UKTIN

Setting the UK up for success

EVENTS

WHAT'S HAPPENING?

Hear and engage with the UKTIN team at these events over the coming months

UPCOMING UKTIN EVENTS

02 OCT	TELECOMS COMMERCIALISATION AND NETWORK ECONOMICS CONFERENCE	LONDON
09 OCT	STRATEGIC IP INVESTMENT FOR TELECOM START-UPS: FROM SEED TO SUCCESS	ONLINE
24 OCT	INVESTOR VIP LUNCH	LONDON
06 NOV	UKTIN & DSIT COLLABORATION AND ADOPTION CONFERENCE	LONDON
04 DEC	UKTIN INTERNATIONAL ENGAGEMENT CONFERENCE	LONDON
DECEMBER	INVESTOR BRIEFING	MANCHESTER

OTHER EVENTS

09-13 SEP	CAMBRIDGE TECH WEEK	CAMBRIDGE
11-12 SEP	CONNECTED BRITAIN	LONDON

Review all the details of upcoming telecoms events here →

CONNECT ONLINE:

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UKTIN IS A CATALYST FOR CHANGE

Ian Smith, Head of UKTIN

Innovation is the lifeblood of any sector: it's what keeps us moving forward.

But to deliver on the demands of citizens and industry today, and ensure a rich and robust pipeline of future R&D and innovation, organisations in the telecoms sector need to be able to navigate complex structures, join the dots across academia and industry, develop and retain talent, and find the people, organisations and funds that can turn bright ideas into commercial reality.

UKTIN exists to do all this and more: and the impact we're having today is clear to see.

But don't just take my word for it: the thoughts of our users really speak for themselves. Consider our Clusters Forum, which exists to showcase and raise awareness of regional telecom innovation programmes, assets, facilities and services. Members like Ste Ashton from Worcestershire County Council tell us it offers "a great place for local authorities to share their progress, thinking and challenges, and hear from others. The calls have led to a number of interesting follow ups on new opportunities and ways to approach new challenges".

Our Expert, Strategic and Adoption Working Groups facilitate new connections, creation and sharing of valuable resources, collaboration and cross-fertilisation of knowledge and ideas on a coordinated and purposeful scale that has not previously been achieved in the UK. Barry Evans, Chair of the Non-Terrestrial Networking group told us how advantageous it has been "to expand horizons both within the EWG and outside in the consultations that we have made. This has improved our knowledge of what is going on in the UK as well as abroad. In turn, this has helped us spot gaps and see where the UK can seize future opportunities".

> "OUR ECOSYSTEM ENGAGEMENT IS FACILITATING NEW CONNECTIONS, CREATION AND SHARING OF VALUABLE RESOURCES, COLLABORATION AND CROSS-FERTILISATION OF KNOWLEDGE AND IDEAS"

Our AI-powered discovery toolkit has only recently launched but is already revolutionising the speed and ease at which people can understand telecoms capabilities across the UK. George Tsirtsis from Qualcomm International Inc, an early user of the tool, noted that "the concept of a searchable dataset combined with an AI Assistant to help make sense of the results is very powerful."

And there are even more stories of our impact on page eight.

> "UKTIN'S VALUE WILL CONTINUE TO BE UNLOCKED IN THE FUTURE AND OVER THE LONG-TERM, WITH RELATIONSHIPS FORGED IN THE NETWORK"

UKTIN's value will continue to be unlocked in the future and over the long-term, with relationships forged in the network today - whether that's a start-up advised and supported, or a technical challenge addressed and resolved - helping to set the UK up for future-proofed success.

Not already signed up to UKTIN? Scan here →

INDUSTRY NEWS

from across the sector

HAVE WE HIT PEAK BROADBAND? ALTNETS TAKE NOTE

As supply pulls up on demand, the need to differentiate ratchets up

According to the latest Ofcom figures, 80% of UK households are now able to receive gigabit-capable broadband. This represents a 7% jump from the same period last year, and reflects an upward trajectory that's been bolstered in recent years by both accelerated Openreach provision and a burgeoning number of altnets seeking to compete.

But this datapoint favoured by the regulator — which focuses on the ability of households to enjoy high-speed connections, rather than actual uptake — risks obscuring a reality that poses a greater challenge for the altnets: a crowded market where differentiation is becoming scarce.

