Success for Disabled Academic Scientists (SDAS)

Report for the Royal Society
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Introduction

A key priority for the Royal Society is to encourage equitable participation for disabled scientists in academic settings, enriching understanding and awareness by listening to and incorporating a range of disability-informed perspectives. In 2019, a sub-group was established within the Society's Diversity and Inclusion Committee for this purpose.

This Success for Disabled Academic Scientists (SDAS) report builds on earlier studies commissioned by this sub-group and aims to develop 'a more inclusive research system'. This research has focused on understanding the lived experiences of disabled scientists working in Science Technology Engineering or Mathematics (STEM) fields, to uncover and develop a series of best practice recommendations for UK universities and funders.

Previous research focused on issues of underrepresentation (Joice and Tetlow, 2021) and the barriers to the advancement of disabled scientists in STEM (CRAC, 2020), with additional research conducted by the Royal Society of Chemistry (2021) and NADSN (2023) to address obstacles and opportunities for disabled scientists.

The Society is committed to delivering high-quality, comprehensive research on disability inclusion in academia. For this report, it has commissioned Open Inclusion as its research partner. The Royal Society's Diversity and Inclusion Committee was consulted on the study design led by Open Inclusion, as was the Society's Steering Group of disabled scientists from various UK Universities. This introduced a degree of collaboration to this disability-informed research.

Research aim

The aim of this research project is to examine the lived experiences of disabled scientists in academic institutions working in STEM fields to make best practice recommendations for UK universities and funders to provide better support.

Research methodology

To achieve the research aim, Open Inclusion conducted a bespoke, multi-stage study between August 2024 and March 2025. This included regular Steering Group engagement and collaboration throughout the study.

The three sequential stages, each of which built on the previous, included:

Secondary research

1. **Literature Review**. Which delivered Leading practices, Supports, and Barriers for Disabled STEM Scientists in UK Higher Education Institutions (2019-2024). This highlighted the need for additional research focusing on the experiences of disabled scientists in academia. Findings from the literature review framed and informed our primary research approach.

Primary research

2. **In Depth Interviews**. Carried out online with 30 disabled STEM scientists from 20 different universities across the UK. Each shared their perspectives in semi-structured interviews lasting approximately 75 minutes.
3. **Round Table Group Discussions**. Four separate 90 minute online facilitated small group discussions were held online. Three groups included disabled and non-disabled scientists, along with professional scientists from individual HEI's and covered culture, policy and disabled scientists networks. The final group included line managers and a disability support advisor from a range of universities which covered line management experiences

More information about the methodology including the research questions at each stage is available in the Appendix.

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Executive Summary

Understanding and effectively addressing barriers to disabled scientists working in STEM fields is essential to encourage inclusive academic environments. When supported, disabled scientist can thrive, progress in their career and be recognised not just for their productivity, but for the full value of their contributions alongside non-disabled peers.

Higher educational institutions (HEIs) that improve their environments, including access to support such as assistive technologies alongside staff training and inclusive infrastructure can transform STEM environments into places where disabled scientists are fully supported.

Creating a disability-inclusive environment is particularly important in STEM departments because the nature of scientific work often involves physical spaces, specialised equipment, fieldwork, travel, and technical content, all of which can present barriers for disabled scientists.

Strengthening inclusivity not only attracts, retains, and empowers a more diverse range of talented scientists, but enriches research culture and innovation. These efforts open institutions to an underutilised talent pool, reinforcing their reputations as disability-inclusive institutions of excellence.

This could have significant UK-wide impact on educational experiences, research and progress across these fields. Students, especially those with disabilities will benefit from a broader range of teachers and research will benefit from a richer, more diverse set of perspectives and experiences.

Through the research, five pillars emerged that can be used by HEIs to address the range of barriers that disabled scientists experience.

Each of these is a key input into the experiences that scientists experiencing a range of different disabilities have in their team and institution, impacting their ability to work efficiently and confidently across the breadth of their role.

These pillars are:

1. Departmental culture
2. Disability policy
3. Disabled scientists networks
4. Line management, and
5. The role of funders

Department culture is foundational. It sets the tone from which decisions are made and influences team members attitudes and behaviours, positively or negatively. While pockets of proactive, inclusive cultures exist, many face negative attitudes and unrealistic expectations that impact personal well-being and career progression.

Disability policies and practices are vital for safeguarding individuals and the institution. Their inconsistent implementation, lack of clear communication, absence of strategic investment, and administrative burdens often render them ineffective. They often place undue stress on the disabled scientists to negotiate complex, incomplete and/or disjointed processes requiring them to self-advocate for needs to be met.

Disabled Scientists Networks offer valuable peer support and advocacy. They can foster a sense of belonging and provide a place to pool helpful knowledge. Their impact is most effective when backed with institutional support. Some could benefit from proactively welcoming people across a broader spectrum of disabilities, including intersectional experiences and non-visible disabilities.

Line managers emerged as the most pivotal point of an individual's enablement or disablement. Their support, or lack of it, directly impacts scientists' ability to efficiently conduct their work, their career progression opportunities and well-being.

Infrequently, a disabled scientist's needs were well met based on an individual manager's care and capability. More often managerial capability was hampered by the combination of undervalued managerial skills, inadequate training, insufficient time for management duties, and rigid assessment criteria for promotion.

Funders and research grants are opportunities to be unlocked. Disabled scientists can face more significant challenges securing research grants relative to non-disabled peers. While some funders are leading the way with inclusive practices, many lack clear ways to request accommodations, forcing disabled STEM scientists to navigate a system ill-equipped to support their access needs.

This report seeks to help institutions progress more confidently from understanding to action. A range of leading practices drawn from the research are shared against each of these pillars in addition to case studies to practically support decisions that will lead to change, drawing on what has been effective for disabled scientists in UK-based STEM roles.

Disability encompasses a very heterogenous group – in relation to diverse disabilities, differing work requirements and the institutions and teams people operate in. No single set of practices will work for all STEM scientists who experience disabilities. However, we hope that these pillars will provide a foundational baseline such as efficient workplace adjustment policies, proactively inclusive cultural design and effective line manager training, from which more nuanced adaptability to specific disability needs or individuals' roles and teams can be affected.

Effectively progressing any one of these pillars for positive change will improve experiences for disabled STEM professionals in HEIs. Consistency across the diversity of situations, access needs and career stages for more equitable enablement of disabled scientists will require all five pillars to be operating effectively, each reinforcing each other.

Different institutions and teams within may have some of these pillars further progressed than others. We would recommend working with disabled scientists and

scientists networks, line managers, HR policy teams and other stakeholders to assess the current priorities for your institutions within and across these pillars, drawing on internal leading practices to extend, and external practices to incorporate.

By better understanding and addressing current workplace barriers, embedding changes across these key areas of enablement or disablement, HEIs in the UK can unlock the full potential of their current and future disabled talent. Such changes can enhance the institution's reputation, research excellence, meet legal obligations, and cultivate diverse, equitable and highly productive STEM academic communities.

1. Culture

Disabled Scientists' Experiences

A recurring theme among participants is that departmental culture has a profound impact on them as disabled scientists. It can create significant workplace barriers or be an enabler to an effective, inclusive environment.

For many of those we spoke to, the overall culture of their department represents a barrier that negatively impacts their experience. However, pockets of good practice do exist and suggest positive ways of building towards a disability-inclusive culture across STEM departments and institutions more widely.

HEI and academic culture are formed through intricate networks of formal and informal interactions. Additional complexity exists within STEM departments, where cultures vary among research teams, disciplines, subfields and even funding structures.

Individual interactions, scientists attitudes, leadership dynamics, departmental values, policy implementation and communication all contribute to these micro-cultures. How disabled scientists engage with and feel a part of or excluded from localised cultural practices profoundly shapes their professional development and opportunities.

> "I switched my primary department. I moved more into neuroscience [switching STEM fields] because they were so supportive. I made them my primary department mainly for that reason. The culture was really supportive." (P5 - Limited mobility, mental health, chronic pain, auto-immune disease, other long-term condition)

Negative cultural attitudes can manifest in various ways, ranging from inflexibility in working practices, dismissive comments, inaccessible language to disrespectful

behaviour. This damages personal efficiency, self-esteem and contributes to emotional distress and anxiety.

Cultures that implicitly or explicitly value long working hours or physical presence can create barriers for disabled individuals. Conversely, cultures that prioritise flexible working and actively cultivate a more supportive environment for all scientists, including those with disabilities, can dismantle barriers that may otherwise exist.

Some participants noted unrealistic expectations around availability and working hours. This disproportionately affects disabled scientists and can negatively impact their health and well-being and lead to them feeling overwhelmed.

The individuals we spoke to are aware that practices across STEM departments vary. While the pandemic prompted some departments to re-evaluate and recognise the benefits of flexible, accessible practices, many disabled scientists experience less flexible attitudes now, a few years after the pandemic, across their departments and teams.

We heard that departmental communications relating to how disability is positioned could be improved to promote a more inclusive culture. A ‘medical model’ approach to disability - as a human problem to be solved - seems more pervasive than a ‘social model’ approach of understanding and addressing environmental barriers that impact people with additional access needs.

Many experience inconsistent messaging at their institutions creating a fragmented experience. This can impact the confidence of disabled scientists and signal that disability-inclusion is not a consistent priority. It limits their sense of belonging and through its impact on others can also limit equitable opportunities and career progression.

Participants mention several other cultural factors that can negatively impact their experience. These include hierarchical power dynamics, a narrow definition of

academic value reliant on traditional productivity metrics, and additional culturally-aligned attitudinal challenges for those who experience inequalities relating to other personal characteristics such as race or gender in addition to their disabilities.

> "[After disclosing my disability] that's when the bullying started. So, between that [facing discrimination as a disabled scientist] and the racism that I faced here, after 3 years … I decided I couldn't take it anymore. So, I've quit. I'm a second-class citizen as a woman. I'm a second-class citizen as a person of colour, and I'm a third-class citizen as a disabled person." (P5 – Limited mobility, mental health, chronic pain, auto-immune disease, other long-term condition)

Observed Good Practice

A positive culture is proactively inclusive, empowered by leadership attitudes and behaviours and operates across teams at all levels. It is respectful and adaptable across team differences, specifically including disability. Such environments enable disabled scientists to thrive, contribute meaningfully, and be recognised for the full value of their expertise.

