The Institution of Engineering and Technology

Empowering disabled engineers and technologists



A practical toolkit for building a more inclusive sector

theiet.org/disability-in-engineering-and-technology-toolkit

Please note this report was based on a UK study, in different regions of the world there will be cultural variances but many of the implications can be applied globally.

The IET would welcome any comments you may have on the contents of this report, and your ideas for future publications. Please get in touch by emailing **inclusion@theiet.org**.

We'd like to extend our warm thanks to **AtkinsRéalis**, **Google**, **Heathrow**, **Huddersfield University**, **NATS** and **WeWalk** for taking part in case studies to help guide and inform the wider sector.

The Institution of Engineering and Technology

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Why accessibility and inclusive design should be a priority in Engineering and Technology

24% of the UK working-age population are disabled, but what if we told you that inaccessibility is still the default in engineering and technology?

Well, recent studies suggest it's true, for example:



92% of disabled people **face barriers in at least one form of transport.** [1]



Only 5% of **public buildings** are currently accessible. [2]



Only 13% of homes in England meet **basic accessibility criteria...** [3]

meaning millions of disabled people are currently living in homes that **don't meet** their needs.

43% of disabled adults who've sought a job in the last 10 years **feel their disability** may have played a role in them **being turned down.** [4]



82% [5]



of non-disabled people are in employment compared with **53% of disabled people.**

It's not just the physical world that's inaccessible, either:

Over **95%** of the **top 1 million website homepages** fail to comply with Web Content Accessibility Guidelines. [6]



71% of users with disabilities **leave a website immediately** if it's not accessible. [8]



Only **3%** of **videos** on top websites have **captions.** [7]



£17.1 billion is **lost annually** in the UK due to **inaccessible websites.** [9]



So, what can we do about it?

We know that diverse engineering and technology teams create outputs that work for diverse communities, and undoubtedly a contributing factor to these statistics is a lack of disabled people accessing or remaining in the engineering and technology sectors.

Making up 14% of the engineering workforce and 6% of the technology workforce in the UK, disabled people are underrepresented in both the design process and consequently, the outputs that are engineered. This needs to change.

We are calling for a change in how disabled people are viewed and valued within the sectors we represent, and to shift inclusive design from being considered a 'nice to have' to an integral part of 'good' engineering.

CASE STUDY

University of Huddersfield: Building inclusive pathways into engineering

Insights from **Dr Karl Walton**, Acting Head of Department of Engineering, gathered by our EDI Manager, **Daisy March**.

> The key obstacle is actually having the students themselves realise that engineering or STEM is a possibility for them.
>
> Dr Karl Walton



Dr Karl Walton, Acting Head of Department of Engineering, University of Huddersfield

The University of Huddersfield is home to a large engineering and technology community, offering programmes across a range of science, technology, engineering and mathematics (STEM) disciplines. Alongside its commitment to academic excellence, the University has developed a range of initiatives designed to support disabled students before, during and beyond their studies, helping more learners see engineering as a viable and rewarding career pathway.

When I spoke to Dr Karl Walton, Acting Head of Department of Engineering, it became clear that widening participation is not only about removing barriers once students arrive at university, but also about helping disabled young people recognise that engineering is a space where they belong in the first place.

Huddersfield's approach combines institution-wide support services with department-specific initiatives. Among the more practical examples are quieter open-day sessions for prospective students who may find large, busy recruitment events overwhelming. These parallel sessions offer a lower-stimulation environment and create opportunities for students to explore engineering in a way that works for them.

Once students have accepted a place, support begins before they arrive on campus. The University offers pre-arrival disability support, tailored induction events, assistive technology guidance and services that help students familiarise themselves with digital learning platforms before enrolment. Programmes such as Ready, Steady, Study and Flying Start are designed to ease the transition into higher education by helping students build confidence, understand expectations and access support early.



Central to the University's support model are Personal Learning Support Plans (PLSPs) and Personal Academic Tutors (PATs). Together, these provide a combination of formal adjustments, academic guidance and routes into specialist wellbeing and disability services when additional support is requested.

