

# Digital Skills and University Students: How Research and Development Programmes can help address the UK's Digital Skills Shortage

February 2022

5G RuralDorset



## 1. Executive Summary

The digital skills shortage has repeatedly been identified as a fundamental issue within the tech sector and beyond<sup>1,2</sup>. There is a significant need for action to be taken to address the situation, and it is not solely the role of education providers to offer skills development opportunities. Instead, a significant contribution can be made by the tech sector, especially Research and Development (R&D) projects like 5G RuralDorset.

As part of 5G RuralDorset's work on skills development a pilot event was designed and delivered at the University of Exeter by Telint Ltd, JET Engineering System Solutions (JET-ESS), Spirent Communications, and the University of Exeter. This event built on the findings of a 5G RuralDorset report on collaboration<sup>3</sup> and the work on digital skills happening across the DCMS funded 5G Testbed and Trials (5GTT) Programme and beyond. This report outlines the work undertaken by 5G RuralDorset as part of the pilot event to provide students with an introduction to the tech sector, future opportunities, and digital and employability skills. The pilot event also provided further understanding of how best to engage university students across different disciplinary backgrounds.

This report puts forward a series of recommendations to support future events and the further provision of skills development opportunities. The recommendations are informed by a combination of feedback provided by students who attended the event and the experiences of the event organisers.

1. Work with universities to create employability and skills events, which will effectively contribute to addressing the digital skills shortage.
2. Mandate in the Grant Funding Agreement for future Research and Development programmes that a percentage of the collaboration budget is dedicated to mandatory skills development activities such as employability and skills events.
3. Focus on engaging university students from STEM and non-STEM backgrounds to diversify the talent pool.
4. Design events to be flexible with content which is location and interest specific so that students can appreciate local opportunities and be inspired by the work happening in the tech sector.
5. Organise events to include diverse speakers who also represent a variety of organisations and different career trajectories to ensure students gain a broad insight into the work of the tech sector and see themselves represented.
6. Foster connections beyond the event through LinkedIn and funded placement opportunities.

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<sup>1</sup> HM Government, (2022) *Levelling Up: Levelling Up the United Kingdom*, Department for Levelling Up, Housing and Communities, [Policy Paper], available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1052706/Levelling\\_Up\\_W\\_P\\_HRES.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1052706/Levelling_Up_W_P_HRES.pdf) accessed: 24/02/2022

<sup>2</sup> Marshall, H. (2020) *Gearing up our people to drive the power of 5G*, Worcestershire 5G Testbed, available at: [https://uk5g.org/media/uploads/resource\\_files/Worcestershire-5G-Skills-Report.pdf](https://uk5g.org/media/uploads/resource_files/Worcestershire-5G-Skills-Report.pdf), accessed: 23/02/2022

<sup>3</sup> Curtis, D. (2021) *Collaboration: Accessing the Full Potential of Collaboration in R&D Programmes*, 5G RuralDorset.



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### 3. The Digital Skills Shortage

The digital skills shortage is a significant issue which is fundamentally impacting the UK's technological innovations and economic development<sup>4</sup>. The changing structures of telecommunication networks and the move towards softwarisation means that it is vital that the UK has in-house digital skills to develop and maintain current and future networks<sup>2</sup>. The digitalisation of the economy and society also demonstrates that the need for digital skills is not confined solely to those who will be working directly with technology infrastructures. Research from the DCMS funded 5GTT Programme has showcased that 5G (and associated technologies) has the potential to transform work happening in a range of sectors including health and social care, transport, agri/aquaculture, creative industries, and tourism. For the benefits of 5G and digitalisation to be fully realised, the digital skills shortage needs to be addressed. Indeed, in the UK's Levelling Up Strategy it identifies that '5G has the potential to radically change the way people live and make businesses more productive and competitive...[but] we must ensure that people have sufficient digital skills to reap the benefits and prosperity arising from the digital economy'<sup>1</sup>.

Demonstrating the possibilities technologies like 5G enable and the opportunities in the tech sector is vital to inspire interest. This requires engaging people across different education stages from primary school through to post-education, and ensuring that each approach is relevant for the audience. A key group to engage are university students who are working to identify potential career paths, and often need support in ascertaining the needed skills and what employment options exist<sup>5</sup>. It is important when engaging with university students that the focus is broad in order to include students studying STEM or non-STEM subjects to help diversify the talent pool as there are a variety of skillsets which are required to ensure the tech sector achieves its full potential.

