



COVID-19:

The Impact on
Technicians in
UK Higher
Education &
Research



The Impact on Technicians in UK Higher Education and Research

COVID-19

Introduction

The COVID-19 pandemic has caused global social and economic disruption. Higher education and research institutions have been essential to the response to the pandemic, reprioritising research to tackle the virus, contributing to the national testing effort, donating PPE to the health and care sectors, developing vaccines and transferring teaching online, whilst ensuring support for their student, staff and local communities.

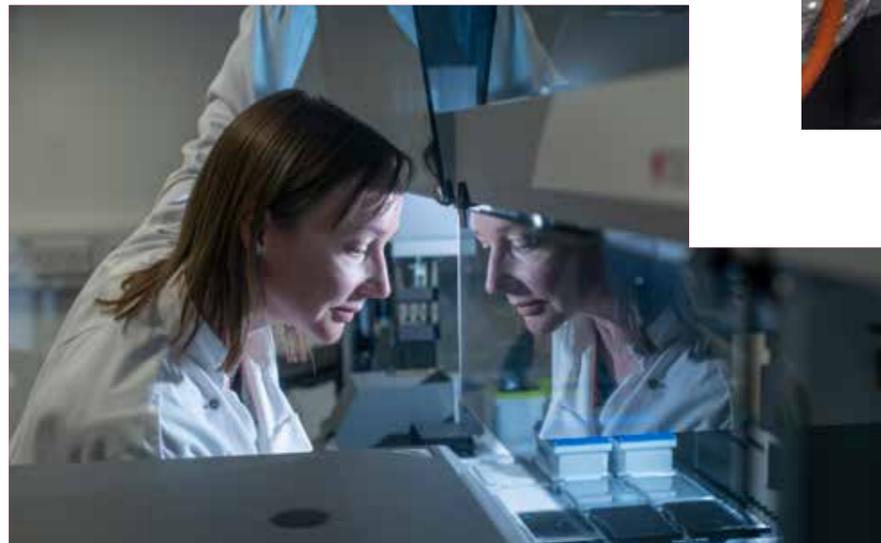
The UK's universities and research institutes are working to continue to deliver world-class research and teaching. People are at the centre of these efforts and the technical community is at the forefront of the higher education and research sector's response to the COVID-19 pandemic.



Working Together

The Technician Commitment¹ is bringing much needed visibility, recognition, career development and sustainability to the vital roles that technical staff play in enabling research and innovation, and in ensuring a positive student experience. A collaborative team from the Technician Commitment, Science Council, Institute of Physics, Royal Society of Biology, Royal Society of Chemistry, Wellcome and the Research England funded Midlands Innovation TALENT programme² undertook a national survey in order to understand the impact of COVID-19 (Coronavirus) on the technical community in higher education and research and to identify ways in which this vital community can be supported.

This report offers an unprecedented insight into the impact of the pandemic on working practices for technicians and shines a light on technical contributions at an extraordinary time. It offers a number of recommendations to the higher education and research sector, individual employers and to technicians themselves in order to ensure that all involved are fully supported.



The Technical Community

The technical community has a vast range of job titles – technicians, skills specialists, technologists, experimental officers, laboratory managers to name a few – and is recognised as being critical to the success of UK higher education and research³. A highly skilled workforce with a diverse range of expertise, technicians underpin the primary activities of universities and research institutes, providing the technical excellence essential for research, teaching and knowledge transfer. Alongside this, many technicians are researchers and teachers in their own right.

They also play a fundamental role in the development of technical skills that students require to pursue a career in research, academia and/or industry.

Technicians have been vital in the sector's response to COVID-19, partaking in the shutting down of facilities and campuses, the transition to online teaching, the sector's civic response to the pandemic and the restart and recovery process.



Methodology

In order to understand the impact of COVID-19 on the technical community across UK universities and research institutes, the team undertook a survey, hosted by the Institute of Physics and disseminated by e-mail and social media through the Technician Commitment, Science Council, Royal Society of Chemistry, Royal Society of Biology, Institute of Physics, Wellcome, the Midlands Innovation TALENT programme and via UKRI and the Technical Managers in Universities networks. The survey consisted of 23 questions, exploring the experiences of technicians in an extraordinary period.

The survey asked respondents about their involvement in their institution's response to COVID-19, the impact on their work practices, their thoughts on restart procedures and their views on what support the community would benefit from.

The survey opened on 18th May 2020 for two weeks.

Survey Findings

The Survey Sample

In total, 1310 complete responses were received from technicians across UK higher education and research. Responses came from 99 distinct universities and research institutes from all four nations of the UK.

There is limited data on the number of technicians working in UK higher education and research, in part because the definition of a technician is contested and varies across institutions and because organisations 'code' their technicians in staff data in different ways. Historical data suggests that there are 30,000 technicians working in UK higher education and research, equating to a response rate of 4.36% to this survey.

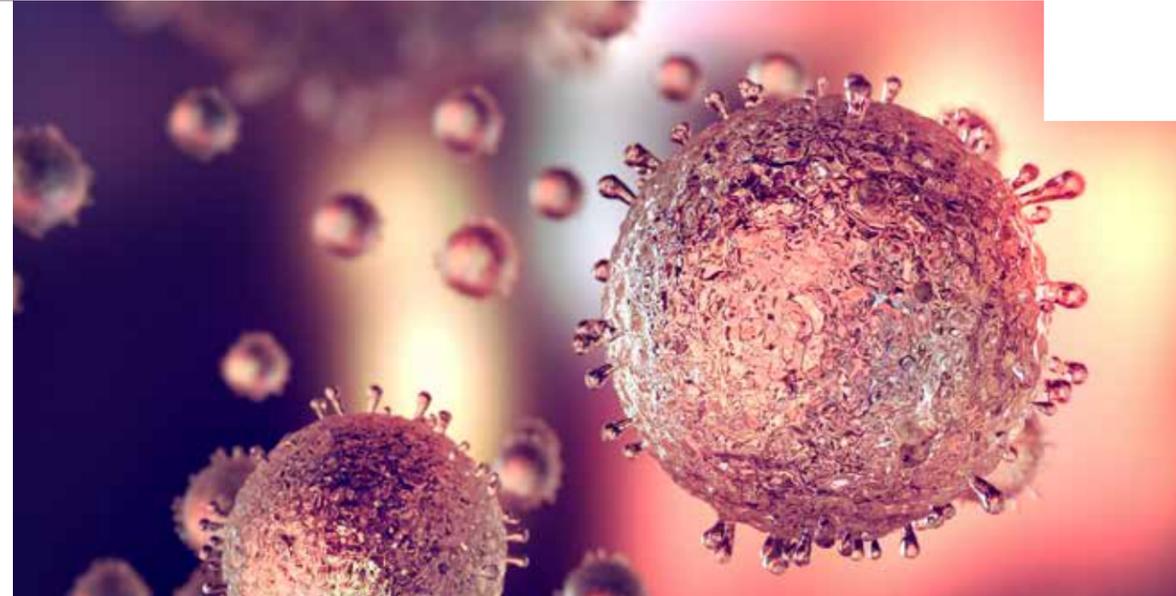
A recent report on equality, diversity and inclusion in the technical community⁴ within universities identified 14,375 'technician' roles in 2017/18 through the use of HESA data but, given the challenges in identifying technicians, recognised that the overall number of technicians in universities would be higher.

Comparison with this figure represents a response rate of 9.11%. This survey includes responses from technicians in research institutes who are not captured by HESA data. It is recognised therefore that there are limits to how much can be inferred from this survey in relation to national-level data and the national population of technicians.