I was very pleased to learn of Huddersfield's focus on helping students develop the skills and confidence needed to succeed throughout their studies. A dedicated student mentor team provides tailored support around academic skills, learning strategies and wellbeing referral, while specialist programmes help students navigate challenges that may otherwise affect retention and achievement.

The department is also working to embed inclusion into engineering education itself. Through its EnABLE Project, students are challenged to design solutions that address accessibility needs, such as wearable technologies that provide proximity warnings for people with visual impairments. By engaging students with real-world accessibility challenges, the programme helps future engineers understand the importance of inclusive design from the outset of their careers.

Lived experience also plays an important role in shaping the student experience. The University's Disabled Students Network provides feedback directly to staff, and helps influence decision making, while external experts contribute directly to learning and curriculum development. Dr Walton highlighted the contribution of Katy Deacon, Visiting Professor of Inclusive Engineering Design and the chair of the IET's EDI Board, who delivers sessions on inclusive engineering and leads empathy-based learning simulations that help students better understand the experiences of disabled people.

Preparing students for the transition into employment is another area of focus. Alongside guidance from the department's Industry Advisory Board, the University runs employability initiatives that support disabled and neurodivergent students as they prepare to enter the workplace. Programmes such as Global Engineering Girls provide mentoring and tailored support to help students build confidence and navigate industry pathways successfully.

CASE STUDY

University of Huddersfield: Building inclusive pathways into engineering

Like many organisations, Huddersfield acknowledges that measuring the impact of inclusion can be challenging. The University uses data collected through its Differential Attainment Project to help identify patterns, understand where gaps remain and evaluate the effectiveness of interventions. While Dr Walton sees opportunities to develop more granular analysis in future, the data already helps inform conversations about student outcomes and inclusion across the institution.



Perhaps the most compelling part of our conversation focused on the engineering pipeline itself. Dr Walton observed that, while universities continue to improve support for disabled students already in higher education, there remains a significant challenge in encouraging more disabled young people to consider engineering in the first place. For him, outreach, role models and earlier engagement with schools will be critical to addressing this gap.

Reflecting on Huddersfield's approach, Dr Walton highlighted three key lessons:

Start support early.

Helping students access information, technology and guidance before they arrive at university can significantly improve confidence and transition into higher education.

Embed accessibility into engineering education itself.

Inclusive design should not be treated as a specialist topic, but as a core engineering principle that students encounter throughout their learning.

Focus on aspiration as well as access.

Removing barriers is important, but so is helping disabled young people see engineering as a realistic and rewarding option for their future.

It's fantastic to hear from academic institutions like the University of Huddersfield, who are taking proactive steps to broaden inclusion within their student and faculty base and helping to create more accessible pathways into the sector.

As Dr Walton reflected, one of the most important challenges still ahead is ensuring that more disabled learners recognise that a future in engineering is within their reach.

Knowing your rights

Your rights as a disabled employee

A person is defined as disabled if they have a physical or mental impairment that has a substantial and long-term adverse effect on their ability to carry out normal day-to-day activities. (Section 6 of the Equality Act, 2010)

Under the Equality Act 2010, it is unlawful for an employer to discriminate against an employee because of disability. This protection applies at every stage of employment, from recruitment and interview to promotion and dismissal. It also extends to self-employed people who are hired to carry out work personally, rather than running their own independent business.

Your obligations as an employer

Employers have duties, including to:

- not discriminate against disabled employees or job applicants because of their disability, or treat them unfavourably because of something arising from their disability;
- take all reasonable steps to prevent disability discrimination and harassment in your workplace; and
- make reasonable adjustments in circumstances where you know, or could reasonably be expected to know, that an employee is disabled and is likely to be put at a substantial disadvantage compared with people who are not disabled.

More information on what is considered reasonable based on guidance from ACAS can be found on page 10.



If I'm disabled, do I have to declare my disability to my employer?

No, you are not legally required to declare your disability if you would prefer not to do so. However, it's important to note that your employer only has to make reasonable adjustments if they know, or could reasonably be expected to know, that you are disabled, and are likely to be put at a substantial disadvantage compared with people who are not disabled.