The skills developed by students studying STEM subjects at university are important for the tech sector to continue to evolve and to ensure other parts of the economy and society are secure<sup>2</sup>. There is a documented cyber skills shortage which is impacting the security of Critical National Infrastructure<sup>6</sup>. Research undertaken by West Midlands 5G (WM5G) has also identified that 'there is a shortage of suitable qualified British engineers' and that this 'presents a significant barrier to the UK's ability to deliver against the opportunity presented by 5G' and beyond<sup>7</sup>. This shortage is not only driven by the numbers of students studying engineering at universities or apprenticeships, but the types of career paths they follow upon completion of their training. Research has identified that students who study STEM

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<sup>4</sup> Ecorys, UK. (2016) *Digital Skills for the UK Economy*, Department for Culture Media and Sport and Business Energy and Industrial Strategy, available at: <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/492889/DCMSDigitalSkillReportJan2016.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/492889/DCMSDigitalSkillReportJan2016.pdf)>, accessed: 20/02/2022

<sup>5</sup> Microsoft, in partnership with LinkedIn (2021) *Degree + Digital: How today's academic institutions can equip students to thrive in tomorrow's workplace*, available at: <<https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RWP7An>>, accessed: 16/02/2022

<sup>6</sup> Joint Committee on The National Security Strategy (2018) *Cyber Security Skills and the UK's Critical National Infrastructure: Government Response to the Committee's Second Report of Session 2017-19*, House of Lords and House of Commons, available at: <<https://publications.parliament.uk/pa/jt201719/jtselect/jtntatsec/1658/1658.pdf>>, accessed: 24/02/2022

<sup>7</sup> Marshall, H. (2020: p. 23 & 14) *Gearing up our people to drive the power of 5G*, Worcestershire 5G Testbed, available at: <[https://uk5g.org/media/uploads/resource\\_files/Worcestershire-5G-Skills-Report.pdf](https://uk5g.org/media/uploads/resource_files/Worcestershire-5G-Skills-Report.pdf)>, accessed: 23/02/2022



degrees do not necessarily choose to pursue careers in related fields<sup>8</sup>. It is therefore important that work is undertaken to engage with university students who are studying STEM degrees to demonstrate the different opportunities available to them, connect them with people currently working within the sector, and help them to pursue careers which either relate directly or tangentially to their degrees.

Non-STEM degrees, which include the humanities, social sciences, and business and economics disciplines, are also important. These degrees provide knowledge and skills which are vital for the development of digital technologies including understanding socio-economic factors, cultural contexts, risk, policies, user demand, legal and regulatory dimensions, and geopolitics. A report from Campaign for Social Science examined the importance of social science for Cisco's technological developments and programmes, including DCMS funded 5G RuralFirst<sup>9</sup>. For Cisco the social sciences are useful for thinking about the implications of technology, realising technological benefits, and working to imagine, create and develop products and services<sup>9</sup>. This situation is not only confined to Cisco or specific social science degrees, as the Infosys President Mohit Joshi argues, arts and humanities skills are also key for the tech sector, especially for understanding end-user needs and perceptions<sup>10</sup>. A number of degree programmes which are typically considered outside of the interest for the tech sector in fact specifically cover technology, such as Science and Technology Studies (STS), and a variety of programmes which include modules on cybersecurity, digital humanities, digital media, digital geographies, digital business, digital skills such as GIS and Python, and many more. These students have a detailed understanding of different dimensions of technology, and it is important that the tech sector engages with students within these disciplines alongside students in STEM. Key to the success of 5G and beyond is the demand-side engagement. This means that it is beneficial for people working in a broad range of sectors to understand the potential of digital technology so that they can help to shape and develop future use cases of 5G<sup>2</sup>.