Supportive departments and teams are characterised by better understanding of each other, care, shared purpose, and inclusive leadership. They prioritise both physical needs and emotional well-being. These positive cultures support disabled scientists (and often those with other intersectional identities, situational or temporary access needs such as injury or illness) to thrive. They remove barriers and encourage a sense of being valued and belonging. The rapid change and flexible response to the COVID-19 pandemic illustrated that institutional and departmental adaptability is possible.

Leadership is key. Buy-in, support and action from senior leadership within a STEM department is essential to build, progress and sustain inclusive cultures.

> "I think all of it really comes down to attitude, approach, culture, and values. In our department, Chair of the EDI committee has been a role that's been taken on

> by heads of department or senior scientists. This means EDI messaging comes from the top all the time. There is just this attitude that this is a part of who we are. It has to inform everything that we do. As a result of that, I think people are more willing to talk about all sorts of diversities." (P2 – Neurodivergent)

Inclusive cultures respect and value diversity rather than 'other' those who are deemed different, dividing the team and combined capability into sub-groups seen to be of differing value and provided different opportunities.

> "I think we can all work in solidarity. I believe that would be a much better way of working. It promotes much better allyship and prevents division." (P5 – Limited mobility, mental health, chronic pain, auto-immune disease, other long-term condition)

Supportive cultures reduce the stress and concern individuals experience when deciding to disclose their disability and ask for accommodations. Asking for and accessing accommodations can be key for disabled scientists to have an effective and fair environment. Such cultures create trust, psychological safety, and support greater emotional resilience – not just for the disabled scientists but for the whole team.

Those who are close count the most. Positive attitudes and support from peers, colleagues, and line management provide a powerful buffer against more ingrained attitudes and barriers that may exist at the departmental or institutional level. Equally a micro-culture that is hostile to disabled colleagues within a more positive broader institutional culture can create significant harm.

Active advocacy for inclusion embeds support into everyday interactions including formal and informal channels. From the disabled scientists we spoke to, examples of informal support include colleagues and peers proactively offering spontaneous support or assistance, providing flexible meeting formats, and professional support. More formal, mandated accommodations need to work alongside this.

> "A lot of the stuff that I've needed, it's been possible to do it informally. That speaks to a culture where we don't have to go through hoops and jumps, if we can just do it informally, it gets done." (P24 – Mental health, other long term health condition)

These examples of informal support demonstrate how inclusive culture involves individuals interacting with kindness and empathy towards one another. From the perspective of those interviewed, inclusive culture can provide effective space for disabled scientists to work, even when other structural barriers remain.

Intentionally cultivating inclusive, adaptive environments through transparent support mechanisms, inclusive leadership, and genuine peer-peer allyship enables the creation of teams that demonstrate positive, disability-inclusive cultures.

Conclusions

Culture – embodied through prevailing attitudes and actions of those within a group - significantly impacts the experiences of disabled scientists in STEM. It can be either a barrier to or an enabler of an effective, inclusive workplace, marginalising or supporting disabled scientists.

Proactive, flexible and supportive cultures within STEM departments positively transform the experiences of disabled scientists. They enable disabled scientists to thrive, removing barriers and creating a sense of value and belonging.

Today, many disabled scientists still experience negative aspects of their department cultures with damaging attitudes, unrealistic inflexibility, low visibility of disability inclusion and inconsistent messaging.

Leading Practice Guidelines

1. **Facilitate positive change and open communication** - Through joint initiatives with scientists networks and EDI teams with senior leadership support.

2. **Provide support across all career stages** - Proactively offer adjustments in job adverts, inviting to interview, on-boarding phase, and throughout an employee's career, and follow-up promptly on requests for support.
3. **Build community and celebrate contributions** - Establish spaces such as Disabled Scientists Networks that promote a sense of belonging and inclusion for disabled scientists and provide opportunities to showcase their achievements.
4. **Design for accessibility** - Create inclusive and accessible work environments (physical and digital) using inclusive design principles, with input from EDI groups, technology teams and scientists with lived experiences.
5. **Have an inclusive communications policy** - Provide communications in accessible formats as standard. Make this easy by using well designed and tested templates with clear easy to use content creation guidelines.

Case study

In Appendix 2 there is a detailed case study from the University of York on culture.

> "We have a really nice inclusive culture and network where we can all offer [mutual] support. And if somebody's struggling with something, we're all happy to brainstorm and chip in."

2. Policy

Disabled scientists' experience

Well-crafted policies that support disability-related needs are appreciated for being effective, formal mechanisms that provide vital support to disabled scientists. They make universities and STEM fields more accessible, inclusive places. This was highlighted by several experiences with standard sick leave policies leaving diverse disability needs unmet.

Policies for disabled scientists cover a range of needs such as available adjustments and non-discrimination. When policies are implemented by STEM departments to benefit disabled scientists, they raise standards and benefit the wider academic community.

> "I don't feel my career is on the line anymore. [Since the flexible workload model was implemented] tasks are [allocated and customised] based on the individual's abilities. Our department started this before the university. It has now become a central policy." (P2 – Neurodivergent)

The experience of disabled scientists working in STEM is shaped by a policy landscape that, although well-intentioned, can feel fragmented and complex to navigate.

Universities have a clear legal duty to provide reasonable adjustments and ensure non-discrimination under legislation such as the UK Equality Act (2010). Policies that extend beyond these foundational legal requirements such as adaptive meetings can better support disabled scientists develop and thrive in their institutions.

Participants noted that the current policy landscape for disabled scientists is often complex to navigate and inconsistent in its application across different institutions or teams. It was felt that there is an overreliance on individual discretion and

interpretation of existing policies. For disabled scientists, this variability of 'policy in practice' impacts whether they get the support they need, or not.

This inconsistency impacts their trust in a 'fail safe', reliable set of institutional policies. Participants frequently reported navigating a "high-stakes lucky dip" when it came to accessibility and support. As a result, disabled scientists often find themselves relying on informal, more precarious support arrangements. This creates a feeling of instability, without clear guarantees and processes they feel that they can confidently rely on to obtain or retain the support they need.

A recurring theme was that the onus placed on disabled scientists to find, understand, and navigate existing disability policies. This lack of clear signposting or communication puts a burden on disabled scientists. It is inefficient, costing each individual significant time, and contributes to a perception that disability inclusion is an aside rather than a more central policy.

A lack of joined-up support systems that are responsible for enabling the policy across the institution or across departments adds additional complexity to the problem of navigating an opaque system for disabled scientists.

> "That 'You're on your own' feeling. They might have some policies around disability inclusion, but they are not implemented very well." (P8 – Blind, partially sighted)

Specific complaints from disabled scientists included ambiguous guidelines, cumbersome administrative procedures, and the fact that they are often over-reliant on their line managers to access support, making it more difficult, stressful and variable in outcome.

Government bureaucracy can add a further to this. Support from government-funded schemes like 'Access to Work' was reported as burdensome and difficult to navigate, with significant delays.

> "It took two years to get anything put in place [from Access to Work]. Now, I don't bother…The number of forms and admin needed for Access to Work is overwhelming, and my workload is already ridiculous…It's a disability tax." (P11 – Hearing loss)

This combination of factors resulted in several participants not receiving or even applying for the accommodations and support they need, including assistive technologies, such as screen readers and speech-to-text software.

The Royal Society's recent report, "Disability Technology," highlights how digital and data-driven assistive technologies (AT) can empower disabled people to lead independent, fulfilled lives. In STEM departments, these tools can help disabled scientists to carry out research, teaching, and administration with autonomy and confidence.

Yet access remains unequal and inconsistent provision often leave scientists reliant on personal tools and workarounds.

The impact of policy gaps, complexity and inconsistencies in implementation negatively affects the day-to-day and longer-term professional experiences of disabled scientists. The impact of policies can start (and could be more positively influential) from day one.

> "You tick that [disabled status on job application], but there's no follow-up. So, it's another tick-box exercise. There are plenty of things we have to go through. Mandatory training, occupational health screening, and all sorts of things on induction. I don't recall disability declaration or reasonable adjustment discussions happening at that stage, and I think it's really important for that discussion to take place right from the beginning." (P3 – Mobility/dexterity impairment)

Some participants felt that existing disability policies do not provide equal levels of support for all disabilities. This was highlighted by several experiences with standard sick leave policies leaving diverse disability needs unmet.

Observed Good Practice in Policy development and implementation

Participants reported "pockets of good policy" across their UK universities, demonstrating that when good policies and practices align, they positively impact disabled scientists.

Many scientists benefit from policies that define inclusive adjustments and provide more universally inclusive workplace arrangements.

> "The environment should simply be inclusive when we get there. That benefits everybody." (University of York roundtable)

Clearer, straightforward practices to find and navigate policies are helpful. Disabled scientists who were clearly signposted to policies which provided them with suitable support felt more secure and reassured in their role. Being directed to clear, formalised frameworks and policies, allowed scientists to more confidently navigate their career. Participants reported multiple benefits including job security, better able to manage their workloads, reduced turnover (flexibility that enabled them to stay in their roles when changes occurred), increasing efficiency, a greater sense of well-being, and fewer barriers to career progression.

A particularly impactful policy mechanism observed was the use of "disability passports". These formalised agreements document a disabled scientists member's reasonable adjustments, minimising the administrative burden of renegotiating accommodations with each new role or line manager. The accommodations effectively transfer with them when managers change, or when they move department, team or across universities.

> "Things are definitely on the up! We now have a disabled scientists service. They deal centrally with reasonable adjustments and liaise with line managers. They do something called 'passporting', which is new. If you have a particular reasonable adjustment in place, and you change jobs within the university, then you can bring your reasonable adjustments with you." (P20 - Neurodivergent, Mental Health, Auto-immune disease)

This system reduces the emotional stress of repeated disclosure and inefficiency of renegotiating for what has already been ask for and provided. Support becomes more consistent and reliable, moving away from dependence on individual line managers or being in a certain team.

Policies such as disability leave and flexible workload models are crucial in levelling the playing field and reducing scientist turnover. Embedding disability-related flexibility into university policies enables disabled scientists to work around their access needs, especially where they may fluctuate across time. For example, some fellowships offer a crucial "fail-safe", allowing disabled scientists adjustments to workloads and phased returns that are less strict than standard HR policies.