During the recruitment process, employers can only ask health related questions for the following reasons:

- To find out whether you can participate in an assessment, such as an interview or test, or if they need to make reasonable adjustments so you can do so.
- They need to know if you are able to carry out a function that's essential to the role.
- They want to monitor the diversity of applicants.
- To take positive action to support disabled applicants, as allowed by section 158 of the Equality Act 2010.
- If the role genuinely requires the person to have a particular disability, to find out whether you have that disability.

Any health and disability related information that you disclose must be handled sensitively by the collector, stored confidentially and only kept for as long as the information is needed.

Reasonable adjustments

Employers are legally required to make reasonable adjustments for an employee when they know, or could reasonably be expected to know, that the employee is disabled, and that they are likely to be put at a substantial disadvantage at work because of their disability.

Reasonable adjustments are changes an employer makes to remove or reduce the disadvantage an individual experiences because of their disability. The necessary reasonable adjustments will be unique to each individual, however some examples include:

- Flexible working hours or locations;
- Assistive technology, including mobility aids like wheelchairs and walkers, sensory tools such as hearing aids and screen readers, and communication devices like speech-generating apps and specialised keyboards;
- Adaptations to communication methods, for example, talking instead of typing, or providing information in accessible formats, such as Braille or on audio tape.

If an employer is aware or reasonably should be aware, that an employee is disabled and likely to be put at a substantial disadvantage compared with people who are not disabled, the employer must make reasonable adjustments. This applies whether or not the employee has requested an adjustment. If they do ask, an employer must make the change if it is reasonable to do so.



What's 'reasonable'?

It can be difficult or uncomfortable to understand what's considered 'reasonable' to employers, especially when discussing something as personal as disability. Guidance from ACAS states that an adjustment may be reasonable if it falls within the following criteria:

- it will remove or reduce the disadvantage experienced by the individual at work;
- it's practical to make;
- it's affordable
- it won't harm the health and safety of other employees.[10]

If you've requested an adjustment that is deemed 'unreasonable' by your employer, they should still try to find an alternative option that helps you carry out your role. This could involve making other adjustments that are reasonable.

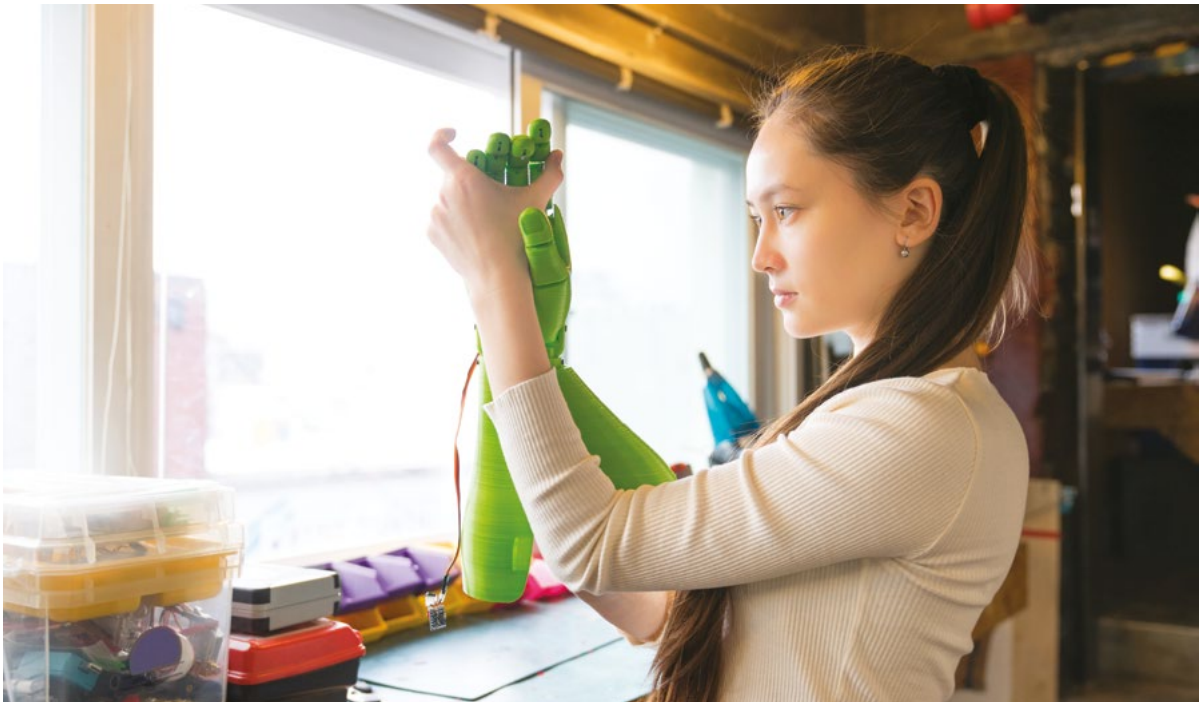
What about the Access to Work scheme?