Following research undertaken by 5G RuralDorset and other 5G projects across the 5GTT Programme, it was identified that work needs to be undertaken in partnership with universities. A report from Microsoft and LinkedIn argues that it should be a priority to ensure students have digital competency and understanding of employment skills, and that 'the path to a solution lies in collaboration'<sup>5</sup> between the tech sector and universities. Such collaboration is mutually beneficial. It is an opportunity for the tech sector to contribute to addressing the digital skills shortage and gain a better understanding of the needs of university students. At the same time universities benefit from this working relationship, and the students, who have faced widespread disruption during their degrees and face

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<sup>8</sup> Smith, E., and White, P. (2018) *The employment trajectories of Science Technology Engineering and Mathematics graduates*, The Nuffield Foundation, available at: < <https://www.nuffieldfoundation.org/wp-content/uploads/2019/11/TheemploymenttrajectoriesofSTEMgraduatesFINALREPORT20180801.pdf>>, accessed: 24/02/2022

<sup>9</sup> Lenihan, A., Witherspoon, S., and Alexander, R. (2020) *Vital Business: The Essential Role of the Social Sciences in the UK Private Sector*, Campaign for Social Science, Sage, available at: < <https://acss.org.uk/wp-content/uploads/Vital-Business.pdf>>, accessed: 18/02/2022

<sup>10</sup> Joshi, M. (2020) *Everyone's talking about STEM – but arts and humanities skills are also key to tech*, NS Business, [online article], available at: < <https://www.ns-businesshub.com/business/arts-humanities-careers-technology/>>, accessed: 15/02/2022



uncertain job markets, are supported. The report from Microsoft and LinkedIn also highlights that universities want to work with the tech sector, and in the report Chris Rothwell, Director of Education at Microsoft UK, explains that ‘industry can play a vital role in helping universities and colleges to prepare students for the jobs of tomorrow’<sup>11</sup>. This context underpinned 5G RuralDorset’s decision to run a pilot event at the University of Exeter, a university local to the testbed. 5G RuralDorset also had pre-existing connections to the University of Exeter as well as funding to undertake this work.

#### 4. 5G RuralDorset Skills Pilot Event: ‘5G And The Tech Sector Are More Than You Think’

An event was organised at the University of Exeter on the 2<sup>nd</sup> of February on the topic ‘5G And The Tech Sector Are More Than You Think’. There were five main aims of the event:

1. Provide students with an introduction to 5G, the tech sector, and digital skills
2. Provide students with a flavour of the opportunities available to them
3. Connect students with local organisations
4. Gain an understanding of what students want from such events
5. Generate learnings from the event to inform future skills development activities

The design of the event was a collaboration between 5G RuralDorset, the University of Exeter, Telint Ltd, Spirent Communications, and JET-ESS.

The event was structured into four sections:

- Section 1: Overview of key themes and opportunities within the tech sector and 5G
- Section 2: Networking and Q&A
- Section 3: Discussion about skills requirements and career development
- Section 4: Scenario-based challenges

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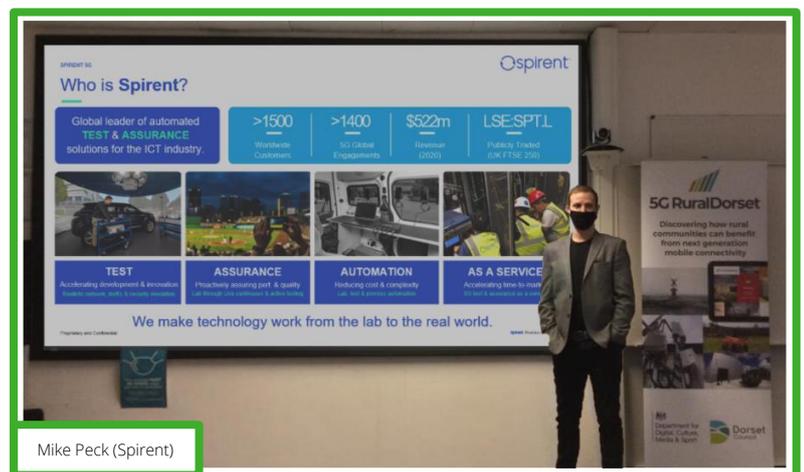
<sup>11</sup> Microsoft, (2021: p.13), *Degree + Digital: How today’s academic institutions can equip students to thrive in tomorrow’s workplace*, available at: < <https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RWP7An>>, accessed: 16/02/2022



