free to get in touch - we'd love to hear from you.

Celebrating Professor Tim Sandle's Contribution to The Journal

We'd like to give a special shout-out and significant recognition to

Professor Tim Sandle Ph.D., CBiol, FIScT,

who has recently submitted his latest article for The Journal, set for publication in early 2026.

In this fascinating piece, Tim explores groundbreaking new research into the ancient fungi that helped shape life on Earth; organisms that enabled plants to transition onto land and ultimately contributed to the development of our oxygen-rich atmosphere.

Remarkably, this will be Tim's 15th article for The Journal over the past 25 years, reflecting his long-standing commitment to sharing knowledge and enriching our scientific community.

We extend our thanks and congratulations to Tim for his continued contributions and look forward to showcasing his work in the upcoming issue.

A Landmark Achievement: Allison Hunter Recognised for Transforming Lab Sustainability

We are delighted to congratulate IST Fellow Allison Hunter on receiving the prestigious My Green Lab Lifetime Achievement Award for Lab Sustainability; an international recognition of her exceptional leadership and long-standing commitment to transforming laboratory practices across higher education and research. As Head of Technical Operations in the Department of Life Sciences, Allison has been a driving force for positive change, inspiring countless teams to embed sustainable approaches into their daily operations. Her award, presented at the My Green Lab Summit 2025, highlights the depth of her influence and the global respect she has earned for championing practical, measurable improvements in lab sustainability.

Allison's achievements reflect a career defined by purpose, progress, and unwavering dedication to environmental responsibility. From her pioneering sustainability work at King's College London to her impactful leadership at Imperial College London, including her secondment with the Sustainability Hub and her advocacy for technical staff development, Allison has helped raise standards, shift mindsets, and empower others to take action.

Her recognition is a proud moment not only for her institution but for the entire IST community. We extend our heartfelt congratulations to Allison and celebrate the continued impact of her outstanding contributions to shaping greener, more sustainable laboratories worldwide.

Click here to read more.

Out and About: Highlights from Our 2025 Events Calendar

Throughout 2025, our team has been active across the UK, engaging with partners, technical communities, universities, and sector networks to support collaboration, share best practice, and champion professional recognition.

The year began with strong momentum as we joined the NTDC Partner Forum on 16 January, followed by the ITSS Partner Forum on 4 February. Spring saw a busy period of national conferences, including the UBMA Annual Conference (9–11 April), the TMU Annual Conference (10–11 April), and another NTDC Partner Forum at the University of Sheffield on 15 April. We continued this pace into late spring with appearances at EduTech Trailblazer on 21 May, Cardiff Met's All Wales Technical Conference on 4 June, the Scottish Technical Conference in Glasgow on 10 June, UK RAS Steps in London on 18 June, Exeter's Technical Conference on 19 June, UCL's Technical Conference on 25 June, and Kent's Technical Conference on 27 June.

Our summer circuit was equally vibrant, with the Brunel Tech Symposium on 2 July, the Leeds Technician Conference on 3 July, HETS 2025 in Leicester on 9 July, the Manchester Met Technical Conference on 10 July, and the Swansea Technician Symposium on 16 July. As autumn approached, the team continued to represent the organisation at the Scottish Networking Event in Glasgow on 3 September and the Science Apprentice Conference on 12 September. We closed the year with a key sector gathering on 2 December at the Science Council's Celebration of Science in London.

These events not only strengthened our relationships across the sector but also ensured that member voices and professional standards remained central to national conversations throughout the year.

Left to Right: Sam Hansford, Ian Tidmarsh, JP Ashton-Kinlin and Jan Brett - colleauges and friends enjoying some event-time to speak to technicians from across the country.