Access to Work is a government funded support scheme that helps disabled people with getting into work and remaining there.

Access to Work may contribute to the additional employment costs resulting from a disability or health condition that the employer would not normally be expected to cover as part of its duty to make reasonable adjustments, such as communication support in interviews, special aids and equipment in your workplace, adaptations to equipment and vehicles, help with travel costs, and the provision of support workers and mental health support services.

Access to Work can be applied for online via GOV.UK. A link to the application form can be accessed here: Access to Work: get support if you have a disability or health condition: Apply for an Access to Work grant – GOV.UK

It's important to note that the Access to Work scheme is undergoing changes that may impact who is eligible to receive funding and may increase the responsibility on employers to support their disabled employees. Information on the current eligibility criteria can be found here: Access to Work: get support if you have a disability or health condition: Eligibility – GOV.UK



Recognising disability discrimination

Under the Equality Act 2010, it is unlawful for an employer to:

- Treat a job applicant or employee less favourably than others because of disability;
- Discriminate indirectly by applying a practice, policy or rule that applies to everyone but puts a job applicant or employee at a disadvantage because of their disability;
- Discriminate by treating a disabled job applicant or employee unfavourably because of something that results from their disability, not because of the disability itself;
- Fail to comply with its duty to make reasonable adjustments where a disabled job applicant or employee is placed at a substantial disadvantage;
- Subject a job applicant or employee to harassment related to disability; or
- Victimise a job applicant or employee because they made or intend to make a disability discrimination complaint under the Equality Act 2010, or because they have done or intend to do other things in connection with the Equality Act 2010.

You can find more detailed guidance on disability discrimination here: Disability discrimination – Acas

If you believe you have suffered disability discrimination at work, your next course of action would normally be speaking to your employer and seeing if the issue can be resolved informally.

For example, it may be appropriate to arrange a meeting with your line manager to discuss what has happened and explain your perspective on the matter. If you decide to formally raise a grievance under your employer's grievance procedure in relation to what has happened, you will normally be asked to meet with your line manager or another appropriate person who is investigating the grievance, and you will be given the right to be accompanied to the meeting if you wish, by either a colleague or a trade union representative.

You can find more information about approaching workplace disputes here: Solve a workplace dispute: Overview - GOV.UK

If the issue cannot be resolved internally, you can find advice and guidance on the next steps, if you're entitled to legal support and how to access it here: Find legal advice and information: Overview - GOV.UK

Knowing what you need

A repeated challenge we heard from participants throughout our research was the expectation from employers and line managers for disabled people to know exactly what they need to deliver their best work.

In reality, many disabled people don't know what they need right away, particularly if their disability has been acquired later in life or they're starting a new role with different environments and requirements.



Being faced with the 'what do you need?' question can be daunting, but it's really an opportunity to advocate for a way of working that fits you. Here are a few suggested actions you can take to help you feel more prepared when the question comes.

