



A Perfect Storm

By Melissa Cogavin, Managing Editor, SCTE

Lockdown hastened the need for superfast broadband but an ongoing skills shortage leaves telcos exposed and struggling to cope.

There's nothing like a global pandemic to bring national efforts at supplying broadband into rather sharp perspective. In a year like no other, working and studying at home full time for the best part of a year now, all of us have been exasperated by intermittent Wi-Fi at home, glazing over at a buffering television and flipping our smartphones from 4G to Wi-Fi and back again to get everything working. From a consumer perspective it is easy to question why it doesn't work better.

The answer of course is the full fibre roll out taking place across the UK. Elizabeth Donnelly, CEO of the Women's Engineering Society explained the current scenario well: "We are keen to see the full and speedy roll out for full fibre broadband. This will benefit millions of households, many of whom are struggling with connectivity issues during the pandemic. This will particularly benefit women who are bearing the brunt of home-schooling while also working from home, and those who are isolated in rural areas."

The tireless efforts of those actually supplying the broadband have been ignored in the wider, mainstream press over the past year but our industry understands all too well the pressure points and obstacles facing engineers knocking on doors in PPE to supply fibre broadband, especially in inaccessible areas of the country.

In spite of the roll out, serious recruitment and training challenges need addressing urgently to meet objectives set out by the government. The original aim, according to the Future Telecoms Infrastructure Review was to see "15 million premises

connected to full fibre by 2025, with coverage across all parts of the country by 2033 and that the majority of the population will have 5G coverage by 2027".

The FTIR was superseded; firstly by the Government's manifesto pledge to provide full fibre to every premises by 2025 and most recently by the long-awaited National Infrastructure Strategy published before Christmas, which is "working with industry to target a minimum of 85% gigabit capable coverage by 2025 but will seek to accelerate roll-out further to get as close to 100% as possible."

The broadband industry finds itself coping with an unprecedented surge in demand, aggressive targets, large swathes of the country underserved and a shortage of skills to address it. Given that backdrop it is important to acknowledge the achievements thus far, given the adverse conditions the sector has found itself in.

Broadband Journal uncovers some of the reasons for this and looks at the challenges, obstacles and solutions ahead.

Looking back to look ahead

A recent report from INCA showed that there has been £1.76 billion worth of private funding related to the independent sector announced between the start of 2019 and September 2020. These figures are on top of an estimated £5.7 billion of private investment-related announcements already made in the sector, bringing the total to over £7.5 billion.

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“The bulk of the investment is in digging holes and filling them in again,” Malcolm Corbett, CEO of INCA explained. Crudely, he’s right of course; though something fairly important goes into those holes. Progress is certainly being made now and while there are disruptors all around us, the objectives are in sight, if not actually being met due to a shortage of engineers.

Unrealistic targets and shrinking budgets

Elizabeth Donnelly confirmed this. “We are concerned at delays caused by a lack of skilled engineers and construction workers, which could lead to the same issues that derailed the rollout of cable TV in the 1990s.”

Government schemes and private companies are both involved in addressing this shortage, but this will take significant time.

CityFibre’s Richard Thorpe, Chief Delivery Officer went into more detail. “It is critical that we have the skills and workforce required to help the UK realise its full fibre objectives. Already CityFibre has made tremendous progress with mobilisation or building taking place across 67 towns and cities nationwide. However, to maintain that rapid pace we have created an industry-leading, three-year recruitment and training programme that’s set to create up to 10,000 jobs across the UK.

Previously that skills shortage might have been addressed by recruiting from overseas, but Malcolm Corbett said that “The newly implemented immigration policies surrounding employing recruits from overseas is very unhelpful, so we are starting from scratch with people who are untrained.” More worryingly he added, “It will take 10 years to see it done now. We are looking at 2025, maybe 2030 to do the job.” By contrast and perhaps unsurprisingly, Conservative MP Matt Warman told the DCMS Select Committee in October 2020 that “he did not think that the roll-out of broadband is going to be inhibited by a lack of labour supply from the EU”.

It would appear that the Government set aggressive deadlines and then implemented aggressive limitations hindering progress, in the middle of a global pandemic and an unprecedented demand for broadband. The pressures brought about by COVID-19 also led to government funding budgets being slashed last year, from £5bn to £1.5bn. Mr Corbett isn’t

impressed. “This whole sector is one that relies on favourable policy environment and a stable regulatory environment which can support new investment.”