Your Path to Chartership: Join Laurence's Expert-Led Course
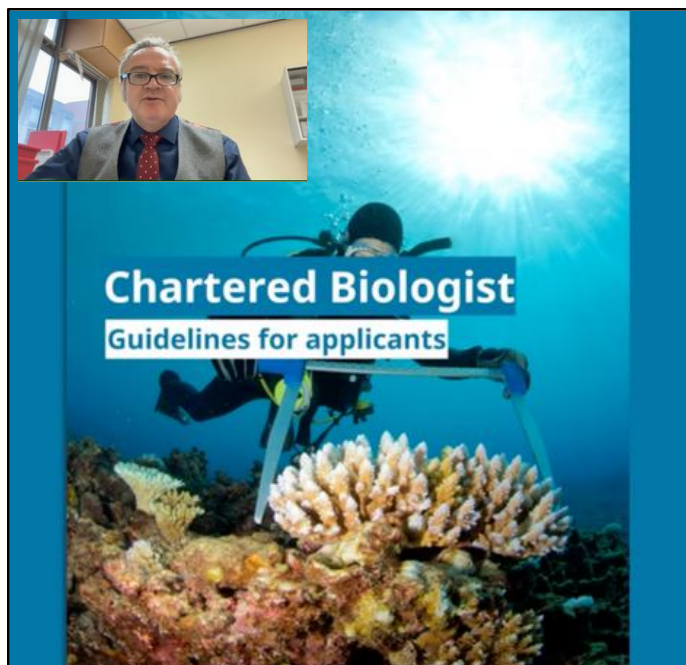
IST Fellow, Laurence Dawkins-Hall is delivering an engaging and highly practical course that's perfect for anyone looking to strengthen their professional practice and move confidently toward chartership. Designed and delivered through the Royal

Society of Biology's learning platform, the course provides clear guidance on how to evidence your skills, reflect on your experience, and present your work in a way that aligns with professional standards such as Chartered Biologist (CBiol). Laurence draws on real examples, insightful tips, and years of experience mentoring professionals, making the session both accessible and genuinely empowering for participants at all career stages.

Whether you're preparing a portfolio, looking to understand the competencies in more depth, or simply wanting to refine your professional development approach, this course offers a supportive, well-structured pathway to help you take the next step. If you're aiming to strengthen your profile or begin your journey toward professional registration, this is an opportunity not to miss.

Click here to find out more.

The Life of a Science Technician
By Denise Ralph

A bit about myself

I have been a Science technician since 2012, (before that I was a teaching assistant for 12 years) I started off as a trainee and was taught by the senior technician who taught me the basics on how to prep practicals, set up demos and make up solutions. I made myself familiar with all the equipment that is used (e.g. conical flasks, reagent bottles etc). I then moved to a school nearer to where I lived and continued learning new thing every day, I was also allowed to put orders through for equipment, chemicals or consumables needed. After a year I was left as a lone tech; I then moved to another school (it was the shortest interview I have ever had) and I was offered the job and became a senior science technician. I was a lone tech there too for 7 years; since then I have trained my assistant science technician (who has been with me for 3 years now). I have been there for 10 years. I am also a RSCiTech (Registered Science Technician) receiving the accreditation in 2016. I am a member of ASE and been a member of the Institute of Science and Technology since 2023.

Life of a Science Technician

Being a science technician is not just preparing practicals or setting up demos and clearing away for the teachers. I get to do all 3 sciences, ordering chemicals, equipment, stationery or mending broken equipment. You get to trial new ways of doing practicals/demos and show the teachers how to do these and the outcome they have. Making and setting up of microscale practicals (which the teachers love, and are so much easier for the students to use) for a science technician it is less washing up and less wastage of chemicals. I am coordinator for Health & Safety for the department and I am

a STEM ambassador, and I get to help out with the Space week for the University of Surrey/Institute of Physics (You could do STEM activities in your area), in the spring term I will being doing activities for the year 5/6; I also get to do the Year 7 science club doing a variation of different/new activities which they enjoy and it also engages them more in science. I am also involved with the process of applications for Registered Science Technicians (RSCiTech) for the Science Council and in the future for IST. I also create instructional videos for various practicals/Demos which I share on social media (X, Instagram, LinkedIn). I have also been asked by other teachers/technicians on social media for advice and help with different aspects of science.
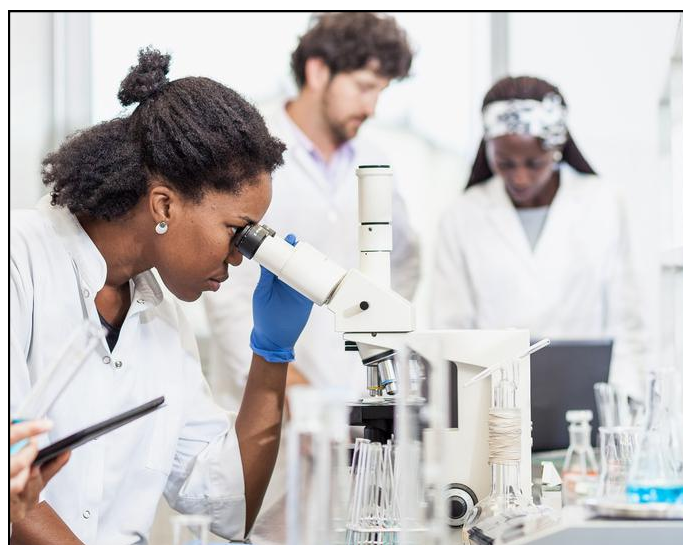
Each day is a school day – continually learning; it was the best career change I have ever made. There are lots of opportunities for a science technician to be involved with! You get to network with other science technicians through FB (School Science technician) Also there will be a new Zoom catch up once a month via a new networking – (watch out on the socials) Science Technicians are the backbone of the Science Department - I love my job.