- **Familiarise yourself with the working environment.** Ensure that before visiting, you are aware of the different spaces you'll be expected to work and move within and assess what may cause a barrier for you ahead of time. Most organisations will have an accessibility guide available on their website, with information that will help you make this assessment. You can also contact an organisation's HR team to request photographs or a map of the location to help you visualise the space.
- **Ensure you know the physical demands.** Ahead of starting a new role or project, establish with your employer or line manager what the physical demands of the job are. Will you be expected to travel long distances, carry heavy equipment or work in challenging environments? Knowing exactly what will be expected of you physically will enable you to better identify what adjustments could help you complete the task.
- **Think about your functional needs.** Do you find you have more energy in the mornings or the afternoons? Do you have limited mobility which makes stairs difficult? Do you require close access to bathroom facilities? Asking yourself questions like these can help identify adjustments that play to your strengths and physical needs.
- **Seek examples from those with similar conditions or disabilities.** Of course, our individual needs are unique to us, however, exploring the type of adjustments that have supported others with your disability or condition can help generate ideas if you're not sure where to start or what's available.
- **Consider the barriers you've faced in the past.** What helped in those moments, and what hindered you? Ask yourself what adjustments or actions could help you avoid facing them again, or help you feel more prepared.
- **Identify what energises you.** We know from our research that disabled people may experience a 'disability tax'; additional time, resource and energy used to carry out their daily lives. To help prevent feelings of burnout or exhaustion, consider what activities motivate you and replenish your energy, whether they be work related or wellbeing related, and ensure you incorporate them into your day. The more of this type of activity you do, the more likely you'll feel ready and able to face challenges if they arise.

Accessing disability support at work

Asking for what you need

Asking for adjustments and support for your disability can feel challenging, and we know from our research that the approach and attitude of your line manager can have a huge impact on just how intimidating it feels.

When considering asking for help, remember that you are entitled to adjustments that enable you to excel in your job and be on a level playing field with your colleagues. You do not need to have or 'prove' you have a diagnosis to receive adjustments.

Disclosing your disability: a 'need to know' basis

Even if you do choose to disclose that you are disabled, you do not need to share what your disability is. Your employer will only need to know that you have a disability that's affecting you at work, and that you require adjustments.

Your line manager will then speak to you about the specific barriers or challenges that you're experiencing, so together you can explore adjustments that solve them or lessen their impact on your workday.

Clearly explaining the negative impact something is having on both your ability to perform your role and your wellbeing can help managers understand why change is needed.

Starting the conversation

If you're starting a new job, some organisations will ask if you require any adjustments ahead of your start date. This is good practice and can help ensure your adjustments are implemented and ready for you when you begin your role. As an employer, taking a proactive rather than reactive approach will enable the new team member to settle into their role much more smoothly and quickly.

However, some might not know exactly what they need at this stage, especially as a new job means unfamiliar working styles and environments. In these instances, you can reach out to your future line manager and request a meeting to discuss the expectations of the role in more detail and work together to anticipate where you may experience challenges. Visit page 12 for advice on learning what adjustments could work for you.

If you decide to disclose that you have a disability to your employer while already working in a role, start by reaching out to your line manager and requesting a private meeting to discuss the barriers you're facing at work. If you don't feel comfortable having this conversation alone, some organisations may allow you to bring someone with you to the meeting.

During this conversation, your line manager will likely ask you questions that help them to better understand what challenges need to be resolved, and work alongside you to explore solutions. They should not ask you directly to share what your disability is, nor should they expect you to have all the answers. Some organisations use a structured document to guide these conversations, like a Tailored Adjustment Plan (TAP.) You can find more information about these on page 15.

Once you have worked through the TAP with your line manager and agreed which adjustments should be put in place to help you, your manager will schedule regular reviews to monitor the success of the adjustments and identify if further changes are needed.

Building a 'Disability Passport'

We know from our 2025 research that consistently needing to self-advocate and communicate needs with different colleagues can be draining for a disabled person. In engineering and technology, it's not uncommon to be working alongside unfamiliar people on a regular basis, so the need to re-share personal details could be frequent.

To lessen the impact and requirement for this, some individuals create a 'disability passport' or 'passport to me' document. Within this, an individual's accessibility information can be stored and regularly updated, and when required, shared with colleagues to provide information so the individual does not need to repeat their needs on multiple occasions.