The expectation is for course correction. This will likely involve a period of consolidation, and more concerted efforts from the altnets to demonstrate differentiation, drive penetration, and perhaps make moves into the wholesale channel as a means of firming up their footing.

As the market continues to show signs of saturation, we can also expect reporting norms to shift. Figures for high-speed availability are likely to be supplanted in favour of stats that illustrate uptake levels and, at a more granular level, who is facilitating that uptake.

Read more: →

NON-TERRESTRIAL NETWORKING OPENS UP NEW FRONTIERS — AND BUSINESS MODELS

But the technology also throws up a host of R&D challenges

Bumper investments ($200 billion in the next three years, according to Juniper Research), big deals from big players (GSMA Intelligence has identified 91 telecommunications operators with signed partnerships with satellite companies), and reams of newsprint all appear to confirm the status of non-terrestrial networking as a third space dimension in the existing telecoms landscape.

There is a rapid convergence occurring between previously independent terrestrial networks and space networks. Dubbed 'satellite meets telephone', the ability to connect smartphones from space networks promises to open up new business models within the sector, while improving coverage, resilience, and capacity.

Deals like AALTO's — which has seen a consortium including two Japanese banks, mobile operator NTT DOCOMO, and NTN specialist Space Compass Corporation getting behind a planned commercial launch for a large solar-powered, 5G-delivering stratospheric glider — suggest enthusiasm for innovation in this area.

But new frontiers inevitably throw up unexpected hurdles. UKTIN's NTN Expert Working Group has identified a number of R&D challenges which will need to be faced before space-based telecoms becomes an everyday fixture. Industry confidence will help fuel the momentum required to meet these obstacles head-on.

Scan for more of the latest NTN news: →

AI IS DRIVING A SEMICONDUCTORS ARMS RACE

The UK has plenty of expertise to offer

Amidst a global push to develop AI-capable chips, industry giants like Nvidia and ARM have intensified their product cycles, with both unveiling new offerings over the summer. Samsung Research has linked up with ARM to dig deeper into parallel packet processing technology, with at least half an eye on the 6G era. Meanwhile, Nvidia's ascent to the position of the world's most valuable organisation underscores the sector's pivotal role in today's economy.

With the spotlight shining on one of the less visible — but absolutely vital — elements of the telco ecosystem, the UK's homegrown talent in the space has enjoyed some of the glow. The UK boasts a notable concentration of semiconductor expertise, with world-class offerings in photonics and processor design, as well as system integration.

In May, the previous government announced the establishment of a new independent institute tasked with building on its £1 billion strategy to grow the semiconductor sector. The UK Semiconductor Institute was envisioned to draw together government, universities, and the private sector to provide research tools and infrastructure, bring new innovations to market, and provide an entry point to the UK for international businesses and partners.

Scan to read the latest semiconductors news:

NEWS BYTES

WHAT'S UP, WHAT'S DOWN, AND WHAT'S AROUND THE CORNER IN THE TELECOMS SECTOR THIS QUARTER

Unexpected delights:

Three posted better than expected YoY results, with a 9% jump from £610 million in 2023 to £664 million this year (but played the results down as it pursues its now-government-approved Vodafone merger); CityFibre turned a profit ahead of schedule, thanks in part to acquisitions that have boosted premises count to 3.6 million; and smartphone shipments are back on the up too, with Counterpoint and Omdia estimating shipment growth at 6% and 12% respectively (while IDC's earlier guess was smack bang between the two).

Gloomy forecasts:

Long-time rivals Nokia and Ericsson both reported significant sales dips (19% and 14% respectively), despite rosier signs of gross margins; plunging handset revenues and a decline in B2B fixed services revenue dampened Virgin Media O2's Q2 results (a revenue slide of 1.4% YoY to £2.7 billion) despite better performance in rolling out fibre via its Nexfibre arm; and analysts at Dell'Oro pulled no punches in calling the RAN market "a disaster" amid estimates for a third consecutive quarter of double-digit contractions, and a decline of as much as 30% in the space.