IST Receives Technician Commitment Award in London

The IST has been awarded the Technician Commitment Supporter Award, following the successful submission of its latest Self-Assessment and Action Plan. The Technician Commitment team praised the clarity and depth of the IST's submission, noting the significant progress being made across a wide range of initiatives. This recent self-assessment plays a crucial role in helping the sector understand how each Supporter organisation is advancing the Commitment's four core themes: Visibility, Recognition, Career Development and Sustainability.

The review panel highlighted the strength of IST's ongoing work and its continued leadership in supporting technical professionals. In their formal feedback, the panel commented:

The IST is in the enviable position of reporting all thirteen actions as green, noting they are either sustained or evolving through new initiatives. This is an impressive achievement.

In recognition of this well-articulated submission and its noticeable impact, the IST was presented with the Award at the Technician Commitment Signatory event held in London in November 2025. This accolade reflects the organisation's dedication to championing technical staff and its ongoing commitment to driving positive change across the sector.

Laboratory Safety

LabCup was designed with a safety first approach! Safety functionality is automated as much as possible. The aim: automate safety info & put it in the users hands when it is needed.

labcup.net

A Landmark Celebration of Technical Excellence in Birmingham
The IST Annual Technical Conference 2025

Many Thanks to our 2025 Key Sponsors:

UniGreenScheme   SiSO   labcup www.labcup.net   academia the technology group

This year's IST Annual Technical Conference at the University of Birmingham was nothing short of spectacular! Bringing together technicians, researchers, creatives, academics, and industry innovators from across the UK, the event reminded everyone why it's the must-attend conference for AI, Creative Industries and STEMM professionals.

Figure 1: Delegates wandering around the Exibitor Space.

From the moment delegates arrived, there was a buzz in the air. The event kicked off with a warm welcome from Natasha Russell, the University of Birmingham's brilliant Technical Manager and a key member of the conference team. Then, we were officially greeted by Professor Adam Tickell, Vice-Chancellor and Principal of the University of Birmingham, alongside IST President and Conference Chair Helen Sharman CMG OBE and IST Chair Terry Croft MBE, who kept everything running like clockwork alongside members of the Conference Team. Their combined enthusiasm set the tone for a day full of energy, learning, and connection.

Professor Adam Tickell stated,

> It was a privilege for us to host the Technical Meeting of the IST (Institute of Science and Technology) in the Teaching and Learning Building. We have been working with the IST – a professional body covering all sectors from science to medicine, to creative arts – for thirty years, particularly in their work to support the professional development of the technical workforce. I went along to the opening session and there was a real sense of a national community coming together to learn from one another.

Keynotes That Wowed the Room

The conference's keynote line-up was truly top-notch. Each talk left the audience buzzing with ideas and inspiration.

Professor Tracy Harwood – "Navigating the Inflection Point: Creativity, AI and the Future of Innovation"

Professor Harwood kicked things off with a thought-provoking dive into the exciting intersection of AI, creative computing, and rapid innovation. Delegates explored how technical professionals can lead through disruption, embracing adaptability, ethical foresight, and cross-disciplinary collaboration. From generative AI to immersive design tools, Tracy showed that emerging technologies aren't just changing the tools we use; they're changing how we think, create, and solve problems. By the end, everyone left with practical strategies to tackle the future with confidence and curiosity.

Figure 2: Dr Helen Sharman with Professor Kit Windows-Yule after his artificial intelligence keynote.