“

The technical workforce were last out and first back in while everyone else is still safe working from home

”



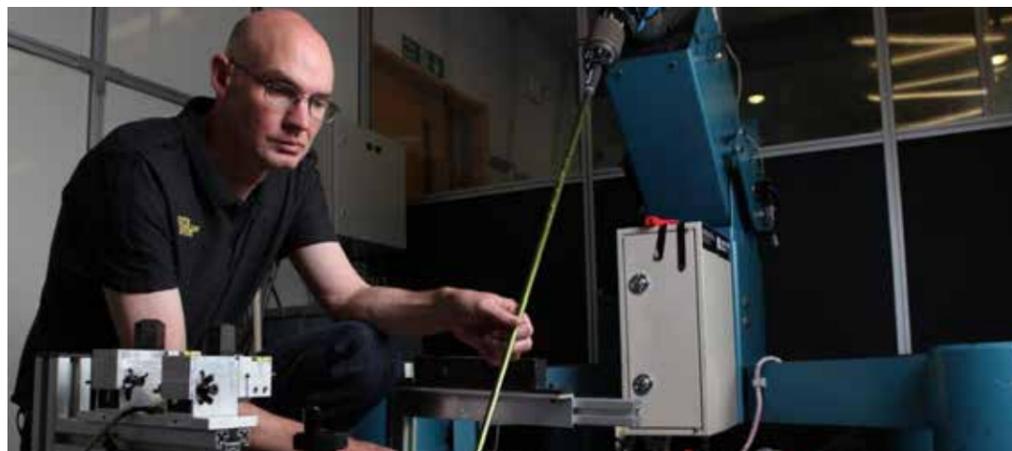
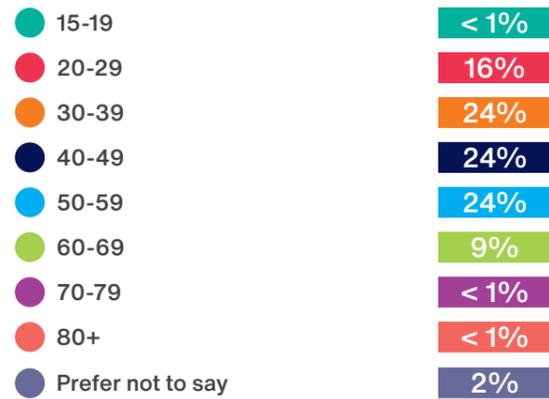
Gender

The gender balance of respondents was 52% female, 46% male, <1% other and 2% prefer not to say. National data suggests that 40% of technicians in UK higher education are female⁴, suggesting that a higher proportion of female technicians responded to the survey.



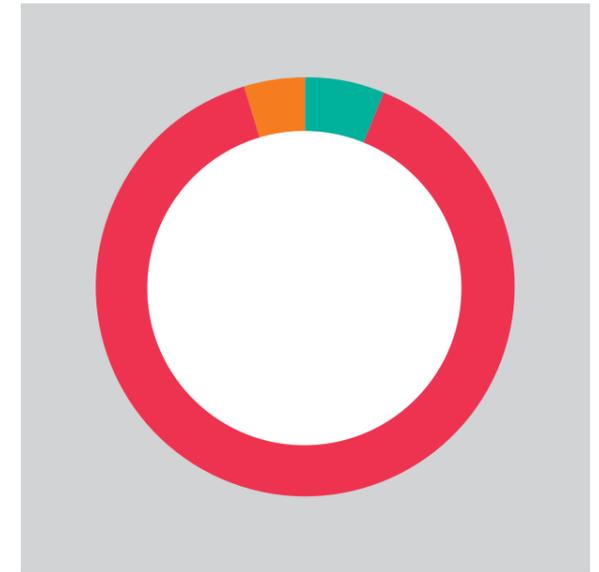
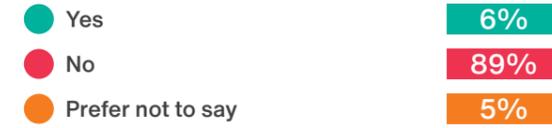
Age Group

An even spread of response rates were received for ranges 30-39, 40-49 and 50-59, with smaller response rates for both younger and older demographics.



A Physical or Mental Impairment

6% of respondents indicated a physical or mental impairment. This is in line with national data⁴.

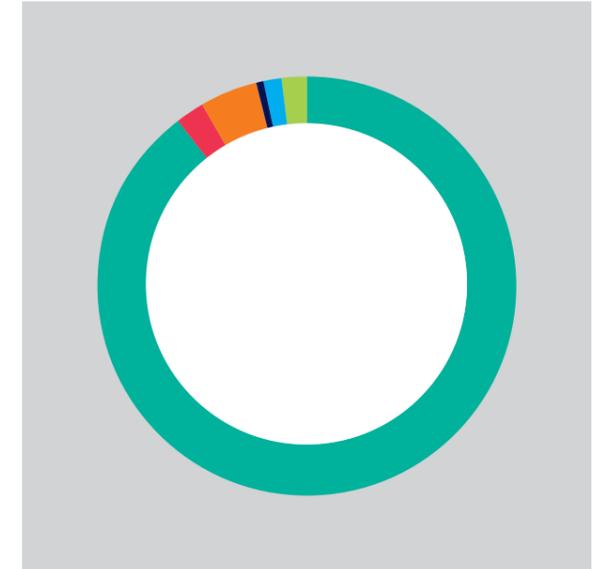




Ethnicity

The majority of respondents identified as White (90%). 2% were from a Multiple/Mixed ethnic background, 5% from an Asian/Asian British background, <1% from Black/African/Caribbean/Black British backgrounds and 1% from any other ethnic group. 2% of respondents did not wish to say. This is in line with national data⁴.

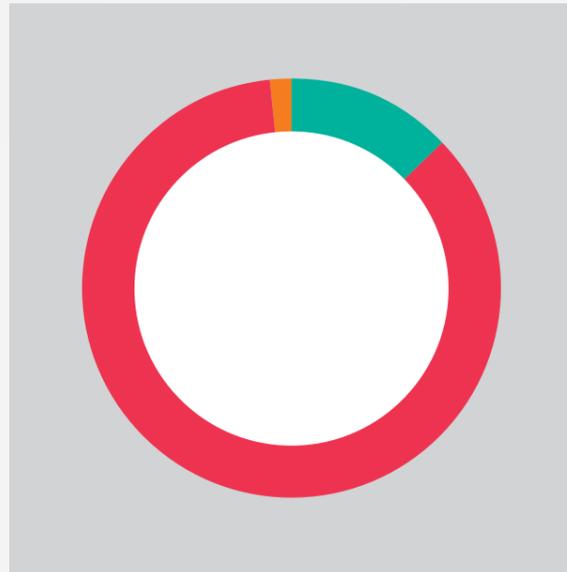
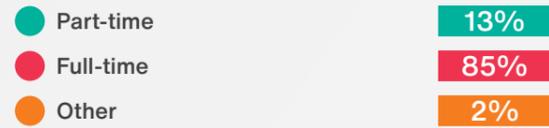
● White	90%
White	39%
English/Welsh/Scottish/Northern Irish/British	47%
Irish	1%
Gypsy or Irish Traveller	< 1%
Any other White background	2%
● Mixed/Multiple ethnic groups	2%
White and Black Caribbean	< 1%
White and Black African	< 1%
White and Asian	1%
Other Mixed/Multiple ethnic background	1%
● Asian/Asian British	5%
Indian	2%
Pakistani	< 1%
Bangladeshi	< 1%
Chinese	2%
Any other Asian background	1%
● Black/African/Caribbean/Black British	< 1%
African	< 1%
Caribbean	< 1%
Any other Black/African/Caribbean background	< 1%
● Other ethnic group	1%
Arab	< 1%
Any other ethnic background	1%
● Do not wish to say	2%



Contract Type

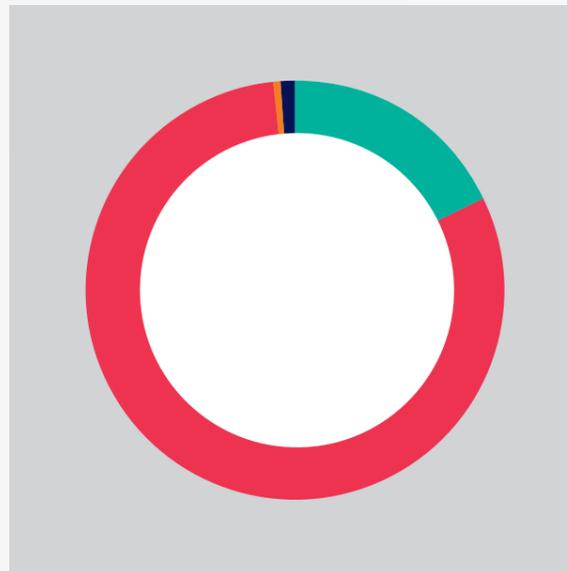
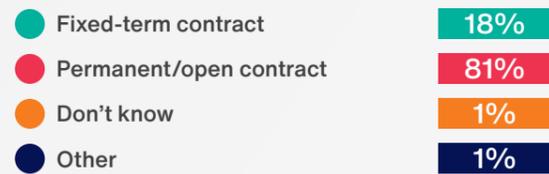
Are you employed...