The design of these four sections was informed by a combination of interests of 5G RuralDorset and the organisations involved, as well as established pedagogical approaches. Section 1 focused on introducing students to 5G through a non-technical lens. Content examined what 5G is, 5G use cases, and radio spectrum and the digital divide. This section also provided an overview of the work being undertaken by 5G RuralDorset, JET-ESS, and Spirent Communications to provide an insight into the diverse work happening on 5G in South West England (and beyond). Section 2 provided students with an opportunity to network with the speakers, generate useful connections, and ask questions. Section 3 explored the experiences of the speakers working in the tech sector, with specific reference to one speaker who had recently graduated from the university and secured a job in the sector. This section also provided an opportunity for discussion about opportunities and skills with an overall aim to breakdown the assumption that technical expertise is needed to gain employment in the tech sector.



Section 4 was driven by three scenario-based challenges on security, use case design, and spectrum allocation. These activities were designed to encourage students to consider three of the key challenges within the tech sector. The first challenge focused on a key sector issue of security whereby the task was planning security for the rollout of two new 5G networks – one for consumers and one that would be used for Critical National Infrastructure. For students interested in the demand-side of 5G, the second challenge was identifying a new 5G use case for environment, transport, health and social care, creative, or educational sectors. This second scenario was partially inspired by the work undertaken by Innovation Nottinghamshire and 5G Connected Forest at West Notts College where students were assigned a project to promote the impact of 5G on local businesses<sup>12</sup>. The third challenge incorporated practical and socio-political angles with the task of deciding a new strategy to fairly allocate spectrum with specific questions about types of spectrum for rural and urban areas, and how the spectrum should be allocated. Questions and prompts accompanied the challenges and