Professor Kit Windows-Yule – "Artificial Intelligence: The Good, the Bad, and the Grey Area"

Next up, Professor Windows-Yule gave a fascinating look at AI in the real world, from its most brilliant applications to its trickiest pitfalls. Drawing on his experiences with industry, academia, and his own AI start-up, he shared lessons learned across eight industrial sectors. The audience gained invaluable insights into ethical, practical, and sustainable AI adoption, all delivered with clarity and a dash of humour.

Figure 3: Dr Raj Persaud with Helen Sharman and Terry Croft after his keynote talk on surviving the workplace.

Dr Raj Persaud – "Workplace Survival Skills: Managing Your Manager Because Adulting is Hard"

Dr Raj Persaud closed the keynote programme in style, delivering laughs and life lessons in equal measure. Speaking from years of experience as a psychiatrist and life coach, he gave delegates practical tools to survive, and thrive, in high-pressure work environments. His anecdotes had the room in stitches, but behind the humour were serious lessons in resilience, wellbeing, and sustaining a fulfilling career as a technician, scientist, or researcher.

Figure 4: Workshops delivered throughout the Conference to inform and advance technical skills.;

Workshops That Made You Think (and Act!)

The workshop programme was equally impressive, giving delegates hands-on experience and practical takeaways across AI, Creativity, Safety and Career Development to bring back to their workplaces.

Session 1 Highlights:

- ACCES: An accessible evolutionary framework for optimising just about anything
- Using AI to enhance immersive learning across devices: from tablets to XR headsets
- NTDC HETT: Introducing the new National Education Technical Professional Pathway
- Upskilling Through Apprenticeships: Taking control of your technical career

- Inventory Management: Smarter, safer ways to store and use equipment
- Innovative Sustainability: Bridging science and the arts for a greener future

Session 2 Highlights:

- StageLinc: Linking technical skills to regional challenges
- The Accreditation Edge: Stories from Creative Tech Trailblazers
- Career Alignment in a Changing World
- Chemical and Safety Sheet Management
- Selling Unwanted Lab Equipment with UniGreenScheme
- What is Deep Learning?

Delegates left buzzing with new ideas, skills, and strategies, praising the breadth, quality, and immediate usefulness of the workshops. Thank You to all our fantastic speakers.

Celebrating Outstanding Talent

No IST conference would be complete without recognising technical excellence:

New IST Fellows: Dr Gayle Calverley and Graeme Shaw

Poster Competition (Sponsored by Sim&Skills):

1st Place:
Jonathan Fulwood - University of Sheffield
2nd Place:
Emma Aitken - University of Edinburgh
3rd Place:
Jaswant Kaur - University of Birmingham

The competition's theme, Outreach, really captured the creativity, innovation, and impact of technicians across the UK.

Special mention goes to IST Fellow Allison Hunter, who was awarded the Lifetime

Achievement Award for Lab Sustainability by MyGreenLab (USA) - a remarkable international recognition!

Congratulations to all award receivers.

Figure 5: Helen Sharman awarded the 2025 prizes to the Poster competition winners.

A Big Thank You to Our Supporters

We couldn't pull off a conference like this without our key sponsors, exhibitors and career zone supporters. Huge thanks to SiSo, UniGreenScheme, LabCup, and Academia, whose support ensures that the IST Conference remains accessible, inspiring, and invaluable to the technical community.

2025 Exhibitors

2025 Career Zone Supporters

Looking Ahead to 2026

The energy, creativity, and collaboration we saw in Birmingham this year were incredible. The IST Conference continues to grow in impact, ambition and excitement.

We're thrilled to announce that next year's conference will take place on:

Tuesday 15 September 2026
University of Liverpool

We can't wait to welcome you back, or meet new delegates, for another day of learning, networking, laughter, and inspiration.

That's a wrap – see you in Liverpool

The 2025 conference proved, once again, that technicians are the heart of innovation, creativity, and excellence; and that together, we can push boundaries, solve problems, and build a brighter, smarter future.

From Your IST Conference Team:

Dr Helen Sharman OBE CMG (Conference Chair), Terry Croft MBE (Conference Co-Chair), Lucy Hudson/Ian Tidmarsh (Secretary), Joan Ward (Finance Lead), Arthur Nicholas (Sponsorship Lead), JP Ashton-Kinlin (Marketing Lead), Richard Saldanha (AI Lead), Graeme Shaw (Creative Lead), Sarah Youde (Science Lead), James Fox (Competition Lead), Natasha Russell (Host University Representative) and John Dwyer (Previous Host Representative)

Feedback:

"The talks gave me a much clear understanding of AI and the guidelines that should be applied due to potential safeguarding and ethical issues."