Inclusive policies and flexibility to better support diverse human experiences can improve the opportunities and experiences for many scientists. Many people at some point through their careers experience disability or specific access needs from illness, injury, ageing or changes in circumstance. Adaptive policies can also benefit scientists with childcare and caregiving responsibilities. Good policies reduce the impact of changes in personal needs or caring responsibilities on scientist turnover or losses in efficiency by flexing in well-designed, human and practical ways.

Policies can also impact external standing. Where STEM departments proactively incorporate disability inclusion into their Athena Swan charter accreditation, they may also benefit from a higher level of recognition. This reflects the intersectional value of good policies.

Conclusions

Effective policies and aligned practices create fairer and more supportive environments for everyone to thrive, both in their current roles and future careers.

Clear policies consistently implemented enable disabled scientists to focus on their work and worry less about navigating systems for adjustments they need to be supported in their job. It cultivates trust and disabled scientists feel recognised and supported to engage fully in their roles and contribute to the life of the department.

Good signposting both from the start when people are being inducted or as their needs change ensures individuals understand their rights and how to access support. This reduces the reliance on informal channels, which by their nature are less stable, enforceable or consistently available.

Leading Practice Guidelines

1. **Design policies that address challenges impacting disabled scientists** in their work. Consult with them to shape policy that meets their needs along with consulting other stakeholders who will help implement the policies
2. **Ensure policies support the diversity of disabilities** providing equally effective support, where necessary creating specific accommodations for subgroups
3. **Communicate policies clearly starting from onboarding**. Signpost the pathway to the policy, making it clear who it covers and how to access adjustments or relevant support, including assistive technologies.
4. **Integrate disability policies into practices that reduce inconsistencies** in experiences for disabled scientists. Ensure policies are known, deployed, accessed and supported by those involved as consistently as possible. Consider implementing mechanisms like ‘disability passports’ so that once applied and accepted, workplace accommodations can be efficiently ported
5. **Create policies that benefit wider audiences**. Where possible, design policies that empower scientists to be optimally effective and supported through other

life changes such as injury or changing caring needs. e.g. flexible working options

Case study

In Appendix 3 there is a detailed case study from the University of East Anglia on policies and responding to physical access needs in STEM.

> "What we've tried to emphasise is that what we're doing here is a journey. It's a long process. It's an ongoing process. It's not a one-off tick box." (University of East Anglia roundtable)

3. Disabled scientists networks

In universities, Disabled Scientists Networks bring disabled scientists in their post-doctoral careers and the wider disabled scientists community together in a community that can provide a sense of belonging and mutual support. Well-established networks serve as crucial hubs for peer support and disability advocacy, ensuring disabled scientists are seen and heard within their departments and across institutions.

Disabled Scientists' Experiences

The practical and emotional support disabled scientists receive from Disabled Scientists Networks in their universities varies. Not all institutions have dedicated disability networks. Where they exist, their effectiveness can differ greatly based on how well they are organised, the level of senior university involvement and whether their primary focus is support or advocacy.

When Disabled Scientists Networks are well-established and supported, it is consistently reported that they contribute to a more positive experience for disabled scientists.

Participants describe these networks as a safe space for disabled scientists to,

- openly discuss their lived experiences
- support and be supported by others who understand
- seek guidance from peers to address disability-related challenges

This shared understanding creates a sense of community and psychological safety that many feel is essential for overall well-being and a sense of belonging.

> "For me, having the Disabled Scientists Network has been life-changing, because you're not on your own anymore, and you don't have to pretend that everything's fine." (University of Manchester roundtable)

This supportive atmosphere leads to increased confidence navigating careers, with reported reductions in stress and anxiety related to disability barriers. For example, when Disabled Scientists Networks advocate for better reasonable adjustments or the facilitation of mentorship opportunities, the benefits were described as significant.

Through Disabled Scientists Networks engagement and support, some disabled scientists are given confidence to self-identify as disabled for the first time. This is fundamental both at a personal level and in practical terms for receiving accommodations and support from their line manager, STEM department and institution. One senior disabled scientist shared their autism diagnosis initially within their Disabled Scientists Network and subsequently more widely to senior colleagues and their STEM department.

Being part of specific STEM sub-groups within broader Disabled Scientists Networks can provide benefits and help address unique workplace challenges facing STEM scientists, such as ensuring effective adjustments for lab work.

Not all disabled scientists report positive experiences with their Disabled Scientists Networks. For example, lack of influence or senior involvement can make networks feel less effective. When concerns are not heard or acted on, disabled scientists can be less willing to engage.

Disabled Scientists Networks often rely on volunteers giving up personal time. This lack of dedicated time provides an additional workload for time-pressured disabled scientists. It makes it harder for the networks to maintain their positive change momentum.

Not everyone who could benefit from Disability Scientists Networks always feels equally welcome. To encourage participation that could positively influence scientists wellbeing and outcomes, it is important to address the uncertainty felt by some disabled scientists, particularly those with fluctuating conditions or without a formal diagnosis. Scientists networks can also reflect hierarchies embedded in the institution such as contract level or status. The sentiment among some late-identified neurodivergent scientists was that this lack of clarity, coupled with a perceived emphasis on more visible disabilities, is a barrier to their engagement.

> "Disabled Scientists Networks do not always represent individuals with invisible disabilities… rather, they tend to reflect individuals with 'permanent contracts' and 'straightforward disabilities'." (P16 – Mobility impairment, cognitive impairment, neurodivergent, mental health).

Disabled scientists consistently highlighted the limited instances where Disabled Scientists Networks receive dedicated funding or where members are granted 'release time' from their academic duties to participate. They felt that formally recognising this work as a valuable contribution to the institution, through support

like funding and protected time, promotes a sense that the network is valuable and prompts more disabled scientists to actively engage in it.

> "The reason I stepped back [from involvement with the Disability Scientists Network] was purely workload related. I found the workload ridiculous and … it wasn't recognised in terms of career advancement". (P11 – Hearing loss).

Observed Good Practice

Successful Disabled Scientists Networks were perceived by disabled scientists as significant enablers of change in their institutions. Based on their experiences, when Disabled Scientists Networks are well-established and seen as effective, they actively support the development of new practices and policies, challenge stereotypes and champion inclusive practices. This ensures disabled scientists are better represented and considered, providing important opportunities to influence institutional decisions and overall direction.

> "One of the successes we had was getting the senior leadership team to consult with the Disabled Scientists Network in the first place. They now engage with the network and come to ask about new policies or advice." (University of Manchester roundtable)

It was noted that when Disabled Scientists Networks include scientists, professional services scientists and postgraduate researchers, this diverse representation significantly increases the Networks' effectiveness in influencing change. The University of Manchester, for example, was cited as a strong illustration of how this broad representation ensures a wider variety of voices are heard and more effective advocacy and policy.

Disabled Scientists Networks are typically based within departments which focus on student well-being, equality and diversity, or general scientists support such as Human Resources. Their positive impact often extends well beyond the remit of the

department they reside in such as actively advising leadership, campaigning for policy changes and providing support to individual disabled scientists.

The research highlighted a “dual-network” approach as particularly effective. This model involves two interconnected groups: a Disabled Scientists Network and a Disability Equity Action Group, which includes both disabled scientists and non-disabled allies.

The Disabled Scientists Network provides space for disabled scientists to share lived experiences and generate ideas. These insights are then translated into concrete actions by the Disability Equity Action Group, leveraging the expertise of colleagues from areas like HR and Estates. This dual approach significantly improves support for disabled scientists, underscoring the importance of both dedicated peer support and collaborative action in achieving broader institutional change.

Participants also called out the involvement of a visible and committed senior champion (such as a Pro-Vice-Chancellor, Dean, or Head of HR) as essential for a highly effective Disabled Scientists Network. Senior-level influence helps advocate for the Network's recommendations, secure financial or other resources and ensure disability inclusion is prioritised by leadership. In STEM fields, this senior support can translate into vital practical initiatives, like making labs accessible or providing tailored assistance for scientists with fluctuating conditions in fieldwork and lab work.

Successful and supportive Disabled Scientists Networks, as described by disabled scientists, operate with clear objectives and a focused approach ensuring their work remains relevant and strategically aligned to broader Equality, Diversity, and Inclusion (EDI) goals.

To ensure the Disabled Scientists Network is welcoming to all types of disabilities including invisible disabilities, fluctuating conditions and neurodiversity, it needs to explicitly welcome those who may not be sure if they belong. This could include stating that a formal diagnosis is not required for membership, proactively

describing the breadth of disabilities included and promoting a culture where all disability-informed experiences are welcomed equally.

The most successful Disabled Scientists Networks are praised for using a variety of communication methods to reach members and the wider university community, such as dedicated intranet pages, email lists, social media groups and podcasts to raise awareness of issues and share knowledge.

A recurring sentiment expressed by participants was the importance of Disabled Scientists Networks in recognising that disabled scientists have multiple identities (e.g. gender, ethnicity, career stage) that all impact their experience. Success depends on considering these intersectional challenges and actively collaborating with other scientists networks (such as BAME networks, LGBTQ+ networks, and Women's networks) to provide holistic support that helps address overlapping forms of discrimination and intersectional access needs.

Conclusions

Disabled Scientists Networks are fundamental to creating and supporting an inclusive university environment for disabled scientists. Their existence ensures that supportive communities are nurtured, challenges and ideas are shared by those who have related lived experiences and disabled voices are heard in a way that can more efficiently influence policy and practice.

Their effectiveness can be limited by a lack of wider institutional commitment and insufficient resources. Furthermore, uncertainty about eligibility can deter engagement among some disabled scientists.

Combining dedicated Disabled Scientists Networks with broader action groups is seen as an effective model for translating lived experiences into concrete, impactful change. This allows separate but connected spaces for peer-peer support and wider institutional engagement.

Leading Practice Guidelines

1. **If one does not yet exist, create a Disability Scientists Network** – Learn from other institutions that have a vibrant and positively impactful network. Start by engaging informal groups that may already exist through active support.
2. **Secure executive sponsorship** to demonstrate clear institutional commitment. Support with sufficient resources for it to be effective such as time spent on Disability Scientists Network initiatives being recognised in workload models.
3. **Consider a two-element model** where the Disability Scientists Network offers a safe space for disabled scientists to share experiences, complemented by a broader action group open to all scientists and allies that advocates into the broader institution for change.
4. **Engage with Disabled Scientists Networks** – Encourage productive collaboration and engagement between the Disabled Scientists Network and the institution to feedback on relevant issues and help inform future changes, training or messaging. Ensure contributions for such work are recognised or the time demands are limited.