These documents are also really helpful to those who work alongside someone with a disability, providing a single source of information so the need to ask questions or initiate potentially uncomfortable conversations is lessened.

When building a 'disability passport', it's helpful to include:

- **About me:** A short introduction to yourself, for example, your role and how long you've been at the organisation.
- **Disability information:** If comfortable doing so, you can disclose your disability here, but this isn't a necessity – you can simply declare that you have a disability if you'd prefer.
- **Impact on work:** Share how your disability affects you at work, for example, if your energy levels fluctuate through the day and what time you feel your best.
- **What supports me:** In this section, include any behaviours or actions from others that help you to feel comfortable and to complete your role.
- **What hinders me:** Include anything you find unhelpful when managing your disability at work, for example, no breaks between meetings.
- **Communication preferences:** This includes spoken vs typed preferences, timings of communication and the clarity of what is being said.
- **Existing adjustments:** If you already have adjustments in place, it's helpful to include these here to make colleagues aware.
- **Emergency or overwhelm management:** In the instance of an emergency or crisis relating to your disability, include information on who can be contacted, and how you would like colleagues to react and support you.
- **Sharing consent:** Ensure you include information on who your passport can be shared with.

Keep a note of the date you first created your passport and ensure you are updating it regularly to reflect your current needs. Some choose to review theirs annually, others add in changes as they experience or receive them. If you need some help establishing your needs and what may be helpful to you, you can find some advice on page 12.



Guidance for line managers

Enabling open conversations

Disability can be a sensitive topic, and it's important that all conversations are approached with respect and without assumptions. Historically, engineers and technologists may have been expected to adopt a 'just get on with it' attitude, but we know that this doesn't enable the best experience or outputs within the sector.

Therefore, it's important to build a culture of openness and psychological safety, so your colleagues or team members know they can speak up if they need to. Here are some suggested ways you can do this:

- **Lead by example.** Being open and sharing something about yourself with your team can demonstrate to colleagues that it's a safe place to do so.
- **Create a network.** If your organisation doesn't have an employee network for disability, consider creating one or signposting to existing groups, like our Disability Member Network.
- **Protect privacy and confidentiality.** Ensure any information shared with you is kept confidential unless otherwise stated by the individual. It's also good practice to offer colleagues an anonymous route to share feedback.
- **Utilise a Tailored Adjustment Plan (TAP) to facilitate conversation.** A TAP establishes for you the questions to ask your team member, and guides the direction of the conversation to ensure you gather the information you need.

Tailored Adjustment Plans

A Tailored Adjustment Plan (TAP) is a document that helps guide conversations around disability and track needs and adjustments.

TAPs can be completed together by the disabled colleague and their line manager, and can be regularly reviewed to monitor the success of any implemented adjustments.

Here are some sections you might find helpful to include in a TAP:

- **Overview of disability.** This could include the specific condition if the individual is comfortable disclosing it, or more general information about how their disability affects them.
- **Symptom fluctuations.** Some conditions may affect an individual more in the morning or in the afternoon, or on some days more than others. Knowing when their best and most challenging times are can help inform how work is distributed to achieve the best outputs.
- **Emergency information.** Include information on who to contact in an emergency. Some also add information on how to react helpfully in these instances.
- **What gets the best out of me.** Here, establish preferences such as working environment, assistive technology use and communication styles or methods.
- **What creates barriers for me.** Include any actions, behaviours, environment or attitudes that increase challenges for the disabled colleague.
- **Requested adjustments.** Within a TAP, any existing or planned adjustments should be logged, and progress with these should be monitored on a regular basis. This makes it easy to know what's currently in place and if it's working well or not.
- **Actions.** Based on the information and proposed adjustments established in the earlier sections of the TAP, there should be a place to record actions for both the disabled colleague and the line manager.
- **Review date.** Once completed, be sure to set and include a date to review any adjustments implemented and any changes to their disability.