"Thoroughly enjoyed all speakers, their delivery, storytelling, jokes - excellent"

> **Fantastic choices of keynotes. Engaging and relevant.**

"World class."

"The workshops I went to were certainly worth attending."

"Great selection of topics."

"Really enjoyed engaging with the reps."

"It is a great networking event - good blend of keynotes workshops, exhibition."

"Excellent format this year, keep it the same. Plus all locations in one building so that was good."

> **I thought this conference was brilliant. I cannot wait to try and attend Liverpool next year.**

97% of all delegates who gave feedback rated the Conference as either Excellent or Very Good.

Many Thanks to our 2025 Key Sponsors:

UniGreenScheme   SiSO   labcup www.labcup.net   academia the technology group

AI Seminar Series
See Eye Health in a Whole New Way!

Missed the latest AI Seminar Series? Professor Francesca Cordeiro shared her groundbreaking work on DARC (Detection of Apoptosing Retinal Cells), a revolutionary imaging technique that allows researchers to observe individual retinal cells dying in real time. This innovation can detect retinal cell apoptosis before vision loss occurs, supporting early diagnosis of glaucoma and other retinal diseases, and opening the door to faster treatment development and monitoring.

The seminar is a must-watch for anyone working in healthcare, biomedical research, or AI-driven imaging, highlighting how advanced technology is transforming early detection and treatment of neurodegenerative eye conditions. Catch the full recording on the IST YouTube Channel and see how cutting-edge AI is helping to save sight.

What is DARC: DARC - Detection of Apoptosing Retinal Cells is an innovative in vivo imaging technique that allows real-time detection of retinal cell apoptosis, particularly in retinal ganglion cells (RGCs). The method uses a fluorescently labelled protein, such as annexin V (ANX776), which binds to phosphatidylserine, a molecule exposed on the cell membrane early in apoptosis. As retinal cells undergo apoptosis, they appear as bright spots on a retinal scan, enabling researchers and potentially clinicians to observe individual dying cells in living eyes, something that was not possible with earlier imaging methods.

Watch the full recording by clicking here.

Women in Tech Spotlight
Dr Maheera Abdul Ghani

The Women in Tech Group is proud to highlight Dr Maheera Abdul Ghani, winner of the 2025 Nature Inspiring Women in Science Award in the Scientific Outreach category. Dr Abdul Ghani was recognised for her exceptional work in amplifying public understanding of research and making science accessible to broader audiences. Her dedication to science communication and engagement exemplifies the impact that researchers can have beyond the laboratory, inspiring the next generation of scientists and technologists.

Her award and outreach achievements make Dr Abdul Ghani a perfect profile for our Women in Tech coverage in 2025. By bringing cutting-edge research to the public and championing

Credit:www.nation.com.pk/27-May-2025/maheera-abdul-ghani-becomes-first-pakistani-woman-to-earn-phd-in-material-science-from-cambridge

science engagement, she demonstrates the vital role women play in shaping both the scientific community and public understanding of science. Members can read more about her inspiring work through University of Cambridge departmental news and Nature's coverage of the 2025 awards.

Welcome, Bill Surradge
The New Chair of the IST Scottish Network

iST Scottish Networking Group

Student experience has always been central to Bill's work. As he explains: "As a former student of Napier myself, I know how life-changing the opportunity to come to university can be for a young learner. I had a fantastic time as a student, so I want the next generation to have an even better experience. If I can contribute to that, and help learners build the confidence and skills to take their next steps, amazing!" This commitment did not go unnoticed; Bill was voted the winner of "Exceptional Non-Academic Support" at the 2024 Edinburgh Napier Students' Association Awards, an honour made especially meaningful as it was voted for by students.

During the Covid pandemic, Bill used lockdown to develop new skills by learning how to produce instructional videos for laboratory techniques, using footage filmed prior to shutdown. An initial test video was well received, and he has since created more than 30 videos to support students' independent learning. This work inspired him to enrol on the University's part-time MSc in Blended and Online Education, which he is due to complete in summer 2026.