Case study

In Appendix 4 there is a detailed case study from the University of Manchester on Disabled Scientists Networks.

4. Line management

Disabled Scientists' Experiences

Line managers represent the primary funnel through which disabled scientists either gain enablement or experience systemic disablement. They are the key point of contact for a disabled scientist seeking support. This can include setting up informal arrangements, such as minor adjustments in communication needs, or providing formal referrals to other teams, such as occupational health.

We consistently heard that when line managers provide positive and proactive support it allows disabled scientists to continue working, thrive, progress and feel safe. Participants specifically highlighted ad hoc support that line managers can valuably provide. Line managers have the unique ability to implement informal adaptive arrangements. These often arise when a line manager has listened to the individual, understood their needs and suggested and/or supported adjustments that the individual has requested.

The onus of coming up with ideas for informal support is often placed on the disabled member of scientists. Line managers can play a valuable role, offering alternatives the scientists member may be unaware of or signposting additional support.

Working in some STEM fields that involve lab work, can be physically demanding, inaccessible to some and challenging for others. This presents an additional challenge in comparison to other faculties. Adjustments, such as paired lab working, in STEM fields requiring lab or fieldwork is even more crucial.

However, the reliance on informal arrangements can create feelings of vulnerability and insecurity. Line managers can change and there is often no guarantee that adjustments will persist or can be relied on.

> "It's more the shadow of possible insecurity. I don't feel secure that this arrangement will continue because there is nothing we can do to protect ourselves." (P21 – Limited mobility, mental health, chronic pain, auto-immune disease, other long-term condition)

The support given to disabled academic scientists by line managers significantly impacts their career and overall experience in academia. A pre-requisite for much of the support available to a disabled scientist through their line manager is first having a conversation with them about their needs or disability. Participants were mixed in whether they trusted their line manager enough to have these conversations, especially if they had a non-visible disability.

> "Why bother [to disclose]? All that happens is I am seen as a liability, and I am managed out the door" (P26 – Limited mobility, other long-term condition)

Where this lack of trust limits individual's sharing their needs with their manager, this restricts their access to adjustments and services that may benefit them and support them to do their best work.

Participants highlighted that the consistency of support offered by line managers is uneven, leading to unequal experiences across and within institutions. This disparity is heightened by quite hierarchical structures within HEIs, giving line managers significant influence and power over disabled scientists. This relationship is central for both reasonable adjustments and career progression.

It was felt by many that line managers are in a position to either enable or block career progression. The importance of this relationship means a poor line management experience can lead to a disabled academic leaving the institution or academia entirely.

> "I have lots of papers and yet my [line manager] refused to put me up for an award last year. I am the most productive person in the department. … She would block my promotion to full professor, for which I meet all the criteria. And yet the

> system is set up in a way that one person can have such a detrimental impact to a career." (P5 – Limited mobility, mental health, chronic pain, auto-immune disease, other long-term condition).

Promotion criteria across institutions tend to focus on individual academic output (papers, conferences and teaching) above people management capabilities. As a result, some line managers are academically accomplished but lack the people management skills to be a successful disability-inclusive manager.

> "[We need to value] emotional intelligence as much as we value intellectual intelligence, so that that becomes a recruitment and a promotion criteria. Certainly in my elite university it's all IQ, not EQ." (Cross-university roundtable)

Line management training reflects this orientation to academic achievement. The current quality and quantity of the training varies across institutions. Often, managers receive generic EDI training, neither specific to line managers nor to disability or reasonable adjustments. It is generally delivered online with limited or no opportunity to ask additional questions. The impact is that line managers who have not had adequate training often don't know how to best support the disabled scientists they manage.

Observed Good Practice

The research found that effective line management contributes significantly to a positive and inclusive experience for disabled scientists creating environments in which they can thrive and progress equitably. Line managers can also encourage and contribute to inclusive team and departmental culture by advocating for inclusive practices and attitudes that support their disabled scientists. When observed, this helps to build trust between disabled scientists and their line manager.

Some STEM research areas are more physically demanding than others. By adopting adaptable workload arrangements and ways of working (such as pairing disabled

and non-disabled scientists in lab experiments) line managers can ensure access to meaningful engagement within STEM labs and research communities.

> “My proposal is about sharing. Like you take an older experienced academic who might be disabled and not able to do some things, and you take a less senior or junior academic, and rather than it being a mentoring, it’s about support as interdependence.” (P4 – Hearing loss, Sight loss)

Disabled scientists noted that when they trust their line managers, they are more willing to disclose their disability, and have conversations about the practical measures that help them optimise their capability in their role. This sense of safety allows the manager and scientist to jointly work through and find better options together. Disclosure is important for both the individual and the institution as it allows for support and adjustments to be arranged.

> "[Telling my line manager] felt like a safe thing to do. I didn’t feel that I was putting my career at risk by doing so." (P2 – Neurodivergent)

Participants highlighted that institutions are beginning to recognise the importance of line management by including it in their workload model. This affords line managers more time to dedicate to managing their team and provide support to individuals based on requirements.

Line managers who demonstrate a more flexible, positive impact and readiness-based approach to promotion rather than a rigid, tick-box style are appreciated. This allows them to acknowledge individual strengths and consider disability-related circumstances to support fair career progression.

Institutional interventions can help mitigate the variability of accessing informal or formal support. This includes introducing disability passports and tailored adjustment plans. These provide reassurances that adjustments will remain as scientists members change line managers or teams, increasing workplace confidence for disabled scientists.

Participants found that training and support to line managers on how to effectively support and manage disabled scientists is helpful where it is provided. Effective training includes information on equality, reasonable adjustments and disability awareness. For everyone to benefit from the training, most disabled scientists thought it should be mandatory.

Conclusions

The evidence indicates that line management plays a critical role in shaping the experiences of disabled scientists in STEM. Line managers are most effective when they have protected time for line management, are trusted by their scientists member, are well trained and informed about how to best support disabled scientists and assess their readiness for future opportunities, and institutional structures are in place to protect the support available and given to disabled scientists.

The undervaluation of line management within academia and the inconsistency in support and training for line managers creates significant challenges and variability. To ensure equitable experiences for disabled scientists, institutions need to shift towards a system that more consistently supports effective, disability-inclusive line management skills and practices.

Leading Practice Guidelines

1. **Professionalise line management as a key part of role** – Provide dedicated time for line managers to conduct their management responsibilities (if not already in place).
2. **Enhance inclusive line management practices** – Train managers (see training recommendation below) and support them to be more confidently and proactively disability inclusive. For example, they could ask all scientists if they have additional requirements – when they join the team and over time as needs may change. They could proactively suggest accommodations that are available at the institution that may suit the individuals that they manage.

3. **Give line managers the tools, support and motivation they need** – This could be from the EDI team, scientists disability services, using external expertise, HR or another team member. Remind line managers of the legal requirement to provide reasonable adjustments and support them meet varying scientists needs.
4. **Formalise support as and when needed** - Explore how ad hoc support set up by a line manager can be recognised so that adjustments can be relied on as people move over time. This could be achieved using a disability passport or tailored adjustment plans.
5. **Provide progression routes independent of line managers** – Allow scientists to access routes to progression without support from their line manager. This could look like scientists putting forward their promotion application to a separate board which their line manager does not sit on.
6. **Support inclusive career progression** – Ensure promotion criteria has built in flexibility to enable disabled scientists to develop and progress equitably. For example, accept that a disability may make specific promotion criterion harder to achieve (depending on the disability) and provide alternative, flexible criteria for disabled scientists to showcase their performance and readiness.

Training topics for line managers that disabled scientists think would be helpful to cover include:

- general awareness and information about different types of disability
- what the social model of disability is and why it's important
- what disability inclusive line management is, including how to promote psychological safety between line managers and direct reports
- how to have supportive conversations to focus on individual needs
- formal and informal support and adjustments for disabled scientists
- information about any specific institutional policies related to disability, such as any reasonable adjustment policies

Case study

In Appendix 5 there is a detailed case study from a cross-university panel on line management.

"I'm disabled, and I've had a long-term agreement [with line manager] that I work flexibly. But it is so annoying [new on-campus work policy], because actually, flexible working is the best way to get out the most out of everybody. So, you need to put in place line managers who are confident, trained, supportive, realistic and creative." (Cross university roundtable)

5. Role of funders

Research funding plays a crucial role in STEM fields, influencing career paths and access to opportunities at UK universities. While there are pockets of good practice within the funding landscape, this is very inconsistent and there is a need to make access and application for funding more inclusive.

Experiences of Disabled Scientists

Disabled scientists described navigating a complex funding environment where application processes and administration can inadvertently create barriers.

The current funding experience for disabled scientists reveals disparities across different funding bodies. Researchers sometimes encountered inflexible processes and timelines that were difficult to manage for example with varied energy levels from chronic conditions. This pressure to meet rigid grant requirements can impact their ability to secure funding.

Disabled scientists reported that perceptions of discrimination during funding applications sometimes made them feel vulnerable. This led to some choosing not to disclose their disability, fearing it might lessen their chances of a successful application.

> "If you justify your resources based on your disability, then you're having to disclose your disability to the reviewers who might then have their own prejudices and ideas about what a disabled scientist is capable of. So, I don't think it should be in the funding applications, or at least not the bit that the reviewers see, because there is just so much potential for prejudice there." (P30 – Multiple auto-immune diseases)

When funders asked about disability without following up on access needs, it was found to feel like a 'tick-box exercise.' Conversely, when questions about disability were framed positively around access requirements and disclosure was actively encouraged, disabled scientists were more likely to share their information, creating pathways to better support.

The application process itself was often described as inconsistent and, at times, inaccessible to disabled scientists.

Securing grants can be challenging due to varied funder policies and a lack of standard application requirements, information, and guidance. While some funders offer excellent support, this consistency isn't universal. Some disabled scientists reported feeling a need to 'justify' accommodations required.

Disclosing accommodations in grant applications was not always straightforward or easy to navigate. Disabled scientists often had questions about available adjustments, and the process, including who was responsible for accommodations, wasn't always clearly communicated in the guidance.