CASE STUDY

NATS: Taking a practical approach to disability inclusion

Insights shared by **Jessica Mount-Kingett**, ED&I Programme Manager at National Air Traffic Services (NATS), and gathered by our EDI Manager, **Daisy March**.

> We want to focus on learning and continuous improvement. We are listening to feedback, being open about challenges and making gradual improvements which can have a meaningful impact on employees' experiences.
>
> Jessica Mount-Kingett

NATS is the UK's leading provider of air traffic control services, handling millions of flights each year and operating within one of the most safety-critical environments in the world. Alongside its responsibility for keeping UK airspace safe and efficient, NATS is working to create a more inclusive workplace by improving accessibility, supporting disabled employees and embedding inclusion into its people practices and decision-making.



Jessica Mount-Kingett, ED&I Programme Manager, NATS

I had the opportunity to speak to Jessica Mount-Kingett, ED&I Programme Manager at NATS, and one of the themes that came up repeatedly was the importance of continuous improvement. Rather than presenting disability inclusion as a finished piece of work, Jessica described it as an ongoing journey, one that involves listening to employees, learning from challenges and making practical changes that help people succeed and feel comfortable at work.

At NATS, disability inclusion forms part of a wider ambition to become a top 25 employer by 2040. This is supported through its broader equality, diversity and inclusion strategy, which focuses on three key areas: attracting diverse talent, creating opportunities to learn and grow, and ensuring that everyone feels they belong. Disability inclusion is considered across all three of these areas.

One area of focus has been making recruitment more accessible. While some operational roles have strict regulatory requirements, for example, air traffic control roles have specific medical standards, NATS aims to remove barriers wherever possible. Candidates are encouraged to discuss adjustments during the recruitment process, and interview formats can be adapted to better support individual needs. Examples include providing additional information about interview structures, displaying questions on screen, and offering additional preparation time where appropriate.

Jessica highlighted that many candidates now arrive with a clearer understanding of the adjustments that help them perform at their best, often drawing on experiences from education. NATS has sought to build on this by creating opportunities for candidates to discuss support needs early, helping adjustments to be put in place proactively rather than after barriers arise.

Alongside recruitment, NATS has invested heavily in creating a more accessible working environment. This has included accessibility audits of its buildings, improvements in digital accessibility and a review of workplace adjustment processes. They've also explored how assistive technologies can support employees, although Jessica was candid about some of the challenges involved in balancing user needs with security and technical requirements in a highly regulated environment - this presents a barrier for some engineering and technology organisations.

One particularly interesting aspect of NATS' approach is its focus on collaboration. Rather than leaving adjustments solely to individual managers, the organisation has developed a more centralised process involving HR advisors and specialist contacts who help employees navigate available support. Jessica explained that having individuals who understand both technical systems and accessibility needs has been transformative, helping bridge the gap between employees seeking support and teams responsible for delivering it.

Employee voice also plays an important role. NATS has a disability network with senior executive sponsorship and regularly uses awareness campaigns, employee stories and inclusion events to encourage conversation and learning. More recently, the organisation has invested in leadership development, including participation in the Royal Academy of Engineering's Inclusive Leadership Programme. This led to the delivery of inclusive leadership and psychological safety training for engineering leaders, helping managers create environments where more people feel comfortable contributing ideas, sharing concerns and asking for support.

NATS is also beginning to embed accessibility more directly into decision-making processes. Representatives from employee networks work alongside teams from IT, facilities, communications and HR to review proposed changes and identify any unintended barriers. This approach has been used to test new technologies, including Microsoft Copilot, helping the organisation better understand how different tools can support employees with disabilities and long-term health conditions.

Throughout our conversation, Jessica was keen to emphasise that progress has come from taking a broader, organisation-wide view of accessibility rather than treating it as an issue for individual teams to solve in isolation. Bringing together expertise from across the business has helped create more consistent processes and reduce some of the variability that employees can experience when accessing support.

Reflecting on NATS' approach, Jessica shared three key lessons:

Take a whole-organisation approach to accessibility.

Consistent processes and shared ownership can help reduce barriers and ensure employees receive equitable support, regardless of where they work in the organisation.