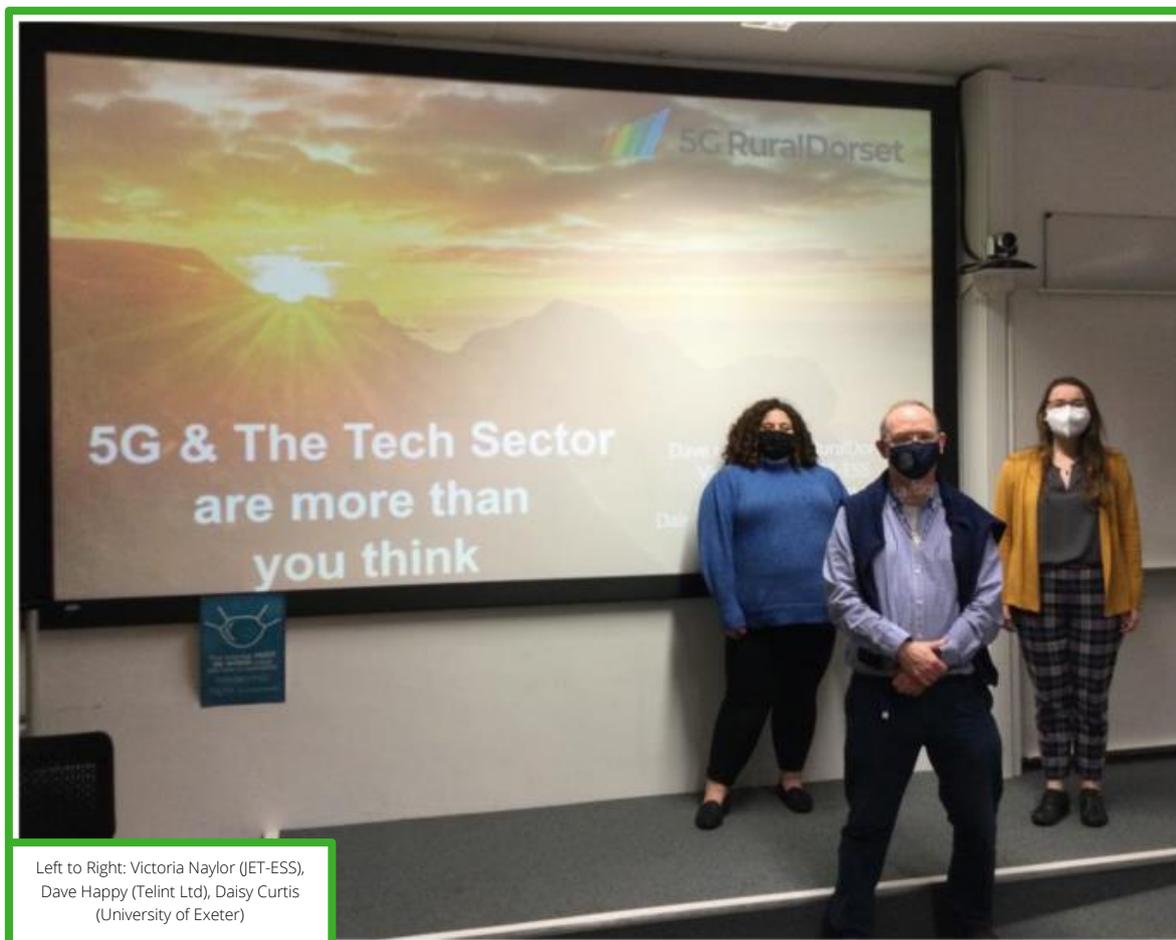


Forest at West Notts College where students were assigned a project to promote the impact of 5G on local businesses<sup>12</sup>. The third challenge incorporated practical and socio-political angles with the task of deciding a new strategy to fairly allocate spectrum with specific questions about types of spectrum for rural and urban areas, and how the spectrum should be allocated. Questions and prompts accompanied the challenges and

<sup>12</sup> Mellors, N. (2021) "5G will change every career you've ever thought of": A pilot project with West Notts College, Innovation Nottinghamshire, 5G Connected Forest, [presentation for UK5G Be Better Connected Conference].

speakers were prepared to discuss these topics with the students as the challenges reflected their expertise. This section was designed so that students could pick the challenge which most interested them. This challenge based activity was informed by problem-based learning which has been identified as ‘useful for developing employability skills’<sup>13</sup> as they enable students to use problem solving and experimental learning with a focus on a specific career or sector.

A priority for the event was enabling students to shape the session to their interests, and a flexible approach was used in the provision of the content on the day. This approach was chosen because it ensured that students were getting value from the event whilst also providing useful learnings about what students need from such events. For the event this meant that extra time was dedicated to the networking and Q&A section whereby students were able to form connections and a positive rapport with the speakers. The opportunity to discuss interests, questions, concerns, and advice meant that the students were able to gain more benefit from the event than if it was purely scripted.



Left to Right: Victoria Naylor (JET-ESS),  
Dave Happy (Telint Ltd), Daisy Curtis  
(University of Exeter)

<sup>13</sup> Kornelakis, A., and Petrakaki, D. (2020: p. 294) Embedding employability skills in UK higher education: Between digitalization and marketization. *Industry and Higher Education* 34(5): 290–297.

## 5. Event Learnings

The 5G RuralDorset pilot event held at the University of Exeter provided a series of learnings which are important to document for the benefit of future events. Students were asked to provide feedback at the end of the event to identify what had worked well and what areas could be improved. This section combines learnings from the feedback and from the experience of organising the event.



Assign an event lead who can act as a point of contact between speakers and the host university



Build flexibility into plans so that events can change and adjust as challenges arise



Speakers should be diverse, represent a variety of organisations, and draw on their different work and experiences



Focus on employability, skills, and options post-degree whilst ensuring the event is not framed as a recruitment drive as this will incur fees



Dedicate a substantial period of time to networking and Q&As to generate benefits for students and speakers



Tailor the session to the interests of the students who are present at the event

### 5.1 Assign an Event Lead to act as a point of contact

On a practical level, an Event Lead needs to be assigned. The Event Lead will be a point of contact between the organisations and the host university. The Event Lead needs to ensure session content is planned and developed in association with each of the event speakers, and also liaise with university teams to ensure event publicity, catering, room bookings, and risk assessments are organised. It is beneficial for the Event Lead to have an understanding of university processes and procedures as well as the needs of the organisations involved. It is therefore recommended that the Event Lead works, or has worked, with universities.