> "They're starting to come in on a few of the funding applications. But no, I can rarely share my disability requirements on application forms for funding on the standard [UK funding bodies] type forms. There's nowhere for me to say, 'I'm a disabled researcher, so I need these accommodations.' I have to do that separately.' (P1 - Mobility/dexterity impairment, cognitive impairment)

A common workaround involved incorporating additional access needs into overall research costs due to the absence of a dedicated section in some research funding applications. It was also reported that disabled scientists often received only partial, or no, funding for their disability-related access needs. Overall, encouraging and enabling disability disclosure is central to effectively supporting disabled scientists in securing funding.

Observed Good Practice

Despite existing challenges, positive developments are emerging, demonstrating more accessible and inclusive funding practices. These examples are creating more equitable research funding access.

Participants mentioned that many funding applications now include questions about disability. Some funders further support this by offering additional funding for accommodation costs and assisted travel. This is a positive step in recognising potential financial barriers for disabled scientists and helping transition from understanding applicants' relevant disabilities to adapting their support to them.

Forward-thinking funders invite applicants to share their disability status early with reassurances of inclusion (and non-discrimination), effectively positioning this as a priority and building trust. Dedicated, clearly sign-posted sections for accommodations or flexible working arrangements within applications work well, allowing disabled scientists to articulate their needs upfront and secure necessary support.

> "I'm going to get a little bit emotional; I apologise. The grant I just wrote was the first time I wrote it [shared my disability], and I got it. The reviewers mentioned it, and it felt so validating. It makes me feel like I'm a whole person. Like I'm not hiding a huge part of who I am. I can still do it [succeed in academia], you know?" (P27 – Mental health, chronic pain)

Some funders also provide simplified application processes, including dedicated support scientists. This significantly reduces administrative burden, enabling disabled scientists to focus on the scientific merit of their proposals.

A highly effective practice observed was when funding applications recognise and support the direct incorporation of access costs into grant budgets. This ensures necessary accommodations are an integral part of the project from the outset.

> "I'm looking at the Daphne Jackson fellowships. Part of what they do is provide support while you're applying, which I think is fantastic. They were originally for women coming back from career breaks, but they've expanded to anybody who's had a break in their career of more than two years because of ill health or childcare. And there you do a very brief first application; I think it's like less than a page of A4. They assign you somebody to help you write the full proposal." (P16 – Mental health, fluctuating long term condition)

UK funding bodies hold considerable power to shape disability inclusion and accessibility in universities showcasing through their practices a more positive and equitable experience for disabled scientists. It was noted by some disabled scientists that the influence funding bodies have could encourage universities to implement policy changes and more actively support disabled scientists' employment in STEM.

> "A couple medical funders put that [disability inclusion] in stone very early on, which made it a real push for medical departments to get this. It forced it to have

> very senior backing because heads of department realised if our funding goes, we can't function anymore." (P24 – Mental health, other long term health condition)

When funders' actions make the scientific funding system fairer, it validates and alleviates barriers to success, providing practical space for scientists, including those with disabilities, to do leading STEM research. It also leads to disabled scientists often feeling a greater sense of belonging in STEM. This occurs when funders, grants, and fellowships offer accessible and adaptive funding applications and requirements, improved support and delivery flexibility such as extended timelines.

Government and charter funding also demonstrate the potential to drive institutional change. The incorporation of disability equity into the 2029 Research Excellence Framework (REF) cycle is a meaningful step in this direction. By consistently considering disability inclusion in funding frameworks and processes, funders can use their influence to support positive change, ensuring disabled scientists have the resources and support to do the industry leading work they are capable of.

> "What I would really like is to have a dedicated pot of money for disability-related additional costs, which has a really light touch, simple application procedure so that you're not adding lots of extra admin. So that somebody who has already got a grant or funding can apply for additional budget." (P30 – Multiple auto-immune diseases)

Conclusions

The experiences shared within the research funding landscape highlights hope as positive change enabling disabled scientists starts to influence funding practices. There is however significant opportunity for further progress making funding access more consistently available to disabled scientists in a way that is equitable with their non-disabled peers. While navigating complex systems, inaccessibility and inconsistencies can still be burdensome in some funding spaces today, increasing awareness among funders and the emergence of good practices provides encouragement for ongoing progress.

By creating accessible formats, embracing clear, proactive policies, building trust through open communication, and embedding flexibility and access costs into funding frameworks, funders can support disabled scientists to contribute their invaluable expertise equitably within the STEM community.

Leading Practice Guidelines

1. **Provide streamlined accessible funding application processes** to make it easier and more accessible for people with a range of access needs to independently and efficiently apply
2. **Have a statement in the funding materials about non-discrimination**. Reassure applicants that sharing disability or access requirements is welcomed and this information will not disadvantage their application.
3. **Encourage applicants to share relevant disability information** including adjustments they need to make the process more accessible. This practically enables scientists with a wide range of disabilities to navigate the funding process more smoothly.
4. **Provide adaptive disability-inclusive funding** Consider providing specific funding for additional incurred costs related to disability which grant holders can apply to separately to or as a dedicated part of the funding application.
5. **Provide disability training for assessors** to help them understand how disabled scientists can be equitably assessed and supported with research funding adaptations.

Conclusion

Our research into the experiences of disabled scientists in UK Higher Education Institutions reveals a landscape that has both immense potential and persistent systemic challenges. Accounts of STEM careers that were shared through the research are deeply individual, showcasing varying successes, barriers and institutional, department and team practices.

The impact of inequality on disabled scientists in STEM is not uniform. It can vary significantly based on work contexts, fluctuating support needs, intersectional identities and professional status. These challenges are not static but complex and

variable. They evolve over time and are influenced by systems, individuals, and cultures within academia that disabled scientists interact with.

However, some persistent and interconnected intervention areas were identified that can either perpetuate disadvantage or enable equitable opportunity for disabled scientists. We have outlined each of these in this report. These include the institutional and team culture, policy, disabled scientists networks, line management, and funding dynamics. Addressing these factors together could help unlock immense potential, improving the experiences and opportunities for scientists with differing disabilities at all levels in their academic careers.

Evidenced with rich authentic insights from disabled scientists currently working in STEM roles at UK universities, we were able to identify localised and more systemic barriers faced. We also uncovered leading practices to share in each section that can help to foster more inclusive environments. Environments where disabled scientists can more confidently and equitably enter, work, progress and ideally thrive in their academic roles. In addition to benefiting the individuals, removing barriers that otherwise perpetuate uneven opportunities will also benefit the institutions and STEM innovation. Diverse perspectives and a broader talent pool could unlock an exciting future for the scientific sector in the UK.

A few threads cut across all the themes we documented.

These included significant inconsistencies in experiences, ‘disability taxes’, the power of trust, mental models that err towards medical rather than social model of disability, and considerations around nuanced disability identities.

Inconsistent experiences

The unequal and uneven nature of support for disabled scientists is deeply impacted by individual contexts and to some degree, luck. A lot of experiences, both good and poor, hinged on unpredictable and changeable factors such as who is allocated as a line manager, the culture of a team, how easily someone finds their way to and through policies that can provide much needed support, how vibrant or not institutional networks for support may be, and the inclusiveness of suitable funding opportunities.

Reducing inconsistencies would ensure a more stable and efficient platform for disabled scientists. This would improve their ability to work equitably, replacing the current “high stakes lucky dip” with reliable support. Such consistency, with better defined and shared policies, scientists training and proactive inclusive leadership, would build greater trust and confidence within STEM departments, institutions and across the sector.

Hidden ‘disability taxes’

Disabled scientists noted that they often need to apply additional resources (such as physical and emotional energy and time) compared to their non-disabled peers. This is required to navigate systems, cultures, policies, funding opportunities and career progression requirements that are not fully accessible or inclusive of their needs. These are denoted as ‘disability taxes’, an invisible, disproportionate burden disabled scientists incur such as additional workload and inherent inefficiencies. Some examples include spending months waiting for Access to Work support to be provided, limiting efficiency early on in a new job, or negotiating for more accessible meeting formats that allow an individual to contribute fully.

Addressing these ‘disability taxes’ begins with working with disabled scientists to understand where they exist. Once identified they can be prioritised and addressed. For example, it was heard that an institution provided assistive communication support in the period up until Access to Work support came into force. Proactive solutions, like adaptive meeting formats may be offered as a standard practice when setting up any new teams (e.g. AI-enabled live captions or having regular scheduled comfort breaks), can encourage open communication about needs and help teams to provide appropriate support.

Trust allows disabled scientists to feel safe to share their needs, disclose their disabilities, and openly discuss the adaptations that can help them be more productive. This creates a virtuous cycle. With trust, disclosure happens; with disclosure, effective support can be provided; with support, individuals thrive, feel valued, and contribute more effectively. Conversely, fear of discrimination can act as a powerful inhibitor. When disabled scientists don't trust their line managers, their institution, policies or funding processes, they understandably hold back from

disclosing. This leads to missed opportunities for support and continued marginalisation.

Building genuine psychological safety through consistent, transparent, and supportive interactions is not just a cultural enabler, but a practical necessity for organisational effectiveness and research excellence. Trust is built on both words and actions. It can be established through positive intent along with emotional and practical support. Disabled scientists will be more likely to share their needs, feeling safe to do so where people they engage with are more disability confident, they see other disabled scientists succeed and be celebrated and believe their adaptations or access needs met.

Models of disability, from medical to social

How we think about disability, using mental models that frame our thoughts, influences what we do. If disability is viewed primarily as a deficiency to be managed and minimised by the employer and employee as it is in a 'medical model', people are more likely to need to do more to justify any adjustments they need and will possibly mask their differences to conform to group norms that minimise rather than celebrate difference. Alternatively, a 'social model' sees disability as a natural and valuable aspect of human diversity. This fundamentally shifts the dynamic. Offering alternatives and adaptations becomes a natural layer to ensure environments meet team needs and cultures are more likely to enjoy and celebrate each other's differences rather than intentionally or unintentionally muting them.

Training, proactive leadership, supportive policies and adaptive practices can all help build more disability-positive mental models, recognising and appreciating the reality of human differences. These will in turn impact team and institutional culture.

Nuanced identities, inclusive of and beyond disability

The final thread that impacts all of the potential areas of intervention is the recognition and reality that disability is not experienced in isolation to an individual's other characteristics and layers of identity. The experiences of disabled scientists are incredibly diverse, influenced by factors such as gender, race, sexuality, and career stage. This intersectionality means that navigating policies, getting support, building

trust, and feeling a part of a community can be either easier or significantly more challenging. There is also immense diversity within disability itself. Disability can encompass a vast array of access needs, lengths of experience since onset, acquisition or diagnosis, preferred adaptive approaches and skills, and personal identity as it relates to disability.