Buy/Sell:

CityFibre, has been splashing the cash (a deal to purchase Lit Fibre recently closed; more are expected in the coming years) in pursuit of its ambitious 8 million premises target. Meanwhile, Vodafone shipped on its Spanish business in a sale to Zegona Communications, and its Italian operations followed, to Swisscom, just a matter of months later.

UPDATE

UKTIN NEWS

TRENDS EMERGE FOLLOWING PUBLICATION OF FUTURE CAPABILITY PAPERS

Skills, partnerships, and standards are all coming under the microscope

Publication of UKTIN's Future Capability Papers has continued apace over the summer.

Authored by UKTIN's nine Expert Working Groups, the papers cover specific technical areas — with, network management, core networking, optics, and semiconductors published most recently — and shared themes and recommendations have consistently been highlighted across this growing body of work.

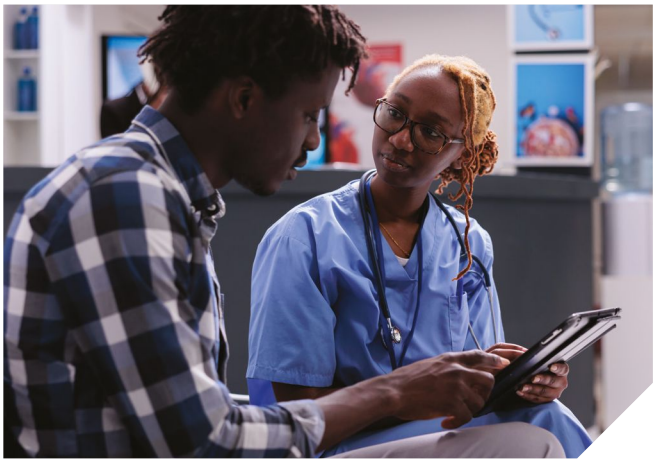
> "UKTIN'S FUTURE CAPABILITY AND ACADEMIC STRATEGIC WORKING GROUPS WILL SOON BE PUBLISHING THEIR FIRST REPORTS"

Skills gaps and challenges with funding and investment, as well as regulation and licensing, will already be familiar to telecoms veterans, but the benefits of interdisciplinary collaboration, strategic partnerships, international cooperation, and tactical engagement with standards and intellectual property all crop up as regular motifs.

In addition, UKTIN's Future Capability and Academic Strategic Working Groups will soon be publishing their first reports, including strategic recommendations covering all subsets of the UK's expansive telecoms ecosystem. The reports are the product of months of research and analysis, and pull together insights gathered from all the Future Capability Papers.

The Future Capability group addresses concerns on the five year horizon, while the Academic group has taken a longer term gaze, casting out over the next two decades. Together their work underscores UKTIN's role as a catalyst for sector-wide collaboration and foresight.

Access the Future Capability Papers here: →



A GROWING LIBRARY OF CASE STUDIES TO HARNESS ALL THAT TELECOMS CAN OFFER

Presenting solutions across agriculture, healthcare, manufacturing, and transport

A set of case studies published over the summer represent the first entries in a new library of practical guides to aid the deployment of advanced connectivity solutions.

Developed by UKTIN's Adoption Working Groups, the case studies published to date cover agriculture, health and social care, manufacturing, and transport and logistics and feature everything from autonomous factories, to farm vehicles powered by methane gas, on-train networks that actually work, and ingested 'capsule cameras' for remote endoscopies.

Each case study includes an explanation of the problem to be solved, a description of the solution, a summary of the commercial model, the expected benefits, and lessons to learn from previous real-world deployments.

> "THIS LIBRARY WILL CONTINUE TO GROW - A FURTHER 10 ARE ALREADY IN DEVELOPMENT"

This library will continue to grow - a further 10 are already in development - with many more planned from a variety of sources. The result will be an accessible and practical resource that helps new players consider solutions that they might not have known about, and quantify the benefits of adopting these technologies.

Access the Adoption Toolkits by scanning here: →

A CHORUS OF INNOVATION AT UKTIN'S INAUGURAL INNOVATION ECOSYSTEM CONFERENCE

Engaging far and wide across the sector

A year into UKTIN, more than 250 individuals from across industry, academia, and government gathered at the Institute of Engineering and Technology on the banks of the Thames for a day of talk, trials, and traction in May.