13% respondents reported that they worked on a part time basis. This reflects national data⁴.



Are you on a permanent/open contract or fixed term contract?

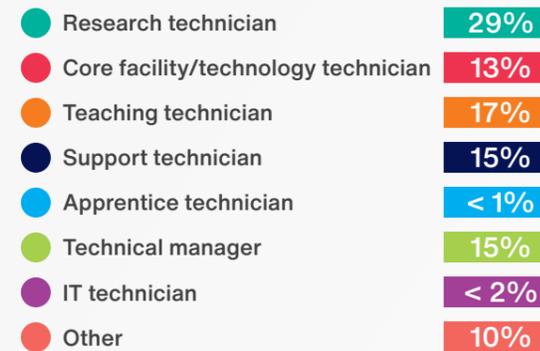
The majority of respondents are in permanent or open contracts. This reflects national data⁴.



Technician Type

What 'type' of technician would you most associate yourself as?

The most common technician 'type' selected was research technician (29%), followed by teaching technicians (17%), support technicians (15%), technical managers (15%) and those that worked in core facilities (13%). A very small number identified as apprentice technicians (<1%).

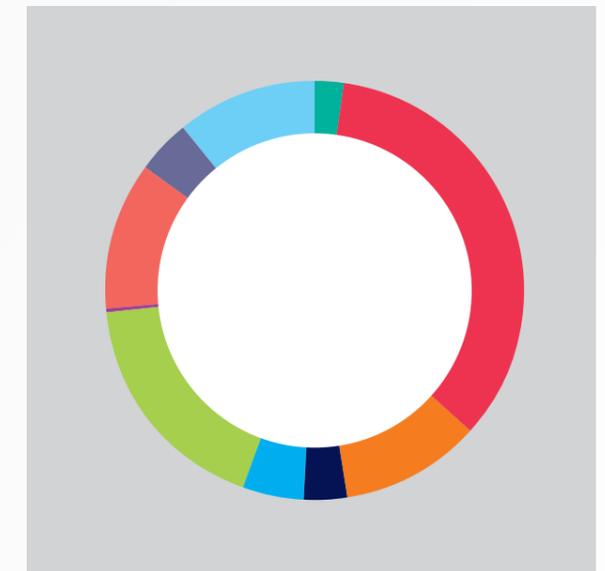
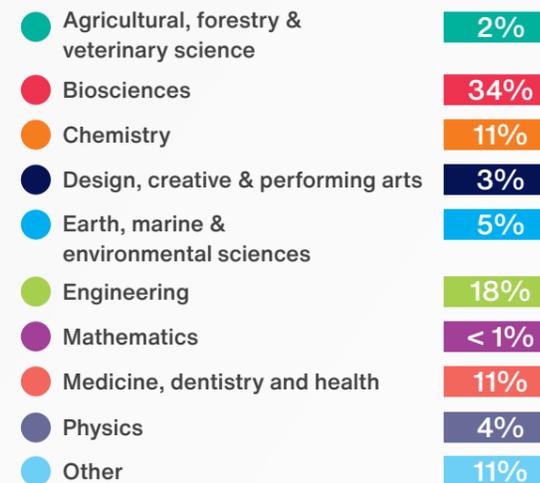


Subject Discipline

Which discipline most closely describes your subject area?

Respondents reflected a diverse range of subject disciplines with the highest proportion of respondents stating "Biosciences" as their subject discipline (34%).

The distribution of subject discipline is broadly representative of national staff data for 2017-18 on technical staff by discipline.



Involvement across the UK



Impact of COVID-19

Shutting Down

Has your immediate area of work (i.e. department, facility etc.) completely shut-down in response to COVID-19?

Respondents were asked about whether their workplaces had shutdown completely in the immediate response to COVID-19. Nearly two thirds of technicians' work areas were completely closed during lockdown with many responses indicating that this applied to entire campuses. Almost 14% of technicians responded to say that their work area had not completely shut down.

Free text responses indicated that the majority of those that were open were science laboratories conducting COVID-19 related research, for example, investigating potential treatments or advancing the understanding of the virus. In a number of cases technicians reported additional laboratory space had been made available for COVID-19 research activities.

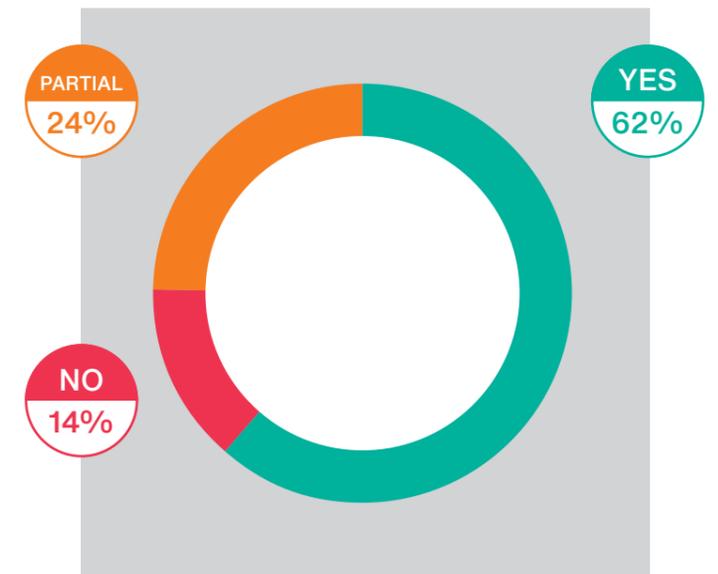
A quarter of workplaces were reported to be partially open and these were almost exclusively scientific laboratories where maintenance of long-term critical experiments was required as well as management of cell lines, and various activities related to animal and plant husbandry; where this was required teams had drawn up rotas to manage a much reduced onsite presence.

Have you been involved in shutting down facilities and work areas due to lockdown?

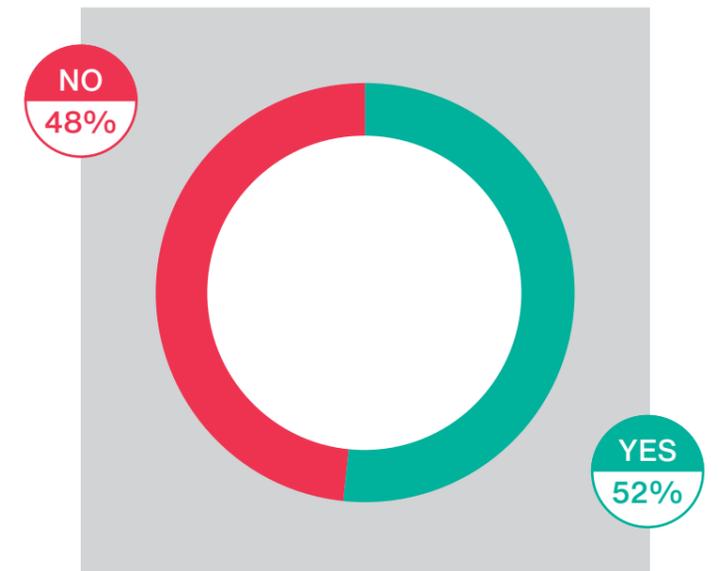
Free text responses also indicated an ongoing requirement for management of cryogenics to keep high end scientific analytical equipment in a safe state so it could be brought back online rapidly as laboratories and research facilities reopened.