A nuanced approach to disability inclusion in the workplace is required to meet this this diverse reality. This research highlights that the most profound difficulties are often experienced by those with multiple intersecting historically marginalised characteristics. Proactively considering the layers of attitudinal and practical barriers a person may face, including those they may have internalised, is important to adapt support to the individual to create more equitable opportunities.

In summary, through this research we have heard that more effective and inclusive academic workplaces for disabled scientists are achievable and will benefit the individuals, their teams, institutions and the sector.

There are many examples of leading practices within this report that institutions can consider. We would recommend that when prioritising those that will likely have the greatest positive impact on an institution, consider the current state of maturity in each intervention area, gather additional input on this from your disabled scientists and managers, then consider activities that could be started, improved or extended.

Institutions can more wholistically empower disabled scientists to thrive, going well beyond simply "accommodating" differences relating to disability. By acting on the recommendations within this report, informed by disabled scientists' experiences, Higher Educational Institutions could unleash additional capacity and capability that lies latent within their institutions today.

This could be achieved through a combination of activities that

- champion disability-inclusive cultures to develop at different levels
- provide clear, well-signposted policies that ensure more consistent support
- nurture and support disabled scientists networks
- train, motivate and empower line managers to more confidently and capably support their disabled scientists, and

- support funders to continue to progress the accessibility and inclusive considerations built within their application processes and project support

By dismantling the barriers experienced by disabled scientists today, UK's universities have the power to unlock the human potential of all STEM scientists including those that experience disabilities, enriching our shared scientific future.

Appendices

1. Methodology – formats, research questions and sample

The multi-stage research approach that informed this report included the following stages.

1. Literature Review
2. In-Depth Interviews (30 disabled STEM scientists working across the UK)
3. Round Table Discussions (4 groups, each lasting 90 minutes

Research was conducted between August 2024 and March 2025 by Open Inclusion.

Research questions that anchored the research design and priority focus for each stage were informed by the insights generated from the previous stage and supported with valuable input from the Royal Society Project Team and the Project Steering Committee made up of disabled scientists working in STEM fields at UK universities.

Disability-informed research in practice

All stages were conducted and led by Open Inclusion's experienced disability-inclusive researchers using accessible and adaptive qualitative research practices. Each was also informed by research input and guidance from people with a wide range of access needs and disabilities including those related to sight, hearing, mobility, dexterity, neurodivergence, chronic health and mental health.

This group included people with multiple co-occurring disability-related needs and people with intersectional experiences of disability, in conjunction to other historically marginalised characteristics such as gender, race and ethnicity, and sexual orientation. This input was received both through the Royal Society's Steering Committee guidance and Open Inclusion's co-researcher practices and guidance with our Community Leaders.

Stage 1 - Literature review

The first stage delivered a literature review of 'Best practices, Supports, and Barriers for Disabled STEM Scientists in UK Higher Education Institutions (2019-2024)'.

This literature review addressed the following research questions:

- What is best practice for UK Higher Education Institutions (HEIs) to support disabled post-doctorate scientists working in STEM?
- What are the current barriers to the adoption of best practice?

Stage 2 – In-depth interviews with disabled scientists

In-depth interviews were carried out with 30 disabled STEM scientists from 20 different universities across the UK. Each interview was held online and lasted approximately 75 minutes.

The sample of disabled scientists covered diversity from a pan-disability perspective and reflected other significant markers of difference through their academic settings, social identities, career stages, and geographical locations throughout the UK. A breakdown of the sample is available below.

The interviews aimed to explore the lived experience of disabled scientists and how policies and practices, including accessibility and inclusion considerations as relevant to them, impact their careers. The interviews were carried out using a semi-structured style of questioning, allowing participants to share their experiences while enabling researchers to pursue a flexible line of inquiry informed by the literature review and emerging insights.

Research questions covered include:

- What are common barriers that disabled STEM scientists face?
- Which barriers can be minimised by HEI support (policy or otherwise)?
- What support is currently available to disabled scientists in STEM?
- What stops people from getting the support they need?
- What support, if any, do disabled STEM scientists receive from funders?

- How could the support provided to disabled scientists in STEM be improved across HEIs?

Stage 3 – Round table group discussions

Following the in-depth interviews, 4 online roundtable discussions were held to further investigate the themes that had been identified (and are detailed in this report).

Three groups were conducted with small groups of disabled and non-disabled scientists and professional scientists from individual universities online. These covered the first three themes, culture, policies and disabled scientists networks.

The final group focussed on line management and included line managers and a disability support advisor from a range of universities.

The overarching research questions that guided the round tables included:

- What best practices regarding policy, DSN's and scientists services, inclusive culture or line-management have been displayed at the universities from which other universities can learn?
- How does this area of best practice reduce barriers or offer more support to disabled scientists working in STEM?
- What barriers, if any, were encountered when setting up this best practice and how did they overcome it?
- What advice would they give other universities who wanted to adopt similar practices?

In-depth interview sample

Although obtaining a representative sample was not the focus, it is worth noting a higher percentage of disabled scientists from English universities were interviewed within this diversity. Nevertheless, this report provides a vital pan-disability and intersectional perspective on disabled scientists, with detailed sample information presented below.

Field

Field	**Number of participants**
Science	21
Technology	2
Engineering	2
Mathematics	2
Medicine	3

Years' experience

Years' experience	**Number of participants**
<5 years (Early)	7
5 – 9 years (Mid)	10
>10 years+ (Senior)	13

Past or current scientists

Academia status	**Number of participants**

Currently work in academia	27
Worked in academia in the past 3 years	3

Disability group

Disability group	**Number of participants**
Neurodiversity	10
Mental health condition	11
Blind / sight loss	4
Deaf / hearing loss	5
Mobility/dexterity difficulties including limb difference	9
Other long term health condition (including energy limiting conditions)	9
Auto immune condition	9
Chronic pain	8
Memory challenges	2

Gender

Gender	**Number of participants**
Male	10
Female	18
Non-binary	2

Age

Field	Number of participants
25-34	8
35-44	11
45-54	7
55 +	4

Ethnicity

Field	Number of participants
White	23
Mixed or multiple ethnic background	3
BAME – African or African British, Caribbean or Caribbean British, Pakistani or Pakistani British, Any other ethnic background	4

Region

Field	Number of participants
England	27
Scotland	3
Wales	0
Northern Ireland	0

Case study – Culture (University of York)

Background

The Chemistry Department at the University of York demonstrate long-term investment in developing a positive, disability-inclusive culture, evidencing it is not only achievable but also beneficial. Through purposeful senior leadership commitment to Equity, Diversity, and Inclusion (EDI), a well-established and influential EDI committee with diverse scientists representation, and a pervasive sense of safety and support, the Chemistry Department at University of York provides a compelling model for other Higher Education Institutions (HEIs) and STEM departments looking to cultivate a disability inclusive culture.

Approach

The University of York's Chemistry Department began its path to an inclusive culture in the early 2000s by signing up for the Athena Swan charter, focusing initially on gender inclusion. As the department advanced gender inclusion, they used the success of this initiative to support other EDI initiatives, such as disability inclusion. They believe an inclusive departmental culture benefit everyone, not just marginalised groups.

The department acknowledges that creating a disability-inclusive culture requires engagement from all levels of seniority. Senior and junior scientists alike influence and maintain this culture, but it requires all scientists to work together toward the same goal to create, sustain, and build upon a disability-inclusive culture.

Senior management buy in

Senior management signal they're investing in EDI to scientists in several ways:

- Taking part in national discussions on equality.
- Senior involvement with the EDI committee. The chair is a senior academic to help build influence of the EDI committee, they also sit on the departmental management team and are involved in senior decision making. Additionally, the Head of Department sits on the EDI committee which allows for quicker decision making.

Senior leadership buy-in encourages scientists members to speak out if they have concerns or suggestions about disability inclusion without the fear of push back.

> "We have had a number of Heads of Department who have been real senior leaders in terms of their impact on the department and the national equality discussions that were going on. That creates a culture in the department which I think does allow people to stand up… without the fear of getting some strong push back."

Scientists involvement

Conversations with disabled scientists help shape a culture where disability inclusion is an important consideration. Senior leadership encourages this by actively listening through a variety of different initiatives and channels and taking action as a result, which further reinforces the conversations and culture as they subsequently affect change.

> "Some of the bottom-up stuff that happens… I feel it is fairly well listened to. We run focus groups, or we carry out scientists surveys where we collect information. And we do then try to put that into place… people will sometimes tell me things [when making tea] that they wouldn't say in a formal setting. But we will then be able to enact some of that feedback… I think those [different] communication structures are really important."

Dedicated EDI scientists positions

> "There is a role of Diversity and Employability officer and the [STEM department] is quite unique in employing somebody specifically in that role… There are not many members of scientists who are paid to do EDI work, it's normally a sort of add-on to their role." (University of York roundtable)

The Department of Chemistry has a dedicated scientists role for EDI. This is uncommon in
STEM, where many of the scientists championing inclusive culture do so lacking formal responsibilities, without protected time. This EDI role within the department originated through Athena SWAN and was initially held by a postdoctoral researcher. Recognising its value, the university has since formalised

this position.

> "I suspect that there's lots of roles where people are doing this work organically and I think we were lucky to be able to create a specific post."

Having a formal EDI post ensures continuity in leadership and helps prevent the loss of departmental knowledge and expertise which is a common issue to other universities and STEM departments which have to rely on EDI committee roles rotate frequently. In contrast, establishing this EDI role in Department of Chemistry, shows it has embedded inclusive culture into its core departmental strategy rather than relying only on ad-hoc or voluntary efforts.

Creating safe environments

The Department of Chemistry provides a safe environment for scientists, where disabled scientists feel comfortable discussing their needs and disabilities. Safety in disclosure serves as an important step to ensure disabled scientists receive support or accommodations to excel in their role.

> "On an individual basis is really supportive so I think that the support that I get from you know my line manager, my head of department is excellent. People are really understanding."