Plenary sessions from Gabriela Styf Sjöman, BT's MD of research and networks strategy, and David Richardson, partner researcher at Microsoft, set the tone for a series of interactive breakout sessions exploring key themes of commercialisation, adoption of new technologies, talent development, and future capabilities.

Incoming head of UKTIN, Ian Smith, emphasised not only the enthusiasm and insights emanating from the 173 participants in UKTIN's Expert and Strategic Working Groups but the outputs already recorded from across UKTIN's service offerings: the 200-plus-strong SME network within the Innovation Platform; 940 Specialist Adviser interactions; 13 successful UKTIN-linked consortia in the ONE competition.

Smith also used his time at the podium to unveil an updated version of the University of Bristol's AI-driven R&D Discovery Toolkit. Debuted at MWC in the spring, it had since undergone major improvements, in particular to its UX. This was, for many, their first encounter with the tool, and the reception was just as positive as it had been in Barcelona.

> "TOPICS WERE FAR REACHING BUT CONSISTENT THEMES EMERGED, FROM TACKLING THE SKILLS GAP TO SUPPORTING SMALL BUSINESSES TO COMMERCIALISE. "

The afternoon provided an opportunity for attendees to join the discussion, debate and share their perspectives. With conversations ranging from rural connectivity to building an R&D roadmap for the next decade, topics were far reaching but consistent themes emerged, from tackling the skills gap to supporting small businesses to commercialise. Attendees remarked on the "consensus across topics" and the "strong levels of passion and commitment" to ensuring the ongoing success of the UK ecosystem.

To access the Discovery Toolkit, scan here and log in: →

SUCCESS STORIES

THE BEST THING ABOUT UKTIN'S SUCCESS STORIES? EVERYBODY BENEFITS

Ian Smith, Head of UKTIN

UKTIN is in the business of networks in more ways than one. We're tasked with connecting a disparate ecosystem of incubators, innovators, projects, universities, funders and industry to create an environment and stimulate an ecosystem in which innovation can not only happen but proliferate. Where new products and services are bolstered by future skills programmes. We're open to organisations of all shapes, sizes, backgrounds, and expertise.

Above all, our members all benefit from the network effect of each of their individual successes — be that a start-up linking a new partnership, academics converting lab breakthroughs to testbeds, or future bright sparks having a career epiphany in college.

THE FUTURE IS SAFE IN THE HANDS OF JOSEPH CHAMBERLAIN SIXTH FORM STUDENTS

Apps to help non-native speakers manage their healthcare appointments, in-store devices to reduce clothing waste, remote education platforms for children living in underserviced regions and countries, and at-home health monitoring: these were just some of the ideas cooked up by students at a UKTIN telecoms careers workshop hosted at Joseph Chamberlain Sixth Form College in Birmingham's inner city.

Most of the pupils studying at Joseph Chamberlain come from local areas of significant deprivation, and an extremely high proportion of learners are from ethnic minority backgrounds where English is not the first language spoken at home.

The careers workshop for maths and science students was just one output from a series of engagements with the college. In 2023, the UKTIN Talent team delivered a bespoke interactive workshop for 100 students as part of the college's industry events programme. This was followed by the annual careers fair, attended by more than 1,200 students — a long, snaking queue of whom were drawn to UKTIN's AI-powered interactive careers guide.

Joseph Chamberlain has worked to build strong links with employers in order to provide up to-date curriculum content through guest lectures, visits, and workshops — UKTIN's broad and engaged expert network has been well placed to feed into this impressive programme. In a number of cases, this feedback loop has come full circle, with employer insight helping to shape curriculum content to help prepare students at the college for their moves into the workplace, and teachers reporting increased confidence in presenting the telecoms sector to their students.