Just over half of the technicians surveyed (52%) were involved in the shutting down of work areas. Respondents from the physical sciences were more likely to have been involved with shutdown activities, with 68% of colleagues from these subject areas being involved in shutdown procedures.

Free text responses demonstrated that technical colleagues were taking a lead on ensuring that work areas were closed down safely.



“
All experimental work suspended, labs closed. Staff and researchers working from home. Small team of key workers come in once a week to top up liquid nitrogen levels in cell banks.
”





Furlough

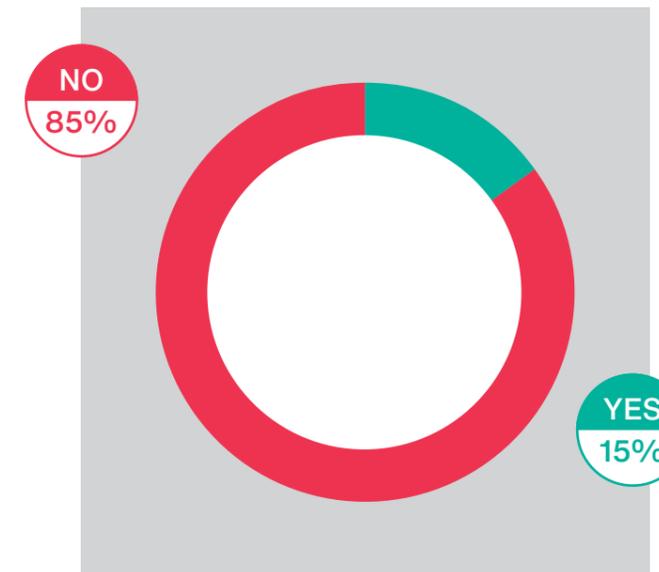
Have you been furloughed?

The majority of respondents (85%) had not been placed on furlough at the time of the survey taking place. A caveat to this is that the survey may not have reached colleagues who were placed on furlough via the dissemination routes utilised (for example, professional networks and internal organisational e-mails). Another consideration is that a number of institutions utilised the furlough scheme from June 2020 onwards, after this survey had closed. Therefore, the statistics represented in this report may not be a true reflection of the proportion of the technical community who were placed on furlough during the pandemic.

Respondents who reported being furloughed described a period of working from home in the first instance, prior to being furloughed by their organisation. Free text responses indicated that many of the colleagues furloughed worked in laboratories and that they had been told that as this was their primary work area, it would be difficult to work from home, hence their participation in the furloughing scheme. Furloughing took place in three-week blocks.

At the time the survey closed, a significant number of furloughed participants anticipated returning to their workplaces at the end of June.

“
I have been furloughed from April to the end of June, however, there may be a need for me to come back earlier with a mix of working from home and visiting site
”



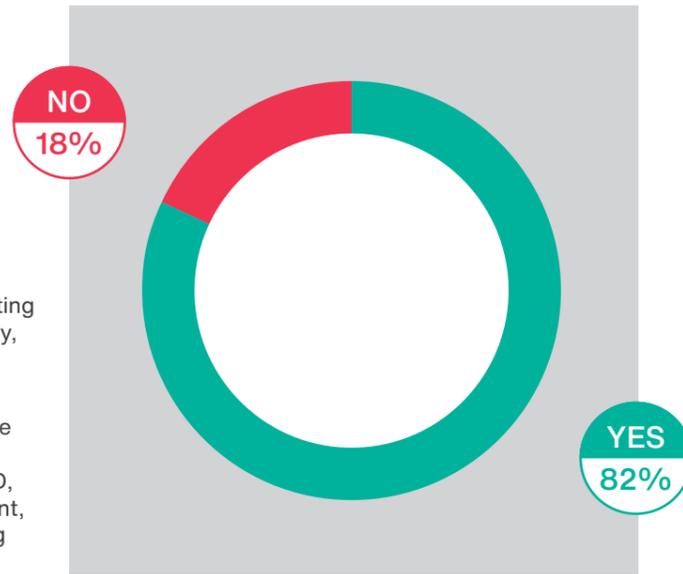
“
I hope that my colleagues who have been furloughed will not be forgotten about.
”

Working from Home

Have you been able to work from home during lockdown?

The majority of respondents reported that they had been able to work from home during the lockdown period (82%). Free text responses indicated that the primary activities being undertaken from home include participation in online meetings, paperwork, including the development and updating of assessments and procedures relating to health and safety, and training and professional development activities.

There was a positive appetite for continued professional development (CPD), with 82% of those working from home accessing CPD opportunities. Technicians who reported not being able to work from home have also accessed CPD, with 55% of them participating in training and development, though these colleagues did not consider this as a working from home activity.



“
Paperwork - updating risk assessments, coordinating the desk-based activities of my team, responding to queries, organising online training for my staff, lots of meetings! Planning prep for return to lab work.
 ”

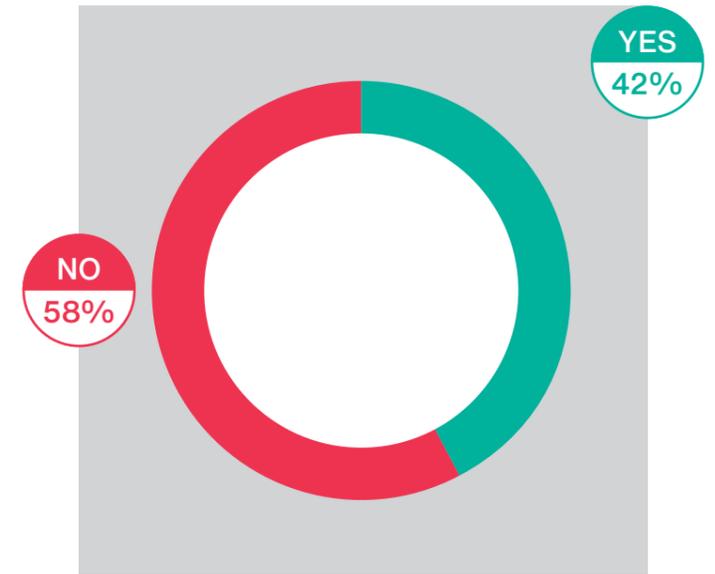
Type of technician and their ability to work from home, ranked most to least able:



Onsite Support

Have you been asked to provide any onsite support during lockdown?

42% of respondents confirmed they had been asked to provide on-site support during lockdown. Free text responses indicated that much of this support was related to keeping biological samples alive or cryogenically frozen as well as keeping complex scientific equipment on standby. A number of technicians supported colleagues working from home by providing a goods inwards service and then, in many cases, delivering these items to colleagues at home. Respondents also indicated that they were providing operational and analytical support for the NHS.



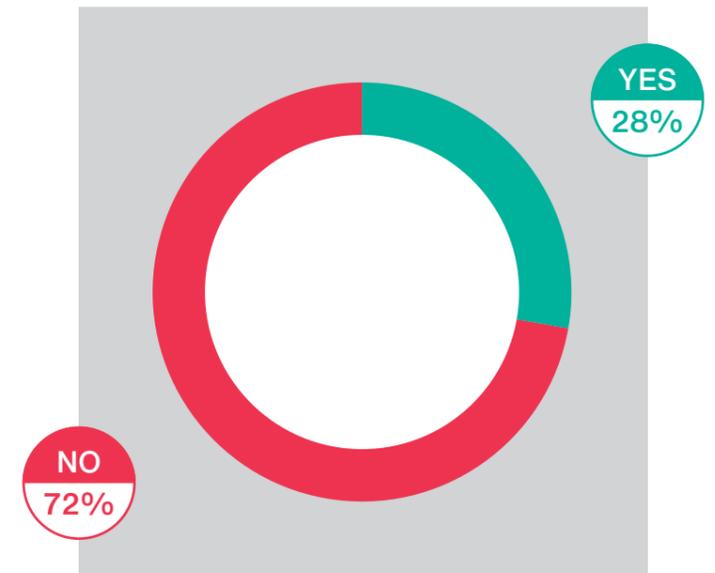
The Civic Response

Have you been involved in your institution's civic response to COVID-19: for example, manufacturing hand sanitiser, collating and donating PPE, national testing?