Since the early 2020s, Bill has also been an active advocate for collaboration across technical networks. He joined the Institute of Science and Technology (IST) in 2023 and has been involved in a number of cross-organisational initiatives. In 2022, he worked with Charles River Laboratories to deliver an outreach upskilling course for recent graduates and individuals returning to work. He has also been a member of the Edinburgh Technical Collaboration since 2023, supporting shared development across institutions. Promoting the technical profession to new audiences is

important to Bill, leading him to create a monthly blog 'A Year in the Life of a Lab Technician' which offers insight into the day-to-day work of prep room teams. He has also delivered and supported practical demonstrations and online sessions for primary and secondary pupils, helping to inspire younger learners to consider technical careers.

However, Bill has also supported learning at younger stages, by supporting and running practical demonstrations or online presentations for Primary and Secondary School pupils.

"The expansion of my personal technical network has exploded over the past few years, by getting involved with the IST and the Science Council, and by being given the opportunity to attend different Conference events, such as the Scottish Technical Conference at Glasgow University in 2023, and the National Technician Partnership Conference at Newcastle Uni in 2024. Events such as these are vital to the sustainability of the Scottish Network, and the technical profession as a whole. We are a strong, supportive community, and I would like to foster and encourage these links further going ahead."

RAi UK Awards £300k to Drive Responsible AI Innovation
Responsible AI UK

Responsible AI UK (RAi UK) has recently awarded over £300,000 to its Enterprise Fellows programme, supporting innovators focused on responsible AI.

This funding aims to accelerate the development of AI technologies that are safe, ethical, and socially beneficial, encouraging projects that consider societal impact, fairness, and transparency. By investing in these early-stage initiatives, RAi UK is helping to create a pipeline of responsible AI solutions that align with both regulatory expectations and ethical standards.

The Enterprise Fellows initiative is part of RAi UK's broader mission to foster a multi-disciplinary, collaborative approach to AI research and innovation across the UK. The programme connects researchers, entrepreneurs, and industry experts, providing mentorship, funding, and resources to turn promising ideas into practical applications.

This approach not only supports technological advancement but also ensures that the deployment of AI systems benefits communities and respects social, cultural, and ethical norms.

Scottish AI Alliance Explores AI Innovation in the Creative Industries
Scottish AI Alliance

The Scottish AI Alliance recently hosted the "BridgeAI Creative Industries Collaboration Event" on 15 October 2025, a forward-looking gathering that aimed to explore how AI can drive innovation across the creative sector. With attendees drawn from both AI-driven projects and traditional creative industries, the event showcased how collaboration can bring about new efficiencies, social impact and sustainable growth through the integration of AI technologies.

Attendees had the opportunity to learn about live projects funded under the BridgeAI programme and hear from developers and creative-industry businesses about the real-world results achieved; from improved workflows to creative experimentation powered by machine learning. The event also served as a networking hub, enabling creative professionals to meet AI researchers, potential collaborators, and funders for future joint ventures.

By bridging AI and the creative industries, Scottish AI Alliance is helping to expand the utility of AI beyond traditional tech domains, positioning it as a tool for enhancing creativity, supporting cultural innovation and driving cross-sector collaboration. Events like this illustrate the Alliance's broader mission to foster inclusive, multidisciplinary AI adoption across sectors.

Expanding AI Funding Opens New Opportunities for CreaTech Innovation
UK Research and Innovation, Innovate UK and DSIT

UK Research and Innovation, Innovate UK, and the Department for Science, Innovation and Technology are opening up more funding for AI projects, and this could be great news for the creative industries. Organisations working where technology meets creativity now have a real chance to access support for projects that push boundaries, whether that's in media, design, arts, or other creative sectors. It's all about giving creative ideas the tools they need to thrive in an AI-powered world.

A standout example is the METIUS project, which uses AI to help make sense of large amounts of research evidence. While it was originally designed for scientific research, projects like METIUS show how AI can create infrastructure that's useful for creative-industry researchers too. From social sciences to media studies and humanities, these tools can help uncover insights faster, spark new ideas, and open up fresh ways to collaborate across disciplines.

By connecting AI capabilities with creative talent, UKRI and its partners are helping build a more joined-up ecosystem where technology genuinely supports cultural and creative innovation. This approach not only strengthens research and development but also gives the UK's creative industries a chance to lead the way in AI-driven innovation, encouraging collaboration, experimentation, and sharing of knowledge across sectors.