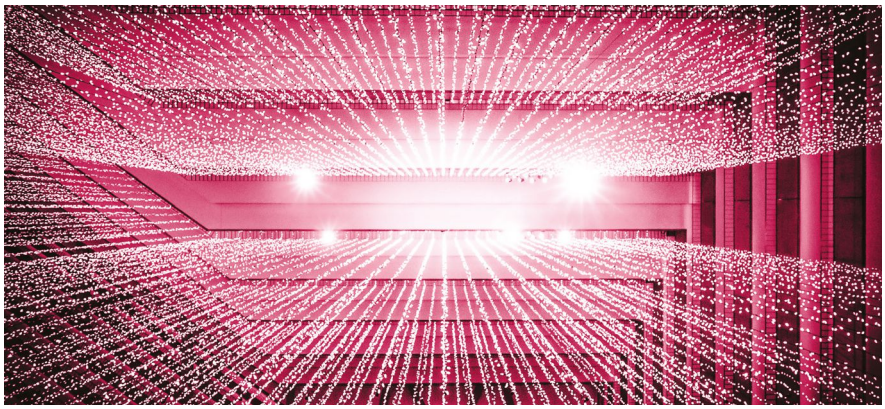
Prior to engaging with UKTIN's Talent team, most of these students had no real sense of how the telecoms industry shapes their everyday lives. Even less so what it might mean for their future. They left our careers sessions feeling like they had a stake to play in that future.

FROM SMALL SEEDS, FINCHETTO IS GROWING MIGHTY TREES

Finchetto was among our first cohort of start-ups to join the Innovation and Investment Workout programme back in June 2023, with a view to finding a fit for its light-speed photonic processors and network switches in the telecoms space.

What CEO Mark Rushworth and his team found was that their business model and proposed use cases needed honing — and that their most effective route to achieving this would be to seek out direct connections in the market.

Burnished by this advice, Finchetto presented the first fully optical switch designed for telecoms applications to BT. Following that meeting, the Surrey-based start-up put together a successful £1m bid for the SBRI Future



Telecommunications Challenge (delivered by UKRI) — one of just 16 businesses to secure a slice of the £70m funding pot.

Now almost halfway through the yearlong UKRI-funded initiative, Finchetto is leading the delivery of the world's first all-optical network switch for ultra-low power and ultra-low latency future telecommunications networks. Moreover, BT is a key collaborator on the project.

With all this going on, the team has also found time to raise pre-seed investment, prepare for a first seed round, grow to seven full-time employees, and begin scouting for a further three positions.

CONNECTING THE DOTS FOR ARCHANGEL LIGHTWORKS

Over the last 18 months, Oxford-based Archangel Lightworks has tripled in size, successfully closed its first seed round, and, most recently, won out in its bid to create the next generation of its pioneering TERRA-M optical ground station as part of a flagship UK government initiative, the SBRI: Future Telecommunications Challenge. UKTIN has been there to support the company on its remarkable journey.

Beginning in July 2023, the Archangel Lightworks team sought the assistance of our Supplier Specialist Guidance Service, and has remained in regular, fruitful contact ever since. Through attending an investor breakfast, Clusters call, and hosting a stand at Connected Britain in September last year, Archangel Lightworks has been able to broaden its connections within the UK telecoms ecosystem and sharpen its understanding of the market for its ground-breaking non-terrestrial network technologies.

> "ARCHANGEL LIGHTWORKS HAS BEEN ABLE TO BROADEN ITS CONNECTIONS WITHIN THE UK TELECOMS ECOSYSTEM"

Working with UKTIN in this way has generated market insights that have fed directly into the company's core strategy, and opened up high potential opportunities and partnerships — which in turn have been sealed at events and with in-person introductions.

As Archangel Lightworks' CEO Richard Johanson has said, "[we] continue to benefit from engagement with UKTIN because the support offered is tailored for individual company needs and delivered by experts in the connectivity field who have a breadth of experience and wide networks which they can draw on."

These forward steps, as well as tangible, ink-on-paper developments like funding rounds, headcount growth, and winning bids, are exactly the kind of network connections that UKTIN exists to facilitate.

Want to see how UKTIN can help you? Scan to see our services. →

How DSIT's Future Network Programmes are driving innovation and growth

The Department for Science, Innovation, and Technology (DSIT) is spearheading a wave of digital infrastructure projects across the UK through its Future Network Programmes. Over the past seven years, these initiatives have forged strong partnerships with industry, academia, and public sector bodies to enhance digital connectivity, drive innovation, and boost economic growth. Key areas of investment include advanced wireless connectivity for local authorities, research and development to fortify mobile network resilience, innovative solutions for hard-to-reach regions, spectrum research, and streamlined collaborations between local authorities and network operators. With 45 live projects delivering significant benefits, we're spotlighting just some of the innovative regions with funding across the UK.