Technicians were asked if they had been involved in their institutions' civic response to COVID-19. 28% responded to confirm that they had played a role in the effort to tackle COVID-19.

Contributions are wide ranging. Example activities include:

- Collating and distributing donations of Personal Protective Equipment (PPE) to local hospitals, hospices and care homes.
- 3D printing and manufacturing of visors and face shields for distribution to NHS and care workers.
- Manufacturing and distribution of hand sanitiser.
- Supporting the national COVID-19 testing effort through volunteering at testing centres and local hospitals.
- Enabling and supporting research into COVID-19.
- Coordination and delivery of technical training to support staff at the Nightingale Hospitals.
- Participation in the Government's "Ventilator Challenge" programme.



“
Volunteers were called for to participate in a hand-sanitiser production project in collaboration with the Council's COVID response hub. We are supplying WHO accredited hand-rub into NHS, care homes, Council, waste management and in-house university settings. This is a voluntary project using university facilities.
 ”

Case Studies

STFC Technicians help deliver thousands of ventilators nationwide

Science and Technology Facilities Council (STFC) technicians helped deliver 13,437 ventilators as part of the Ventilator Challenge UK, more than doubling the stock available to the NHS.

Initially STFC technicians helped to develop a training manual for testing and calibrating Penlon's ventilator to ensure its safe and successful use in hospitals.

The STFC team of "super trainers", based in Harwell, Oxfordshire, led the training of hundreds of others to test the new ventilators produced by Penlon at its nearby facility in Abingdon.

The testing team monitored pressure and air flow through the ventilator while it inflated and deflated a set of steel "lungs".

A larger STFC team of more than 70 people, including technicians, engineers and scientists, continued to test the ventilators throughout production and provided essential logistics services during the project.

The consortium of UK aerospace, motorsport, automotive and medical businesses delivered critical Penlon ESO 2 and Smiths paraPACTM plus ventilators to the NHS from 19 March, with the last shipment of finished ventilators dispatched on Sunday 5 July.



The Midlands Innovation technical community response to COVID-19

Midlands Innovation (MI) is a partnership of eight universities in the Midlands (Aston, Birmingham, Cranfield, Leicester, Loughborough, Keele, Nottingham and Warwick). Technical staff have been at the forefront of supporting Midlands Innovation institutions' efforts against COVID-19, bringing their knowledge, expertise and skills where needed.

Technical colleagues have organised Personal Protective Equipment (PPE) donations from MI universities to NHS and other frontline services, created thousands of gallons of hand sanitiser for hospitals and social care settings, supported MI institutions to quickly transition academic teaching online, and ensured crucial services and ongoing academic research can continue. Technicians have been keeping essential equipment working, refilling cryogenic liquids and gases, sewing medical gowns/face masks, led 3D printing of ventilator parts and visors, collated equipment for UK government testing centres and carrying out compliance checks throughout the lockdown.

Technicians within MI are also part of a national initiative to map how COVID-19 spreads and behaves by using whole genome sequencing and have been supporting COVID-19 testing at government diagnostic laboratories.

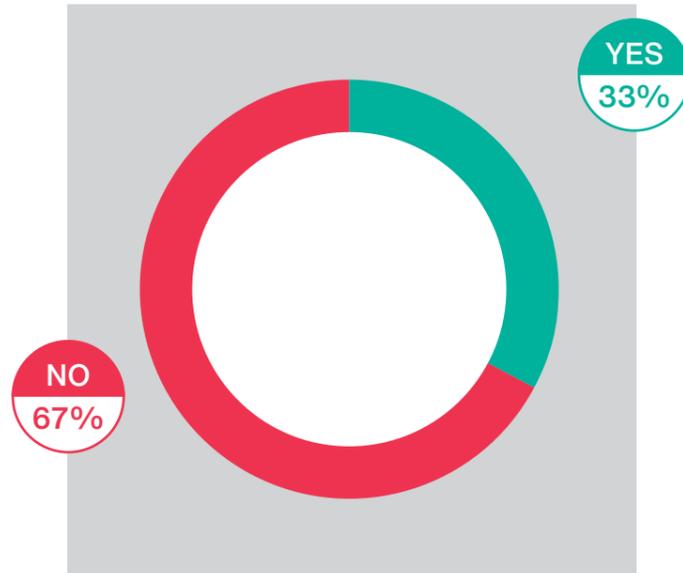
Supporting Other Areas

Have you provided support to other areas (administration, teaching, etc.) during lockdown?

A third of respondents (33%) reported that they had supported other areas in their institution during lockdown. Technical colleagues reported direction of their skills towards IT support and infrastructure and technicians with data-handling expertise were deployed into teams generating, processing and understanding COVID-19 related data.

When broken down by subject discipline, design, creative and performing arts technicians provided the highest level of support to other areas (58%).

Many technicians also reported the provision of support to teaching colleagues in their rapid transition to online learning platforms.



“ I have helped produce information/leaflets to young children regarding the different types of common viruses the immune system encounters. This has replaced our normal outreach programmes where we deliver this information on site at local schools. ”

Continued Professional Development

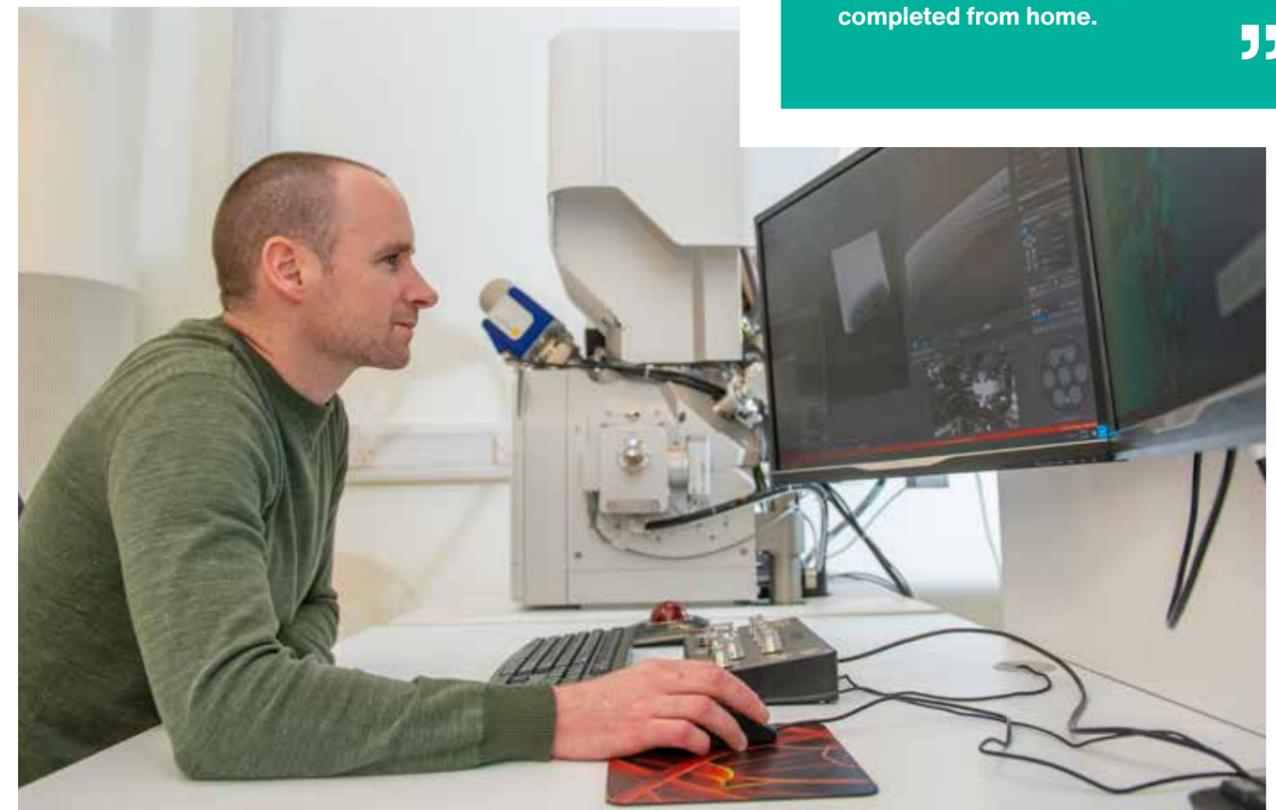
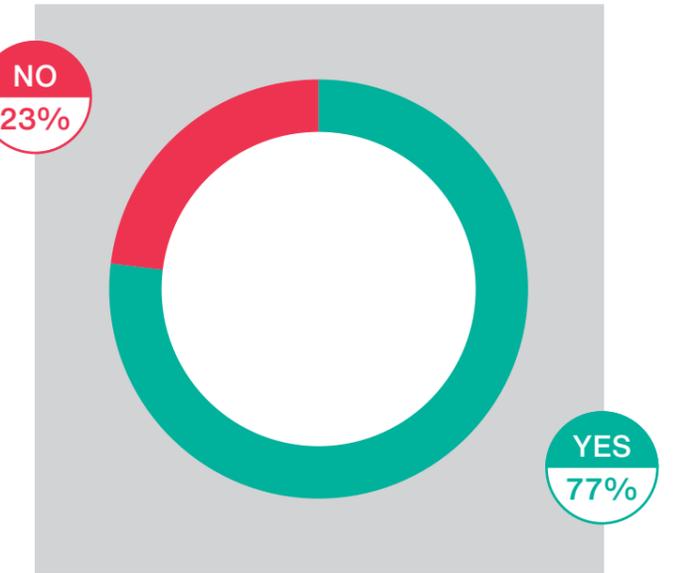
Have you had access to/done any CPD activities (e.g. webinars, online courses, etc.) during lockdown?