It is a credit to the sector that progress continues to be made so efficiently in spite of all these moving parts. Steve Holford, Chief Commercial Officer at Airband is feeling this pressure. “The ongoing roll out of full fibre broadband services across the UK would not be possible without the immense skill of engineers. If we are to continue to roll out at pace and meet government targets, it is of national importance that adequate resources are put towards training engineers, and therefore tackling the skills shortage”.

The Department for Culture, Media and Sport were unavailable for comment at the time of writing but in an exchange recorded as part of a wider report* on the UK roll out’s labour shortage last October, Matt Warman MP sees it rather differently. He told the DCMS Select Committee, “As we ramp up the rate of installation, labour supply is a very important part of the conversation. So, do we have what we need today for the rate that we are going at? Yes, we do. Do we need to keep an eye on making sure we are able to maintain that rate of acceleration so that we can get to where we need to get to? Yes, we absolutely do.”

The Select Committee responded tersely that: “The Minister’s assertion that the UK has enough engineers for its current need contradicts what we have been told by industry and is scant reassurance when build rates need to increase four-fold to reach 85% of the country by 2025. We encourage the Government to introduce time-limited visa solutions that enable engineers from the EU to address the industry’s labour needs until such time that these can be met by the domestic workforce. Political in-fighting is nothing new but it highlights in depressing clarity the lack of joined-up thinking at Government level which will not help our sector.”

The pandemic has seen unemployment rise by 3.65 % in the last 12 months with 370,000 redundancies between August and October last year alone. The furlough scheme is due to end in March and there are calls to extend it further to avoid another sharp rise in unemployment figures. While it might

seem obvious to invite those newly unemployed looking for a career in telecoms to retrain as an engineer, it is not that simple. There is practical training and there is theoretical training; one can be applied without the other but if we are looking at long term retention of staff and career development of the individual, knowledge and application of theory in this development is essential. Naturally this rounded knowledge ultimately benefits the company and the sector overall.

Career development is always a sound investment, but in the middle of a pandemic with serious obligations to fulfil, it is not a question of just funnelling new recruits into training centres till they're ready.

Anthony Basham, Regional Sales Director for Northern Europe at Technetix, and President of the SCTE explained. "The current need is to get people connected; understanding the reasons why the connection works is not important, as it's just connecting and moving on. The career development potential comes when the backlog of connections in your daily work is removed. That's when the workforce can be properly upskilled."

He went on, "But there is no time for learning on the job with a trainer; the trainers have to get connections done too. It is a fact that training costs time and the goals set out are difficult to reach with the technicians and engineers we have now; adding training to their workload defeats the objective of getting connections done."

This chicken-and-egg scenario looks grim doesn't it. Let's look at it another way. Training takes two forms: the practical and the theory. As a former engineer himself Anthony told *Broadband Journal*:

"There is a practical need and a theoretical need; these are not dependent on each other. You can connect a service without knowing what the transport protocol is doing, but knowing

what the transport protocol is and not understanding how to ensure a clean fibre connection will result in failure. The current requirement is about actually getting service to end users. This involves civils (digging and filling holes), fibre trenching, splicing, rigging, installation of infrastructure, CPE installation, customer service and provisioning. Included in these are also the wayleaves, network design and fault-finding. All of these build the service experience, with the goals being at present the funding. The drive to get to the goals is there but the hands and brains to do it are still being developed."

This can also be seen in the training budgets, as goals weren't met. It is clear that the funding is available now, the alt-net provision to install the broadband is there, but the people to implement the work are not."

Clearly there is a substantial opportunity for those looking to start a new career in the broadband sector, but they will need training to facilitate this. Practical training is essential, though arguably in order to ensure employee retention, theoretical training must be provided as part of the employee's career development. Investment in your staff is good for morale, generates loyalty and promotes career progression. Training in any form is to be encouraged.

Theory versus practical

The SCTE provides theoretical training that can take trainees with the practical experience and knowledge to the next level. Chris Swires of the SCTE says it's important to have that theoretical training "because you will come across awkward technical problems as an engineer; without that theory you'll struggle to come up with the answers." Ultimately of course this leads to inefficiencies, service level reductions, and reduces the opportunity for the engineer to progress in their career.