GLASGOW CITY REGION: SMART SOCIAL HOMES

Glasgow City Region has been awarded DSIT funding to transform social housing and health services through digital technologies. The ambitious project aims to provide free connectivity to 10,000 social homes, exploring the cost-effectiveness of this investment by leveraging the broader benefits to the community. Key innovations include deploying Alexa-style voice recognition technology to assist vulnerable individuals - replacing obsolete Telecare devices - and connected sensors to monitor temperature, humidity, and CO2 levels in homes. These technologies enhance tenant wellbeing by improving energy efficiency and reducing fuel poverty. They can also support online healthcare initiatives that can expedite hospital discharges and shift the balance of care towards home environments.

The project is backed by the expertise of the universities of Strathclyde and Glasgow, with commercial potential evident in spinouts like Neutral Wireless, which provided connectivity for the King's coronation and the Paris Olympics. The involvement of mobile network operator Three, and UK SMEs Freshwave and AWTG, alongside a £3.4 million investment from Cisco, underscores the project's potential to attract further investment and skills to the region.

SUNDERLAND CITY COUNCIL: SMART CITY INITIATIVES

Sunderland City Council, in collaboration with six other councils in the North East Mayoral Combined Authority, is on a mission to establish the North East as a National Innovation Region of Excellence, with Sunderland set to become one of the UK's leading smart cities through enhanced digital connectivity. Recent projects include the creation of one of the UK's largest immersive screens in a new creative arts exhibition area, capable of live-streaming global broadcasts using the city's 5G network.

While enhanced connectivity around the Stadium of Light ensures high-quality coverage for spectators and supports live streaming of football and esports events.

Past DSIT projects in the region, like the testing of 5G-enabled autonomous HGVs at the Nissan plant, have paved the way for Sunderland's smart city status. The city's 20-year contract with Boldyn Networks to invest in wireless infrastructure demonstrates a long-term commitment to innovation and connectivity.

WEST SUSSEX COUNTY COUNCIL: CONNECTIVITY FOR GROWTH

West Sussex is leveraging DSIT funding to boost growth and innovation in its key economic sectors: agriculture and tourism. The region's strength in food and drink production is being enhanced through advanced connectivity, with new farming practices supported by real-time data from networks and sensors. Soil and yield sampling, crop monitoring, geolocating animals, and weather prediction will boost sustainability and productivity while enhancing workforce skills through specialist training and qualifications.

A shared mobile network deployed at the seafront promenade in Worthing addresses the challenges of peak visitor periods by ramping up coverage when needed and conserving energy during off-peak times. This project has attracted partners like Dense Air, now part of Sidewalk Infrastructure Partners, and multiple mobile network operators, enhancing both connectivity and environmental sustainability.

YORKSHIRE TELECOM INNOVATION CLUSTER: BUILDING A TECH HUB

Yorkshire is rapidly emerging as a telecoms powerhouse. The region's telecom innovation cluster features projects like DU-Volution and YO-RAN, which are developing UK-made radio network components and building local skills. While the REACH project demonstrates UK-developed technology in real-world applications, ensuring robust coverage during peak tourist seasons in Blackpool, Lincolnshire, and North Yorkshire.

These initiatives have spurred the creation of innovative UK-made products, drawing domestic and international clients, resulting in new jobs and significant investments. Collaborations with UK SMEs like Accelercomm and Slipstream, and foreign investors such as US-based Adtran, are positioning Yorkshire as a leader in telecoms product development.

The recent launch of the National 6G Radio Systems Facility at the University of Sheffield will further enhance research, support SMEs, and create high-quality jobs while advancing supply chain diversification.

DSIT's Future Network Programmes are driving substantial advancements in digital connectivity across the UK, from urban centres to rural communities. These projects are enhancing public services and economic growth as well as positioning the UK as a global leader in telecoms innovation. To learn more about these transformative initiatives and their impact, visit the DSIT hub on UKTIN ⟶

UKTIN

Over 6,500 people are already part of the UK Telecoms Innovation Network

Join our inclusive and collaborative forum for the UK telecoms innovation ecosystem, bringing together industry, government, and academia to catalyse R&D investment, cooperation, and commercialisation

Sign up today at uktin.net