77% of respondents reported engagement with CPD activities during lockdown.

Common themes for CPD were soft skills (i.e. confident speaking, managing change, wellbeing), specialist skills (pipetting, microscopy, python coding, LabView), online tools (Teams, Zoom, Google Docs, supporting teams remotely), webinars on research or learning (external courses including the Open University and edX), essential skills (Health and Safety and fire safety training) and CPD towards professional registration (Science Council, Engineering Council, BCS).

Engagement or access for technicians in the 60-69 age bracket was lower than other age brackets but still stood at 59%.

Female technicians reported a higher CPD engagement than male colleagues (83% and 70% respectively). The gap between genders widened slightly with age, for example, 78% of female respondents aged 20-29 answered yes, compared to 74% of male respondents, whereas for technical staff aged 50-59, 87% of female technicians responded yes versus 71% of male technicians.



“ Numerous online course, safety courses, webinars and cpd courses completed from home. ”

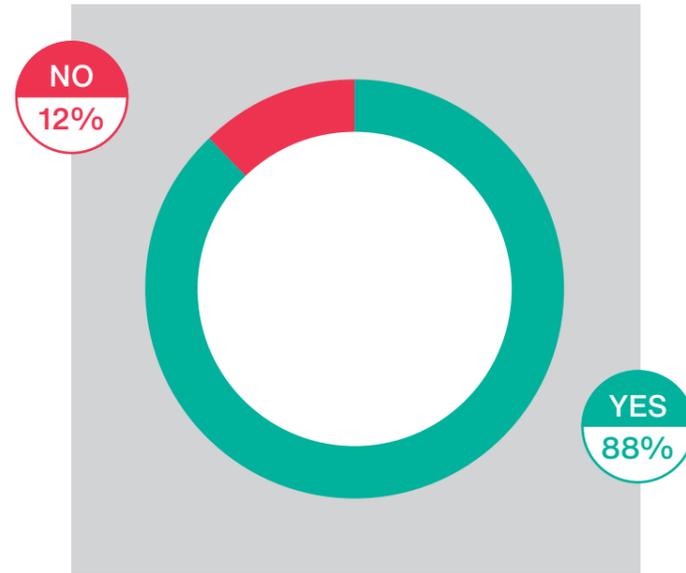
Communication & Support

Have you felt informed, engaged and supported by your institution whilst in lockdown?

88% of respondents reported feeling informed, engaged and supported by their institution whilst in lockdown. Recurring themes amongst these respondents included fast responses to allowing working from home, regular calls or virtual meetings with line managers and clear, transparent communications from senior leaders.

Of the 12% who indicated feeling unsupported, the recurring themes included a lack of communication, radio silence once furloughed and lack of clarity from senior leadership.

Those who didn't feel supported cited that the technical community specifically were not being given due consideration with academic and student colleagues taking priority.



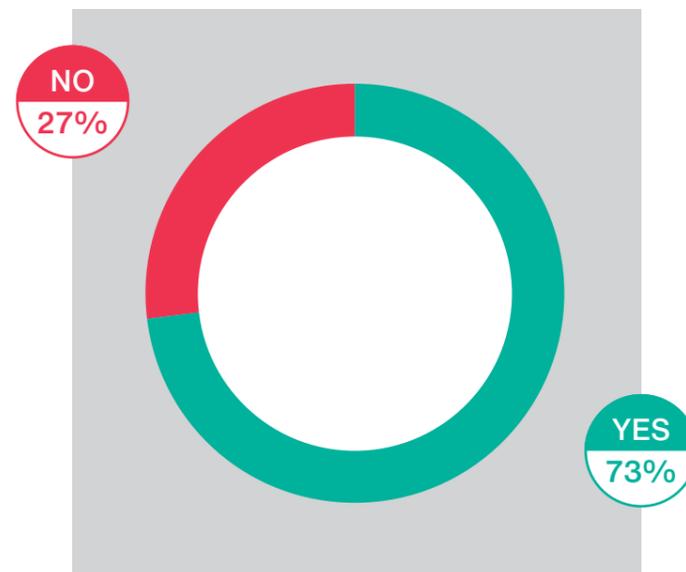
“ Clear and concise instructions have been provided via email to staff on the current status of lockdown. Help has also been provided on working from home and mental health support ”

Reopening

Will you be involved in reopening your area of work?

73% of respondents reported that they will be (or already were) involved in reopening their areas of work. This is an interesting contrast to the 52% of respondents that stated that they were involved in shutting down work areas and possibly reflects the added complexities of the reopening procedures in line with new health and safety guidelines.

Free text responses reported that much of the operational planning for return activities was undertaken by technicians as part of multidisciplinary teams.



“ The institution has worked really hard to safeguard employees' jobs and income and has provided reassurances that they understand the complexities of working from home e.g. if there are young children around. ”



“
I am planning with my staff for external contractors to come in and inspect equipment and ensuring that all statutory checks are done and completed prior to opening. Also working on a phased return approach and working with timetabling about occupancy impacts due to social distancing.
”

A ‘New Normal’

Do you have concerns about the eventual return to ‘normality’?