The department understands that creating and maintaining this safe environment is not a "one and done" approach. One large change or action does not create the culture; instead, repeated, small actions by both senior management and scientists are what build and reinforce an inclusive culture over time. For example, during the recruitment process, the department consistently communicated that disclosing a disability would lead to active follow-up (which they ensured took place). Additionally, the department does not require proof of a health condition or disability when a scientists member discloses it – something many disabled people commonly experience. Being believed in this process helped foster trust between disabled scientists and the department.

> "This is the first time in my employee life that I disclose my disability, which I've never done before and I think that came about because there were multiple

> messages, from all different [departments and people] that gave me all the right signals that people will listen, and would easily put something in place."

The department's consistent and ongoing work on inclusion over many years has improved representation of minority groups among scientists. The increased visibility encourages the whole department to welcome differences, helping to build a safe environment where people feel more comfortable discussing their disabilities.

> "I was also put in touch with somebody who has a lifelong condition when I started. I'm aware that there were other people like me about, which is really nice to know. I think it's just being visible [is helpful]."

Forming cultural resilience

The inclusive culture of the Department of Chemistry is resilient and has become capable of resisting attempts to change it. This embeds inclusivity as a normative value, attitude and belief among scientists and senior leadership, as well as in the cultural practices and departmental infrastructure of EDI roles and committees. This has made the shift towards a supportive, inclusive culture something that scientists at all levels identify with and defend.

> "I think equality, diversity and inclusion are deeply embedded in the department and the culture is now strong enough to withstand attempts to rollback inclusive practices. I feel there would be significant push-back from senior voices in the department if we tried to implement changes that could be seen as for the worse."

The University of York recognise there is further progress to be made but when problems arise, they feel heard, supported and confident that the department will address them. This 'active listening' is key to building a robust, open culture towards disability inclusion. Rather than being stymied by the threat of 'getting it wrong', it recognises inclusion is the larger goal of ongoing, incremental improvement.

> "My department is fantastic in terms of that [being open and inclusive]. They usually get those things right. And when they don't get them right, they're active listeners and they're willing to address things… [They listen] to the people affected."

2. Case study - Policy (University of East Anglia)

Context

Disabled scientists and senior leadership at UEA have developed a strong EDI policy landscape at their university over the past decade. Despite gaps within its wider disability policy landscape[1], UEA takes a progressive approach to disability-friendly and supportive policies by developing a unique EDI framework for collaborative policy-making.

> "I think consultation [at UEA] is really wide. Consultation is really important that you try to get as many voices and as many diversities, not just disability, but the whole intersectional diversities at the table."

However, in terms of disability, UEA established the Access All Areas Working Group (AAAWG) in 2015. It offers a STEM-specific case study of collaborative policy-making between disabled academic scientists and the university's senior leadership. As a result of the AAAWG and the 'structural access guidelines' that they developed, UEA has one of the most accessible science buildings in the UK.

> "The core of it [lab and campus accessibility], actually, came from the 2016 [AAAWG's Structural Access Guidelines] - that was pretty much what we used. But I think that that really helped in terms of getting further stuff changed, because you could see the difference. It was visible that improvements were being made, and because of that visibility, the culture shift occurred

[1] UEA has been investing in Advanced HE charter accreditations (as of March 2025, silver-level Athena Swan institutional status and pending bronze-level submission for the Race Equality Charter). UEA does not take part in the Disability Confident Leader scheme, and in the absence of a disability charter for UK HEI's, disabled academics are advocating for a "gold, silver, and bronze" improvement model for accessibility to enhance accountability and incentivise disability inclusion.

> subsequently in terms of addressing things like web page accessibility or teaching practices."

UEA's approach to EDI and disability inclusion presents a promising avenue for improving support for disabled STEM scientists at the university level.

Collaborative approach

The University of East Anglia (UEA) is one of the better-performing universities for disability inclusion. A key factor behind UEA's success is the effective institutional support and collaboration between the university's senior leadership and disabled academic scientists in prioritising accessibility for all.

Rather than relying on a standalone disability policy, UEA's approach to disability inclusion has integrated disability-specific policies and networks into a broader EDI framework, characterised by "pockets of good policy" working cohesively together.

> "I think we are doing good - there are pockets of really good projects, but we've got a long way to go at UEA and beyond. I think it's helpful to have dedicated policies, and also to try and embed these concepts, principles, values, across policies."

Selecting UEA as a case study does not ignore the ongoing challenges faced by disabled scientists and EDI initiatives but seeks to highlight how the university's approach to building an accessible laboratory showcases how STEM-specific accessibility and collaborative policy-making can positively impact disability inclusion.

Senior leadership "buy-in", especially the pro-vice chancellors (PVCs), was key to showing "that accessibility was important at UEA, and to actually getting it integrated into the UEA strategic goals and mission statements". This avoids common pitfalls of other universities, where senior leaders buy-in with words, not actions.

> "It's having that senior level buy-in that this [EDI and disability inclusion] was important – that this was a UEA thing – that this was part of our mission, and it actually having it integrated into the UEA strategic goals and mission statements and stuff."

UEA's inclusive policy landscape has evolved considerably over the past decade, following updates to the university's 'structural guidelines'. The updates established new roles and relationships between UEA's senior leadership, departments, and various EDI networks to enable collaborative policy-making, particularly via the Equality and Diversity committee.[2] While the focus of our UEA case study is STEM-specific accessibility, UEA's overall approach illustrates the advantages of making EDI networks "mandatory consultation points" on policy at the university level.

This shift in UEA policy-making is a departure from "old-fashioned, top-down" policy governance, replacing it with "many voices" through "diverse methods of engagement" as well as forward-thinking by "anticipating needs" rather than merely "making adjustments".

> "On university policy, there are multiple points of consultation across various UEA committees depending upon what the policy is. We have input from a wider range of people at the Joint Network EDI committee, which feeds informally to the [formal] Equality and Diversity committee. That committee then feeds into university policy on parking, leave, workload allocation, working from home, etc."

The UEA guidelines are all about anticipating all of the possible things that could happen in a context and designing for them. The collaborative policy-making approach at UEA fosters an interactive and iterative process among senior leaders,

[2] The committee comprises **senior university leadership**, including Pro-Vice Chancellors, the Registrar, and Directors overseeing governance, research, and student services; **EDI leadership**, including the Director of People and Culture, the Head of Equality, Diversity, Inclusion, and Wellbeing, and the EDI Project Coordinator; senior **faculty representatives and EDI champions** from various academic departments; and **student representation** through the Chief Executive Officer of the Union of UEA Students. This committee is responsible for UEA's Equality and Diversity 2030 Strategy under the UK Equality Act.

departments, and EDI networks for designing, evaluating, and implementing disability-friendly and supportive policies.

What works well within the UEA policy landscape?

Equality and Diversity Committee (established in 2017)

This committee is a formal university policy forum which facilitates discussions on "inclusivity issues" and also enables informed policy responses that operate "outside very traditional hierarchical line management structures".

Joint Network EDI Committee (established in 2020)

This committee enhances collaboration and intersectional awareness. It establishes an informal policy forum for UEA's various networks, including Scientists Pride, LGBT+ Allies, BAME Scientists Network, Access All Areas, ResNet, Mental Health First Aiders, and the Inclusivity Network.

Increased voices leads to greater influence, "bringing those groups together to encourage collaborative working has meant that we've got a really strong collective voice now across those networks, which is really important and helps develop that diversity of influence on policy and procedure". This intersectional approach to cross-network collaboration is not common across HEI's.

Inclusivity Network (established in 2018)

This EDI network is responsible for UEA's Inclusive Education Policy (2018/2019). However, its new leadership has broadened the existing policy remit to include universal design and accessibility for all students incorporating EDI initiatives for disabled academic scientists into the policy implementation - "The Inclusivity Network was set up for students its new direction emphasises that inclusivity includes scientists."

The Access All Areas Working Group (AAAWG)

Established in 2015, the AAAWG exemplifies a STEM-specific approach to collaborative policy-making at UEA, involving the disabled academic community,

estates, and the university's senior leadership. In 2019, UEA constructed a state-of-the-art New Science Building as a result of this consultation process, featuring fully accessible teaching and laboratory facilities. Since then, the remit of the AAAWG has expanded to address accessibility issues beyond the built environment.

> "The AAAWG has gradually expanded its remit to be looking more at policies and web pages and all of those sorts of things. So, the softer side of access is gradually increasing, but it is still a mandatory consult point for refurbishments, new builds, redevelopments, etc."

Advice for other HEIs

All UEA's drafted policies are uploaded with the opportunity for disabled scientists to feedback.

Policies available the 'My UEA' intranet web portal, enabling scientists and students across the university to provide policy feedback to university departments and committees.

Senior leadership support and centralised university budgets are invaluable.

The AAAWG operates with a centralised budget contributing significantly to its success. Given UK university budget cuts, AAAWG's "ring-fenced" budget for accessibility is important. Senior leadership must, therefore, communicate a clear commitment to EDI funding.

> "Having contradictory messages from the top it is very easy to lose the trust that you've built. It's fragile. Clear, simple messaging from the top is really helpful to ensure that from the bottom, you know that you're heading in the direction that the leadership does want and backs."

One positive change creates a domino effect in disability inclusion.

Both AAAWG and estates have found that one good change has led to more. The acoustic design of the New Science Building had an unintended positive spill-over effect, with the increasing neurodiverse student population preferring this building "as a study space because it's actually quieter than the library". The visibility of the

New Science Building on campus has also pushed forward more changes because it could be "pointed to" as a success story. Thus, "because of that visibility, the culture shift occurred in terms of addressing things like web page accessibility or teaching practices, to improve the accessibility across the wider culture of the university". AAAWG and Estates conduct tours of the New Science Building to support both the redevelopment of UEA's Lasden Wall building and for other universities to learn about designing accessible labs.

> "We're able to now utilise our previous experience and say, 'Look, here's the 3D version and what it's got to be better than.'"

Harnessing expertise of disabled scientists improves disability policies.

The AAAWG's 'structural accessibility guidelines' (2016) demonstrate that disabled scientists possess the expertise needed to translate the UK Equality Act (2010) statutory requirements into STEM-specific accessibility solutions.

The structural guidelines of the AAAWG integrate universal design principles within the social model of disability, emphasising that there is no one-size-fits-all solution for disability access.