The Institute of Creative Technologies – De Montfort University

The Institute of Creative Technologies (IOCT) at De Montfort University is a pioneering interdisciplinary hub where the arts, humanities, science and technology converge. Founded in 2006, the IOCT brings together researchers, technologists, designers and creative practitioners to explore how digital culture, interactive media, and emerging technologies can reshape creative practices and cultural expression. At the forefront of this work is Professor Tracy Harwood, Professor of Digital Culture in the university's School of Media, and a core member of the IOCT. Tracy brings deep expertise in creative technologies, AI, VR/AR, digital culture and usability research, and has led numerous projects under the IOCT banner.

What's especially relevant now is Tracy's role as chair of the advisory board for the Creative Registration Framework, the IST's professional registration programme, developed in partnership with Creative UK, which aims to recognise and accredit the highly specialised technical workforce that supports creative-tech projects across the UK. With this, her work bridges academic research, creative-technology practice and professional standards, helping ensure that creative technologists receive recognition for their skills, and that the creative industries have a robust framework to support talent and technical expertise.

Regional & Institutional Innovation / R&D Infrastructure & Local Growth

On 6 October 2025, the Department for Science, Innovation and Technology (DSIT), working closely with local authorities and regional institutions, launched a major new funding competition designed to boost innovation across the UK. The scheme allows local areas to bid for up to £20 million each, with the aim of accelerating regional research, development, and science-and-technology growth. This investment forms part of the government's wider commitment to strengthening the UK's innovation capacity beyond traditional centres, helping local regions build the infrastructure, partnerships, and capabilities they need to support long-term economic development and high-value jobs.

For many of our members, this is welcome news, especially those based outside London and major metropolitan hubs. The emphasis on regionally distributed innovation opens fresh opportunities for science parks, innovation districts, research organisations, and universities operating in towns and cities across the UK. By ensuring that funding reaches a broader range of local ecosystems, DSIT's initiative supports more inclusive growth and helps regional institutions play a central role in shaping the next generation of science, technology, and creative-tech breakthroughs.

Academic / Research Institutions & New Programmes or Grants

Northumbria University: Centre for Responsible AI

Northumbria University has taken a significant step in advancing ethical and socially grounded AI research with the launch of its new Centre for Responsible AI in May 2025. The centre is dedicated to exploring how artificial intelligence can be designed and deployed in ways that put citizens at the heart of decision-making. Its work spans a wide range of themes, including AI governance, public-sector applications, environmental responsibility and the growing interplay between AI and the creative industries. By bringing together experts from technology, social sciences, law, and the arts, Northumbria is positioning the centre as a major UK hub for responsible innovation, one that not only studies the impacts of AI but helps shape national policy and best practice. This investment signals a strong commitment to ensuring that AI supports society in fair, transparent and sustainable ways.

Bath Spa University: Sustainable AI Futures

In March 2025, Bath Spa University secured a £1 million grant to launch an ambitious initiative titled Sustainable AI Futures, a project focused on better understanding and reducing AI's environmental footprint. The programme addresses urgent questions around the energy demands of data centres, the environmental cost of large-scale computational models, and how governance frameworks can encourage greener innovation. Alongside its technical aims, the project also explores how sustainability principles can be embedded into the design, use, and long-term planning of AI systems across sectors, from creative industries to public services. This major investment places Bath Spa at the forefront of research into climate-conscious technology and highlights the growing recognition that AI's future must be both innovative and environmentally responsible.

UBMA and TMU Conferences 2026

The 2026 UBMA Conference, taking place from 8–10th April at the University of Central Lancashire, is set to bring together professionals from across the sector for three days of insight, discussion, and collaboration. The conference offers a valuable platform for colleagues to share innovations, explore emerging trends, and highlight best practices shaping the future of university business, management, and administration. With a mix of presentations, workshops, and networking opportunities, attendees will be able to connect with peers, exchange practical knowledge, and return to their institutions with fresh ideas to support strategic and operational improvement.

Just weeks earlier, Durham University will host the 2026 TMU Conference on 26–27th March, welcoming delegates to engage with key themes affecting technical, managerial, and professional services roles across the higher-education landscape. The event will provide space for sector experts and practitioners to discuss challenges, celebrate achievements, and explore new approaches to supporting academic and research excellence. Bringing together diverse voices from institutions across the UK, the TMU Conference aims to spark meaningful dialogue and strengthen the professional communities that underpin university success.