67% of technicians who responded to the survey reported concerns about the eventual return to normality. Key themes included:

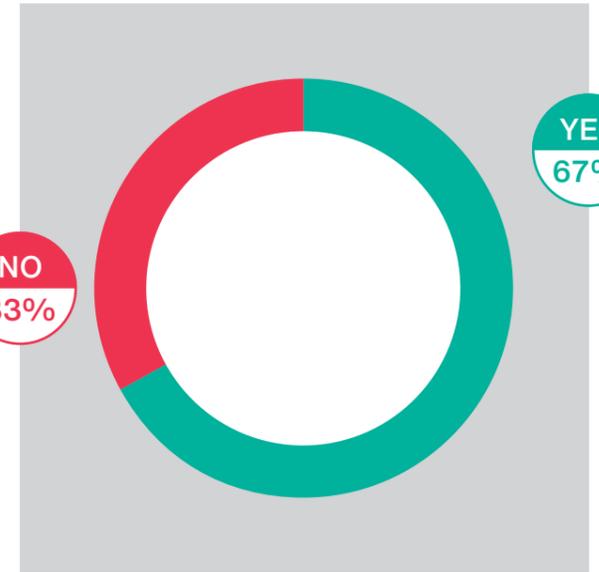
- Financial concerns - shutting down labs/ organisations and the possibility of technicians being made redundant.
- Concerns about how to do their work in a socially distanced environment, including the challenges of small laboratory spaces and a shortage of PPE.
- Concerns that technicians would be used as the ‘test’ staff who would be back on site first.
- Worries about the perceived low priority placed on technicians across Government.
- Personal uncertainties, including childcare, commuting and personal health.
- Concerns about the impact of working in air conditioned laboratories and the perceived impact on air quality.
- Concerns about how leadership address health and safety in relation to laboratory work.
- Concerns about going back to campuses and workplaces too soon and fears about a potential complacency.
- Resultant workloads from imminent staff changes and shortages, in response to severance schemes.
- Concerns over the unknown and what the new normal will be.

Female technicians were more likely than male technicians to have concerns - 73% of female respondents reported concerns compared with 60% of male respondents.

Furloughed respondents weren’t significantly more likely to have concerns than staff who hadn’t been furloughed.

The most common concern reported was the challenge of maintaining social distancing and other safety measures - technicians cited concerns that users wouldn’t maintain discipline, and often cited cramped conditions. Around 5% specifically referenced availability of PPE.

Female technicians (43%) were more likely than male technicians (35%) to cite challenges connected to social distancing at work among their listed concerns.



“
I have a lot of concerns about social distancing, especially as our office and lab areas are both open plan and shared by a few groups. A lot of lab spaces have poor ventilation, so this would be a worry, along with shared equipment, which again is sometimes used within confined spaces.
”

27% of respondents who gave detailed free text responses cited health concerns outside the workplace, such as commuting, the risk of infecting others at home, or increased stress or anxiety.

Other themes included concerns as to how to deliver services effectively in future or uncertainty over how things would work, increased workload due to possible staff shortages, and financial or job security concerns.

7% had concerns about senior staff or management’s approach, perceiving a lack of care and attention.

“
Technical staff are essential in the re-opening of university buildings but I am not convinced all teams will be consulted on what is possible
”

Sector Support

What support do you feel would be beneficial from the wider sector at this point?

Technicians welcomed additional support from the wider sector where possible and cited the following areas:

- The availability of grant funding and/or extensions to existing funding deadlines to safeguard technical jobs and ensure retention of skills.
- Guidance and training to ensure safe working environments and ensure technical colleagues are equipped and empowered to enforce health and safety policies.
- The creation and promotion of networks to share guidance, best practice and experiences.
- Where possible, clearer information and clarity on the future (such as contract extensions for technicians).



“
Guidance about expectations of returning to work, costed extensions to research projects and mental health support
 ”

Perspectives from Technical Managers

The project team recognise that the survey presents a snapshot of the impact of COVID-19 on the technical community in May 2020. Given the pace in which events have unfolded over recent weeks, a focus group discussion with a group of ten technical managers from six higher education and research institutions was held in July 2020 to draw out common experiences and key themes in relation to the impact of the pandemic. Colleagues represented medical and health science, physical science, engineering and art and design subject areas.

The following themes emerged:

Returning to Work:

Technical managers reported that they were now onsite, leading the reopening of buildings and workplaces in conjunction with Estates and Health and Safety colleagues and maintaining safe working environments. They have established and developed protocols and procedures to facilitate social distancing and are policing these arrangements on a day to day basis. Limited buildings had been reopened but plans were in place at all institutions to continue with a phased opening approach. The majority of staff are not back on campuses. Colleagues cited the pandemic as an opportunity to positively transform health and safety culture.

Staffing:

Technical managers discussed that a number of their team members had been furloughed and that they naturally felt a responsibility to check up on the wellbeing of these colleagues, given the unprecedented situation. They expressed a frustration at the lack of clear guidance from HR departments on the furloughing process but recognised that government guidance on this was changing very rapidly. They also described pressures around being one of the first staff groups to return to campus.

Examples cited included fears from themselves and their teams about contracting COVID-19, challenges on staffing regarding accommodating technical team members who were shielding or had childcare/caring responsibilities and a culture of “furlough envy”, where a minority of colleagues expressed disgruntlement on returning to work when other colleagues were furloughed.

Lack of Inclusion

Despite their active role in the recovery process, technical colleagues reported a lack of inclusion in decision making related to reopening workplaces. For example, many organisations had set up institutional task forces or committees but these rarely had technical representation. This caused frustration, as technical colleagues felt that their expertise and experience, particularly regarding working in laboratories and workshops, and with specialised equipment, was overlooked and undervalued. It was described as a ‘missed opportunity’ that could have increased effectiveness when considering reopening procedures, particularly given that the technical community were ‘hands on’ and actively leading this process. This added to the feeling of a general lack of understanding of technical roles and expertise from other staff groups within their institutions and reports of a naivety as to the challenges involved in reopening and maintaining safe technical working environments.

An example cited was a decision taken by Estates colleagues to turn off air conditioning in a suite of laboratories, without consultation with technical staff. One laboratory affected contained a highly specialised, high value piece of equipment that needed to be kept in a strictly temperature controlled environment. The equipment now needs costly repair, a situation that could have been avoided if technical colleagues had been included in the decision making on this.

“
There’s a feeling that roles have been stripped from us, it’s like they don’t trust us to do the job we are employed to do
 ”

Communication:

There was recognition that government advice was changing rapidly and that this presented challenges in terms of communication within organisations. However, technical managers described poor communication of institutional policy and changing guidelines to the technical community in general, linked to the lack of technical representation on institutional recovery committees. They reported having to search out information, rather than having it conveyed to them directly, coupled with being the 'point of call' for many colleagues who expected them to have answers and guidance on the return to work process. This presented an additional toll to their roles at an already challenging time: "We are the point of call but there is so much uncertainty".

Voluntary Redundancy Schemes:

The majority of institutions had initiated voluntary redundancy schemes, in order to make cost savings in a financially challenging time. The group felt that this had had a negative effect on technical roles in that a number of technical colleagues had sought this option and that in the short-term, these roles were highly unlikely to be replaced. Colleagues highlighted the crucial, frontline roles that technicians play in the student learning experience and expressed concern that this would be negatively affected in the forthcoming academic year: "There is an increase in our workloads in response to the pandemic, but we'll have less staff".



Remote Working:

Technical managers suggested that there was in some cases, a lack of consistency in the provision of IT equipment to allow technical team members to work from home and that better support for mobile working for technicians would be welcomed.

Mental Health & Wellbeing:

Given their (and their teams) frontline roles throughout all aspects of the pandemic (shutdown, civic response and reopening), technical managers reported a negative impact on their mental health and wellbeing. Colleagues reported a feeling of increased pressure and responsibility and "sleepless nights", together with a feeling that, given the intensity of the circumstances, it would be difficult to take annual leave. The group discussed the challenges in looking after the wellbeing of their teams through virtual platforms. There were some positives, colleagues reported a greater sense of teamwork across staff groups and there were examples of particular recognition of the role of the technical community throughout the pandemic from senior leaders which were clearly welcomed and appreciated.

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It's hard to look after the mental health of our teams virtually
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Moving Forward: Conclusions & Recommendations

The responses to the survey in May 2020, and the focus group hosted in July 2020 demonstrate that technicians have been integral to the UK higher education and research sector's response to COVID-19. They have enabled campuses and facilities to close rapidly and safely. They have maintained critical operations on site throughout campus closures. They have been at the forefront of their institution's civic response to COVID-19 through a wide range of contributions and, now and moving forwards, they are critical to the safe and effective reopening of workplaces.

Technical colleagues are essential to the day to day operation of many multi-user workplaces, for example, laboratories, workshops, studios, facilities and entire buildings. Once reopened, technical colleagues are likely to be responsible for implementing and maintaining safe working environments in their respective areas and it is crucial that institutions support and enable them in this endeavour.