In the case of the 5G RuralDorset event, the Event Lead was a current University of Exeter PhD researcher who has previously worked with 5G RuralDorset and some of the organisations involved in the event. This meant that the Event Lead had access to different



university systems, and support could be provided for internal promotion of the event. For events where it is not possible to allocate someone with prior connections, it is recommended that extra time is planned for contacting university careers teams and establishing action plans.

## 5.2 Build flexibility into plans so that events can change and adjust as challenges arise

It is anticipated that challenges will arise for any event, in some instances these can be anticipated and mitigated, and in others, the challenges have to be navigated as they arise because they are event-specific. It is therefore recommended that flexibility is built into plans so that challenges can be effectively handled. For the 5G RuralDorset event there were event-specific challenges faced such as the registration portal not working correctly. This was a challenge which could not be mitigated beforehand but illustrates the need to be open and flexible in approach so that the challenge could be navigated as it arose.



A key challenge of these types of skills and employability events is framing to ensure it is relevant for students whilst meeting the requirements of the university and organisations. For the 5G RuralDorset event the term 'employability' was used so that the event met the needs of everyone involved. Care needs to be taken in the language used to describe the event, and it is recommended that discussion with the university occurs to ensure that all expectations are fulfilled and that changes can be made if required.

Certain broader challenges were also experienced during the organisation of the 5G RuralDorset event including Covid-19. This context has impacted (in-person) university employability events as many have had mixed student uptake due to students experiencing access complexity and increasing pressures surrounding their degrees. Reports into student employability and careers demonstrate that students are uncertain about their skills and how different careers relate to their skillsets<sup>5</sup>. This situation means that events such as the one organised by 5G RuralDorset are important in demonstrating the relevance of the skills students currently hold and working to help them further develop their skills and interests. However, this also represents a challenge in engaging students. It is therefore recommended that a directed publicity approach is taken whereby the event is advertised to students on specific degree programmes and modules. This requires asking the university's employability team to utilise their connections across the university, and if the Event Lead has connections within the university, assigning time to them to contact colleagues who will be able to help with tailored publicity to students.

### 5.3 Speakers should be diverse, represent a variety of organisations, and draw on their different work and experiences

There was a clear benefit identified in having a selection of speakers from a variety of organisations who could draw on their different work and experiences of 5G and the tech sector. Feedback from students identified that the specific details of 5G use cases helped to demonstrate the relevance of 5G and the tech sector, and also provided an opportunity for speakers to discuss topics they are passionate about. Students explained that the specific details which speakers discussed enabled them to gain insights into actual work being undertaken and move beyond the idealised hype surrounding 5G technology. Focusing on how the technology is being used and its relevance for a variety of sectors and areas of life made the technology more relevant. This was a key goal of the event: to capture student interest by demonstrating the diverse applications of the technology.



Providing specific examples related to the speakers' work also enabled speakers to talk knowledgeably and passionately about 5G. Fundamental to any form of skills engagement is for the speakers to communicate about their interests and why their work is important. Crucial to the success of the 5G RuralDorset event was that each of the speakers represent different backgrounds within the tech sector and also work in the area local to the university. Each speaker engages and works with 5G in different ways, and are at different stages of their careers including: a PhD researcher examining 5G from a social science perspective, a bid and research manager with a background in Geography and environmental sciences; a regional sales manager of a multinational telecommunications testing company with a background in sales across different sectors; and the Collaboration and Security Lead of 5G RuralDorset and Managing Director of an SME with a background of 30+ years in tech. (See Appendix A for further details). Each speaker was therefore able to contribute diverse views to engage students in why 5G and the tech sector are interesting and relevant. For anyone planning similar events, it is recommended that a group of speakers are drawn from different organisations/areas of an organisation with different experiences of the tech sector so that students can gain a variety of insights about the sector.