The SCTE works with their partners to create a bespoke course for engineers that ticks all the relevant boxes, ensuring their



Photo: County Broadband / INCA



Photo: Warren Page photography



Photo: County Broadband / INCA

time is well spent. The courses are all available online, and as a newcomer to this industry myself I can attest that they are easily digestible, in plain English. Anthony Basham, who also sits on the Training Committee at the SCTE, is clearly proud of the work the SCTE has done in this area.

“Over many years the SCTE has built the theoretical training, giving the necessary information about the theory behind the connections. Ensuring that there is a reason for doing things the right way. SCTE training is based around the idea that learning takes place when time is available, rather than the student being forced to take time out to sit in a classroom. Adding knowledge empowers the engineer to grow, giving that foundation knowledge that is often expected of the engineer but is not always present. Engineers in the field solve problems and get things working; knowing why it worked helps the organisation to build a knowledge base and disseminate to others. Fundamentally it’s about cutting costs and improving the customer experience through qualified personnel.”

Thinking locally

This isn’t a new problem. The pandemic has shone an ugly light on the issue in 2020 but skills shortages in this area go back

years. Penny Syddall, Digital Adoption & Skills Programme Lead at Dorset Council is responsible for communications to Dorset residents and premises owners, and has had first-hand experience of this since the programme began in 2013. “It was difficult at the start. It’s better now but the worry is that we are looking at delivering FTTP soon and we expect these problems to start all over again,” she told *Broadband Journal*. She went on to describe almost a decade’s worth of delays, disappointed residents, shifted goalposts and managed expectations.

It is difficult to make sense of this. As a skilled occupation in high demand, an engineer can expect a starting salary of around £27k, rising exponentially. It is a well-paid career, and yet the vacancies exist in their tens of thousands. It is an awareness issue, Penny feels. “Engineering isn’t promoted in schools. Our understanding is that school leavers and job seekers don’t know about this as a career path. It’s a similar technical skill to an electrician, mechanic or a plumber. Plus, as a telecoms engineer you get paid a lot more than most other graduates, without three years’ university debt.”

Necessity being the mother of invention, Penny has developed an impressive solution. Dorset Council are on the brink of hiring a project manager to oversee their own training programme. In partnership with CityFibre and other network providers, they will provide a route for school leavers and job seekers to train at a local Further Education college and at a specialist practical centre. Local recruits bring local knowledge which is invaluable in this field, and Penny hopes some will remain local. It would be good to see her investment in local talent pay off.

Training locally is an initiative fully supported by the government and the hope is that other councils follow Penny’s example as a case study and adopt this methodology around the UK. This is just one of CityFibre’s initiatives. Richard Thorpe also told us “In partnership with PQMS we are helping to skill-up a generation of network builders who are going to help us reach up to 8 million premises by 2025. Since launching the programme in the summer, we have worked with our build partners to help

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bolster their own workforce, but there is still a long way to go. We would call on anyone who is looking for a new career challenge to speak to us about how they too can help play a leading role in rolling out full fibre across the country.”

Where do we go from here?

Ideally, the goal should be career development rather than just plugging a skills gap. Back at the SCTE, Anthony was firm on this. “We need to look long term and consider retention of employees rather than just recruiting bodies to help with the immediate shortage of FTTX build. The current strategy builds on having the hands and brains available but as an investment in people, and consequently an investment in the company they work for, a balance must be struck between digging holes and learning about the reasons behind it.”

Equally, time spent must be proportionate to the Government targets set, ensuring that every household and premises is equipped with full fibre broadband sooner rather than later.

In any emerging technology, there is always a race to the finish line. The process in this instance has been scattergun and unplanned, and has emerged organically, characterised by visionaries and entrepreneurs, late-in-the-day Government funding and private investment over several years. The landscape is cluttered with large network operators and independent alt-nets fighting over market share, inspired by Government targets but equally hampered by shrinking Government budgets and complex immigration policies.

Raising awareness amongst jobseekers and informing a generation of young people that this career path exists urgently needs addressing. The ongoing recruitment process industry-wide is admirable and relentless, but the shortfall still unacceptable for the thousands of households still struggling with poor signal strength and endless buffering.



* DCMS Select Committee report Broadband and the Road to 5G Broadband and the road to 5G - Digital, Culture, Media and Sport Committee - House of Commons (parliament.uk)



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