3. Case study – Disabled Scientists Networks (University of Manchester)

Grass roots origin and lived experience foundation

The University of Manchester (UoM) has a central Disability Services Department, which is well organised, advertised and signposted. This active Disability Scientists Network, helps campaign leadership for change and provides support for its members. The University of Manchester's Disability Scientists Network emerged from the lived experiences of disabled scientists who found systemic gaps in services and nothing in place to support them. The network's foundation was built on direct advocacy with senior leadership, with the network addressing issues faced by disabled scientists.

Strategic positioning and intersectional representation

The Disability Scientists Network emerged as a way to expand the support services offered to students to the disabled scientists at UoM. The network strategically positioned itself within the Student Experience directorate, enabling a holistic, flexible support system. The network incorporates academic, professional services, and postgraduate researcher perspectives. This deliberate choice ensures diverse voices are heard and reflects the experiences of all disabled scientists.

Proactive approach

> "We've always had a strong link between the disability scientists service and the disabled scientists network, supporting each other."

The DSN works in partnership with support services for scientists (DASS) within the UoM. This unified approach, where the DSN and DAS collaborate closely, creates a strong support system for disabled scientists. It offers integrated resources and processes with DAS providing formal support, and DSNs offering shared lived experience, understanding, and advocacy.

This builds trust, visibility and awareness, and encourages engagement among disabled scientists. At UoM it resulted in scientists coming forward to seek support and disclose their needs.

> "Suddenly there were so many colleagues, disabled colleagues, who actually came forward and registered with DASS as being disabled members of scientists, because suddenly there was actual support available to them."

The DSN at UoM is proactive in addressing issues, raising awareness and signposting support services. It has been successful in creating "a community where you're not alone anymore", and offers a sense of belonging and empowerment.

What works well for UoM's DSN?

Flexible approach

The UoM's DSN demonstrates that effective disability networks must be flexible and adaptable, actively "filling in the gaps" left by Occupational Health, HR, Access to Work, and even Disability Advisory Services (DASS).

Representation of disabled scientists across roles and career stage

To truly represent all disabled communities, HEIs should strive for the "gold standard" of representation, encompassing academic, professional services, and postgraduate research roles in its three co-chair model. This multi-level approach, combined with direct engagement from both senior and middle-level managers, provides comprehensive support and drives meaningful change.

Collaboration with other support services

This collaborative approach not only improves individual experiences but also strengthens the overall culture of inclusivity within the UoM.

> "It's not simply in one subject area (i.e. STEM) but that there are "pockets of excellence" across UoM making a difference and need support to develop and extend further."

Variety of methods of communication

The DSN uses a range of communication channels to build community. Zoom-based social events, create accessible and engaging spaces for interaction. Quarterly EDI forums provide platforms for formal discussions, while informal networking spaces facilitate peer support.

Digital guidance documents and a strategic social media presence ensure information is accessible and meets a diverse range of communication preferences. Their "Let's Talk Disability" podcast serves as a powerful tool for direct dialogue between disabled scientists and senior leadership, creating a mechanism for accountability.

Advice for other HEI's

Building a successful DSN

Put the experiences of disabled scientists front and centre. Make sure the network has strategic, representative leadership from different scientists groups and get senior leaders on board. Design the network to be flexible and driven by what scientists actually need, not just what the university thinks they need.

> "Make sure disabled scientists feel safe to talk openly and confidentially about their disability requirements. Get different university departments to work together and set up ways to make sure the university is held accountable. The DSN needs a dedicated budget. Establish mentoring, offer training, and don't just tick boxes for compliance; actually change how the university works".

The DSN should amplify their presence and advocate for disability support across multiple forums raising the profile of disability alongside other protected characteristics (race, sexuality and gender) and challenging misperceptions of who 'is' disabled through inclusion of invisible disabilities (e.g., growth in Neurodiversity Network).

Opportunities to improve

Despite the DSN's success at UoM, they recognise there are still jobs to be done to further develop in future and strategic priorities include comprehensive line manager training, targeted early career researcher support, and expanded neurodiversity recognition.

> "We are using our imaginations in STEM to not just be accessible but be at the cutting edge of inclusion."

4. Case study – Line management (Cross university panel)

Context

The cross-university roundtable of experienced line managers highlighted that good line management for disabled scientists is rooted in personalised, adaptive, and emotionally intelligent support. However, they also acknowledge a major gap; there is very little training or guidance in place for line managers on how to support disabled scientists effectively.

> "A lot of scientists, when they start, are not trained to become managers at all… their people skills are in a major deficit."

> "I went on a Research Leaders Course. It took a whole year, and I don't think we touched on this [disability inclusive line management]."

Despite this, the roundtable shared the creative and effective approaches they have developed as line managers. These include adaptable workload arrangements, task-sharing in labs, adjusting communication styles, and tailoring roles to disabled scientists' unique abilities, whether physical disabilities or neurodivergence. Their experiences show that while systemic support and training opportunities may be lacking in UK universities, good line management can still become possible when grounded in empathy, adaptability, and a commitment to inclusion – these skills can be learned. This makes the personal attitude towards line management the deciding factor.

> "Best practices are hard to pinpoint because there isn't a one-size-fits-all solution. I think that's why it's really hard to nail down, but being end to end [inclusive from start to finish], and having empathy and emotional intelligence and the willingness to change – all of these are traits of a person [as a line manager] that can be taught, but they're hard to. So, I think that's where we need to focus."

Learning and evolving line management support

> "I think the one good thing that we do have in science is a mindset of trying something, and if it doesn't work, we learn from it. Yet somehow that isn't yet built into disability line management."

The cross-university panel, recognised as 'good line managers', agreed a tailored approach offering individual support is most effective when working with disabled scientists in STEM. This involves learning from successful strategies and adapting to each unique situation through tailored plans, empathetic understanding, and consistent, transparent communication.

> "It's not a single thing [good line management], it's not a simple solution, and it's not one solution. You have to take every case as a different case and start building on that with communication."

Without formal training, line managers have developed creative, practical solutions themselves, such as adjusting workloads, rethinking STEM roles and fields, and tailoring their managerial support. Disability inclusive line management is not about having all the answers, but about being willing to adapt, listen, and learn.

> "Don't expect them to know all of it, because often it's [disability], or an increased level of disability, and you need assistance to work out how to work. You might not get it right the first time. You might need a bit of time to try things out and say, 'No, that doesn't work. Let's try something else.'"

For many, line management involves building supportive interpersonal relationships with disabled scientists, potentially filling in the gaps, especially those without a formal diagnosis so disabled scientist can access disability support services and accommodations required.

> "I've been supervising two PhD students with completely different disabilities, and they've both done really great. What works is an approach of – 'What can I do to help you and facilitate your studies?' Sometimes [post-doc] students come to me with self-diagnosed symptoms. Obviously, this wasn't covered by any

> Disabled Scientists Services plan. So, we have to find ways to make it work ourselves."

What works well for inclusive line managers?

Flexibility in STEM research

Some STEM research areas are more physically demanding than others. By adopting adaptable workload arrangements and ways of working (such as pairing disabled and non-disabled scientists in lab experiments) line managers can ensure access to meaningful engagement within STEM labs and research communities.

> "They couldn't be in the lab, so I actually redesigned his project to be a bioinformatics project, because it's [a sub-field] more accepting of physical limitations, and he completely ran wild with it. He did wonders!"

Within STEM teams, fostering interdependence over uniformity and individualism allows disabled scientists to contribute their unique skills. This approach creates a more inclusive and ultimately more productive research culture.

> "I think it's about pairing disabled scientists with [non-disabled] people who can do that part of the work. I really value the technical skills [of my disabled colleague], and I need them to be able to work and be able to contribute as much as possible."

Adapt your line management style

Successful inclusive line management demands a shift from standard approaches to personalised, individual support and acknowledging the varied requirements and working methods of disabled scientists. Straightforward accommodations, like frequent check-ins and segmented tasks for neurodivergent employees, can make a big difference to disabled scientist experience. Equipping line managers with practical guidance and confidence to adapt their management style can help put support in place quickly and cost effectively.

> "I have found with an ADHD PhD student that an hourly milestone system works better than weekly or monthly. This student felt they did not achieve much when we were discussing it in our weekly or monthly meetings. I said, "Okay, how about every day you break down the steps of this experiment, and you tell me exactly how many steps you've done."

Encourage visibility

Self-disclosure and visibility matters, especially for the line managers who were themselves disabled scientists. When senior scientists and line managers are open about disability, it sends a powerful signal to normalise the conversations and create a more inclusive culture. This openness can encourage others to feel safer disclosing their needs and more confident in seeking support.

> "I'm a line manager and disabled as well. One of the stats that is quite worrying in academia is that the higher up you go in terms of seniority, the less likely you are to disclose your disability. We have to create an environment in which people can disclose, will actually get respected when they do disclose, they'll get responded to appropriately."

Importance of accountability

Central to the success of inclusive line management is the establishment of clear accountability so what is happening, when, and who is responsible with measurable outcomes, regular progress reviews and updates. It's important, if adjustments are agreed, line managers ensure the timely and effective provision of adjustments.

> "We've just released an individual adjustments plan, which is a form to note down what has been agreed between the manager and the scientists member. It can be saved by the line manager and scientists member."

Advice for other line managers

Be proactive, accessible, and flexible

Do not wait for disabled scientists to disclose their needs. Ask about access needs and how they might want to be supported. Check-in regularly about those needs and offer flexible working, which can be based on reported needs rather than only medically diagnosed disabilities (which can be a significant barrier to support).

> "Right from the get-go, you have to be proactive and accommodating as far as possible. You should not be waiting for somebody to tell you. Really listen to your people. Really do the accommodations they need, but don't expect them to know all of it, because often it's a new thing, or it's an increased level of disability."

Build trust

Trust, not fear, drives inclusive line management. Because training often fails to prepare managers for adjustment conversations, open communication and empathy are key. Managers must build rapport, and disabled scientists should acknowledge genuine efforts, even if imperfect. This shifts the culture from defensive to collaborative.

> "We have reached point in disability regulation where we end up being very defensive, having tick boxes and rules… I think we need psychological safety. I think encouraging people to speak openly, to not shame each other when we get things wrong, but to help each other get things right."

Adapt to individual strengths and needs

Break down research roles and assignments, offer disability-specific advice on STEM specialisms, and be open to different approaches. As a line manager, adapt workloads, timelines, and career guidance to each scientist's strengths.

> "It was so good [switching sub-field], it was his strength, and he only discovered it because of this process [disability-specific STEM guidance]."