It is also important that the speakers at such events are diverse as there is a significant issue with the lack of gender and ethnic diversity in tech, as well as diversity in terms of disability, neurodiversity, sexuality, and socio-economic status (and the intersections of each). This is crucial to consider when planning skills and employability events as students must be able to identify with the tech sector and see themselves working in the space<sup>2,14,15,16</sup>. For the 5G RuralDorset pilot event there was an awareness of this importance and work was undertaken in designing the event to include speakers who represented

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<sup>14</sup> UK Science and Technology Committee Inquiry (2022) *Inquiry into diversity in STEM*, available at: <<https://committees.parliament.uk/committee/135/science-and-technology-committee/news/161114/committee-to-hold-first-evidence-session-of-its-inquiry-into-diversity-in-stem/>>, accessed: 24/02/2022

<sup>15</sup>Hired, (2019) *The UK Tech Workplace Equality Report*, available at: <<https://hired.com/uk/uk-tech-workplace-report/#government-must-fix-the-wage-gap>>, accessed: 24/02/2022

<sup>16</sup> Tech Nation, (2021) *The future UK tech built*, available at: <<https://technation.io/report2021/>>, accessed: 24/02/2022



these identities, however, there is clear recognition that there was not full representation at this event and more work needs to be done.

#### 5.4 Focus on employability, skills, and options post-degree whilst ensuring the event is not framed as a recruitment drive as this will incur fees.

Feedback outlined that there needs to be a clear focus on the different future opportunities which are available to students. However, a balance needs to be found as these events cannot be framed as recruitment drives as this would incur a substantial charge for the organisations involved – many of whom either will not want to directly recruit students or will engage in specific university career fair recruitment events. This situation means that specific opportunities cannot be outlined. However, there was a clear interest from students in the options present to them after their degrees. It is recommended that speakers draw on their own experiences or the experiences of colleagues who have recently entered the tech sector. Whilst emphasising the different future opportunities, it is important that the discussion is student focused and not business focused. This also presents an opportunity to draw attention to the skills which are transferable from different degree programmes into the tech sector, and the different skills which are needed within the tech sector. It is recommended that events include suggestions of how students can further develop these skills. This can be explored through scenario-based activities to introduce students to example scenarios and the skills needed in these situations, and also by directing them to other communities or programmes they could engage with such as the *Ladies Hacking Society*.



In the presentation of future opportunities it is important to also include references to further study. Feedback from the 5G RuralDorset event identified that there is an interest in understanding options for further study which are related to tech and/or relevant for future careers in tech. This provides an opportunity for speakers to draw on connections with universities and showcase the UK's strong research base in STEM and non-STEM areas related to technology. Speakers can also provide insights into areas which are critical for the tech sector such as diversification and cybersecurity, which can help students in considering further study options. Encouraging students to explore further study options linked to tech is also beneficial to the tech sector as students can further develop their skills through other degree programmes; undertake research which may directly help the tech sector; and/or students may undertake a placement during their further studies which would have direct benefit for the host organisation.

### 5.5 Dedicate a substantial period of time to networking and Q&As to generate benefits for students and speakers

Specific content needs to be covered in events, however, the networking section provides the most benefit to students and speakers. Networking is important at any event to establish connections, and for the 5G RuralDorset event networking was specifically planned into the session alongside refreshments. The networking provided a way for the distance between speaker and student to be broken down as the 'stage' at the front of the room was no longer used, and a more informal atmosphere was created. The networking enabled students to discuss their interests and ask questions, and it provided the speakers with an opportunity to learn from the students about their views of 5G and the tech sector, what they wanted to hear more about, and learn how the event could be improved. Feedback identified that the networking was one of the most useful parts of the event, so it is therefore recommended that networking is embedded and prioritised in future events.



It is also suggested that the networking does not only occur at the mid-point of the event, but at other points, such as at the beginning, to enable a clearer understanding of student interests and create a rapport between students and speakers. Similarly, the networking should not end at the end of the event, instead students should be encouraged to reach out to speakers on LinkedIn. This happened after the 5G RuralDorset event and subsequent advice and discussions have already occurred. Establishing these types of networks may also be useful in the long-term by providing students with points of contact as they decide which paths to take after the completion of their degrees. Many students are advised by universities to develop LinkedIn profiles, however, it is a challenge for many of them to form networks in sectors in which they are interested in pursuing careers. Connections made at these types of events can enable students to begin to develop their networks as mutual connections are more likely to respond positively to connection requests, and as such speakers can act as gatekeepers to the tech sector.