This report offers the following recommendations to ensure that the technical community is supported moving forwards:

- Clear communication to technical managers and their teams is essential, particularly at a time when guidance is changing rapidly and when sudden local lockdown measures may be enforced. Technical staff will be on the ground, implementing and maintaining safe working environments for staff and student colleagues and it is essential that they receive clear and effective communication of new and revised guidance and policies.
- Inclusion of technical representatives on COVID-19 'restart' or reopening working groups, committees or taskforces is vital. Technicians have practical experience and expertise in operating complex, multi-user working environments and working knowledge of specialised equipment. This expertise is essential and should be utilised wherever possible.
- The technical community need tailored provision to support their mental health and wellbeing. A number of technical staff have played frontline roles throughout all aspects of the pandemic (shutdown, civic response and reopening) and others have experienced a period of furloughing. Care should be taken to ensure that their wellbeing is fully supported moving forwards. Institutions should ensure that technical staff managers are appropriately trained and are supporting their staff and considering their mental health and wellbeing effectively. Institutions should also ensure that technicians are aware of the support available to them personally both within and beyond the institution, for example, on campus staff counselling, contracted employee assistance programmes, professional body support.
- It is important that institutions ensure they understand the roles and contributions of their technicians and utilise their expertise, ensuring increased visibility and recognition of this community.
- There is a clear appetite for continued professional development from the technical community. A need for tailored, online training for technicians was identified. In the first instance, guidance and training to ensure safe working environments and enable technical colleagues are equipped and empowered to manage new workplace arrangements and enforce health and safety policies would be welcomed. Organisations are encouraged to offer guidance and training for technical staff through the provision of appropriate, timely and accessible training and support resources for technicians.
- Ensuring the provision of funding for grant extensions is inclusive of technical roles.
- The promotion and development of technical networks to enable the sharing of guidance, best practice and experiences.

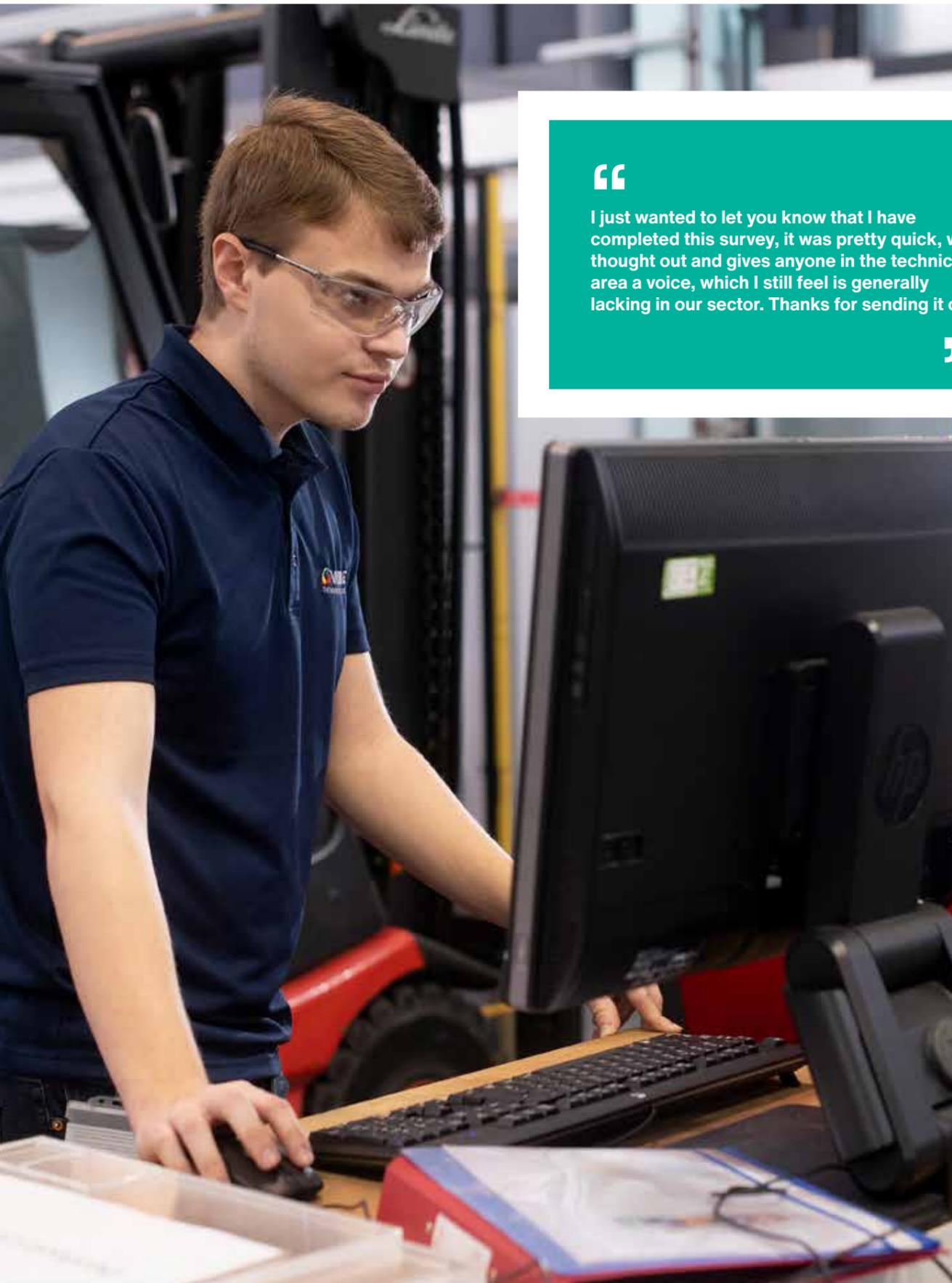
- Technicians play a vital, frontline role in delivering a high quality teaching and learning experience for students. Their expertise in designing and delivering practical teaching activities should be recognised by ensuring inclusion in strategic planning discussions around future teaching and learning provision, including the delivery of face to face teaching in socially distanced, practical environments along with the design and delivery of innovative ways to continue experiment/practical based learning online.
- Despite having roles that can be perceived to be only fulfilled in their practical workplaces (e.g. laboratories, workshops, studios etc), the majority of technicians reported that they have been able to work from home during the lockdown period. This offers an insight into possible future flexible working arrangements for technical staff in line with other colleagues.

It is important to note that the results of our survey provide a snapshot of the experiences of a small sample of technicians. Institutional and individual experiences may of course differ from those depicted, and as described on page 5 of this report, the definition of technicians' roles is broad and varies across higher education and research institutions.

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Technicians are the ones that will enable a safe and proactive return to a level of normality of onsite activities. Senior management should be guided by the specialist knowledge and safety expertise which is embedded in the technical community.

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“
 I just wanted to let you know that I have completed this survey, it was pretty quick, well thought out and gives anyone in the technical area a voice, which I still feel is generally lacking in our sector. Thanks for sending it out.
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Acknowledgements

The collaborating organisations wish to express their gratitude to every single technician who took the time to complete the survey and share their experiences. The significant number of free text responses demonstrated that they were keen to share their stories and that this is an important issue to them given their crucial role in the response to COVID-19 across UK higher education and research. The authors also wish to express their sincere thanks to the group of technical manager colleagues who participated in the July 2020 focus group and provided valuable insights into the challenges and opportunities facing their teams at this time.

Appreciation is also extended to colleagues at the Institute of Physics for their support in hosting the survey on their online platform, STFC for permission to feature the work of their technical colleagues in a case study and to the Technician Commitment Signatory community and Technical Managers in Universities (TMU) for their support in survey dissemination. This collaborative piece of work has been funded by the Technician Commitment, the Institute of Physics and the Royal Society of Chemistry. Collaborating organisations also wish to acknowledge the support and contributions of the Research England funded TALENT programme and Midlands Innovation.

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COVID-19

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All images were taken before COVID-19.

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