November 2025 UK Budget
A Highlight for Technicians

The government has reaffirmed its long-term commitment to research and innovation, setting out plans to increase annual public R&D investment to £22.6 billion by 2029–2030. This sends a strong signal about the continued importance of research jobs, university-based R&D and collaboration with industry.

Alongside this broad uplift, the Budget confirms that UK Research and Innovation will channel targeted investment into priority growth sectors, with £9 billion over the next four years directed towards applied research, innovation projects and industry-facing work aligned with government priorities.

A number of new innovation programmes were also introduced, opening up direct opportunities for organisations involved in R&D and creative-tech. These include the £130 million Innovate UK Growth Catalyst, aimed at supporting frontier companies through grants and tailored guidance, and the £500 million UKRI R&D Missions Accelerator, which will launch challenge-based programmes spanning areas from cultural assets to infrastructure efficiency. For creative industries, tech and media companies, the Budget also includes important administrative updates clarifying how RDEC, AVEC and VGEC tax credits are treated, changes that will matter for organisations

navigating investment and production finance.

The Budget further confirms ongoing support for R&D across the UK's regions and devolved nations, including investment zones, city and growth deals, and new or expanded R&D centres; all highly relevant for members working in regional development, universities and science parks. Over the coming weeks, UKRI, Innovate UK and DSIT will release more detailed calls, prospectuses and eligibility criteria for the programmes announced.

Overall, the Budget not only protects but plans to grow public investment in R&D while sharpening its focus on industry-aligned research, meaning members across creative, technical and scientific fields should keep a close eye on upcoming funding opportunities.

IST Partners and Collaborations / Supporters

We value our partnerships with various organisations

We would like to extend our sincere thanks to all our partners for their continued support, collaboration, and commitment. Your contributions play a vital role in helping us deliver impactful projects, develop new opportunities, and support the wider professional technical community.

Whether through joint initiatives, shared expertise, or collaborations, your partnership strengthens our mission and enables us to reach new heights. We deeply value the relationships we've built and look forward to working together on future endeavours.

To partner or collaborate with us, please contact: office@istonline.org.uk.

Thank you once again for being part of our journey.

Howgill Beck: River Restored for Wildlife and Climate Resilience

The restored Howgill Beck in Cumbria has been re-meandered and revived, bringing back natural habitats, boosting biodiversity and strengthening flood-plain resilience in the Pennines.

A 1.8 km stretch of Howgill Beck at RSPB Geltsdale in the North Pennines has been returned to a more natural course and the results are already visible across landscape and wildlife. Once straightened centuries ago, the river lost its natural features. Restoration works re-introduced meanders, connected the beck to its floodplain and created wetlands, gravel beds and varied flow habitats.

Wildlife has responded: breeding pairs of previously absent birds, including redshank and oystercatcher, have returned. Wading birds, dragonflies and new aquatic plants are thriving, demonstrating that thoughtful re-naturalisation can revive ecosystems. Beyond biodiversity, the project improves the landscape's resilience. Renewed flood-plain function helps slow water flow during heavy rain, reducing downstream flood risk, an increasingly important buffer in a changing climate.

This success offers hope and a blueprint: by working with nature, not against it, the UK can restore rivers, protect wildlife and strengthen defences against climate impacts.

Credit: www.rspb.org.uk Howgill Beck

Embrace the Earth, Cherish the Green

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JP Ashton-Kinlin
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We are still accepting expressions of interest to be part of the Editorial Board or to be involved with any of the other IST activities that take place over the year.

Thank You for your contributions

Amro Heikal
Alice Beasley
Dinesh Chacko
Dr Ian Tidmarsh
Michael Quigley
Professor Tim Sandle
Allison Hunter
Laurence Dawkins-Hall
Denise Ralph

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Innovation Programme for Apprentices

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Introducing Mark Loon - the Newest Member of the Editorial Board

Mark is currently the Dean of the School of Business and Creative Industries and a Professor at the University of the Sunshine Coast in Australia. He has published in the top journals in the fields of Innovation, Entrepreneurship, and Management Studies and Education. He is also a Visiting Professor at Northumbria University and is a Chartered Scientist. In their free time, Mark and his wife enjoy working on their hobby farm in Noosa's hinterland, and the occasional boat rides just south of the Great Barrier Reef.

Wanting to contribute to the magazine?

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