### 5.6 Tailor the session to the interests of the students who are present at the event

It is recommended that sessions are tailored to the interests of the students who are present to ensure they are relevant for the audience. Students at the 5G RuralDorset event were from STEM and non-STEM degree programmes which demonstrates that there is no single "type" of student who is interested in 5G and the tech sector. This diversity is vital for the tech sector, and it is therefore important to foster the interests of these students. To achieve this, it is recommended that events are designed so that they can be tailored to the interests of the students who are attending the event. In the feedback for the 5G RuralDorset event one student suggested that more time could be spent providing information about the technical aspects of the networks underpinning the 5G use cases.



This feedback highlights that this student was interested in the technicalities of 5G, however, other students may have preferred to learn more about the end-user engagement. More opportunities for questions and discussion should be embedded within the structure of the session to ensure such events cater to the interests of the students. At the beginning of the 5G RuralDorset event the speakers introduced themselves and also asked the students to explain why they were attending the event and what degree programme they were studying. This approach should be replicated as it provides speakers with information about the audience and their knowledge backgrounds and interests, which in turn enables the speakers to tailor the event to emphasise specific topics which will be of greater interest and relevance to the students.

## 6. Summary

Drawing on the experiences of 5G RuralDorset's pilot event at the University of Exeter, specific recommendations have been put forward. These recommendations are designed to support future initiatives and events, and crucially they are intended to stimulate further investment in skills and employability events. Outside of the remit of the 5G RuralDorset project these suggestions are already feeding into the development of a skills and employability event with another university. There is a clear opportunity for universities and the tech sector to work together in a mutually beneficial way. Such events can help universities meet increasing requirements to provide employability support, and also work towards supporting the diversification of the tech sector in the long-term. Importantly, students will also benefit from such events through the connections they foster, and insights they gain from the speakers. These events also represent an opportunity to help students develop and better understand the required skills for working in the tech sector, or sectors which intersect with technology. It is clear that action needs to be taken, and events such as the one undertaken by 5G RuralDorset illustrate the opportunity for all future R&D programmes. A priority in enabling this to occur is for R&D programme funders to budget and mandate projects to undertake skills development activities. The digital skills shortage must be addressed and there needs to be funding to ensure events are effectively planned and delivered to the benefit of the students, universities, and the tech sector.



## 7. Acknowledgements

Particular thanks go to the students who attended the 5G RuralDorset pilot event and who provided the useful feedback which informs many of the recommendations outlined in this report.

The speakers wish to extend their thanks to the University of Exeter for hosting and helping to organise the event.

Thanks are also due to Victoria Naylor (JET-ESS) and Mike Peck (Spirent Communications) for contributing to the delivery of the 5G RuralDorset event.

Photos credit: Sharon Jones, Economic and Development Officer at BCP Council

## 8. Compiled References

Curtis, D. (2021) *Collaboration: Accessing the Full Potential of Collaboration in R&D Programmes*, 5G RuralDorset.

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## 9. Appendix A

The 5G RuralDorset event involved four speakers, below are their speaker bios:

**Dave Happy**, Telint Ltd MD, 5G RuralDorset Collaboration and Security Lead. Dave has 30+ years of experience working in the tech sector and his previous roles include VP for EU Affairs in Samsung R&D



**Victoria Naylor**, JET-ESS Bid and Research Manager. Victoria (Vicky) graduated with an MSc by Research from the University of Exeter in 2019. Her research examined coastal process in the South West of England and utilised environmental monitoring tech. Vicky is now a key member of the JET-ESS team working to provide 5G at Sea via their 5G connected buoys



**Mike Peck**, Spirent Communications Regional Sales Manager – UK&I. Mike helps enable businesses and organisations across the UK in Defence, Government, and Aerospace ecosystem by reducing complexities and costs, accelerating time to market, ensuring the delivery of excellence, and driving revenue and profitability. Mike has a broad background working in sales both in the tech sector and beyond.



**Daisy Curtis**, University of Exeter PhD Researcher. Daisy's research examines how people make sense of, and engage with, 5G. Her work explores the processes, practices, tensions, and opportunities bound up in the development of 5G. Daisy has a background in Human Geography and has previously worked with 5G RuralDorset as part of a six month PhD placement funded by the Economic and Social Research Council South West Doctoral Training Partnership (ESRC SWDTP).



## 10. Attribution

This report was written by Daisy Curtis (University of Exeter), with support from Dave Happy (Telint Ltd).

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