Create connections between technical experts and lived experience.

Having dedicated people who can translate accessibility needs into practical solutions can significantly improve the speed and effectiveness of workplace adjustments.

Focus on learning and continuous improvement.

Organisations do not need to have all the answers. Listening to feedback, being open about challenges and making gradual improvements can have a meaningful impact on employees' experiences.

I was really impressed to learn about NATS' aspirational but realistic approach to disability inclusion. As Jessica reflected, the goal is not perfection, but a genuine commitment to learning, improving and making a difference.

The 'disability tax'

The 'disability tax' emerged as a key barrier for disabled engineers and technologists throughout our research, and refers to additional time, energy and cost that an individual experiences on a daily basis due to their disability. It can be experienced by disabled people, but also in some ways by those who support them.

Some examples include:

Cost

- Purchasing assistive technology, which often comes at a cost to the individual, especially specialist equipment.
- Private transportation may be required if public transport isn't accessible, incurring a higher cost.
- Increased energy costs from running or charging assistive equipment or heating the home.

Time

- Finding accessible routes, checking facilities in advance, or allowing extra travel time.
- Additional admin processes required in accessing adjustments or navigating workplace systems not built for inclusion.
- Advocacy work is often carried out by disabled people themselves as an additional task, and is usually unpaid.

Energy

- Additional energy spent planning routes, finding accessibility information, and managing unexpected challenges, for example broken lifts.
- The need to repeatedly self-advocate for themselves, which can be draining.
- Balancing workload with fatigue, pain, or changing symptoms can require constant energy and decision-making.

Ways to manage the 'disability tax'

In a society often not built for disability, removing the 'disability tax' entirely can be difficult, but there are actions that you can take which could help to lessen the impact. For example:

- **Explore funding schemes to assist with cost.** Government-led benefits programmes and Access to Work offer some routes to access this, along with our benevolent fund Foothold and other disability-focused charities like Scope.
- **Proactively schedule in rest and recovery time.** Ahead of each week, ensure that you have reserved regular time to rest – and stick to it! It can be tempting to push ourselves and neglect breaks, but taking them will enable you to feel and work your best in the long term.
- **Alternate tasks by energy required.** Start by breaking down your tasks into 'higher energy' or 'lower energy' categories, then when planning your day, alternate the higher energy tasks with lower energy tasks. Or, if you tend to have more energy at a certain time of day, aim to focus on higher energy tasks during this time.
- **Make use of technology designed to make your life easier.** It may sound obvious, but many people aren't aware of what's available to help them, especially given the rate at which assistive technology is evolving, or if a disability was acquired later in life. More information about different types of assistive technology can be found on page 30.
- **Find a support network.** This could be formal support, such as a carer, assistant or community worker. Or it could be less formal support, such as friends, family, an inclusion network, ERG or online community forum. More information on how to find support that works for you can be found on page 12.



Supporting colleagues impacted by the 'disability tax'

If you line manage or work alongside a disabled colleague, it's great to have awareness of the 'disability tax' and how it may impact them. One step beyond this is adjusting your actions to help lessen its effect on them.

The most effective way to learn how to support a disabled colleague is to have a conversation about how and when the 'disability tax' impacts them and work together to establish how you can be of best support in these instances. Some colleagues may already have a 'disability passport' developed with this information – more details on these can be found on page 14.

Here are a few actions you can take to be supportive of a disabled person experiencing the impacts of the disability tax:

- **Be proactive.** If you notice a colleague is struggling with something at work, ask if you can support in finding a way that works better for them. However, remember not to make assumptions about their disability or what they need – be proactive in offering support, not telling them what should happen next.
- **Be flexible.** Be aware that some colleagues may struggle more at certain times of day or might take longer to get from A to B. Be conscious of this when planning meetings or events – always ask what time works best for them.
- **Simplify.** In any ways you can, try and reduce the time and effort required for a task. This could be as simple as using concise language and ensuring the reader's required actions are clear and highlighted in communications.
- **Create opportunities for openness.** This could be by checking in regularly on what's working well and what isn't without using prying or targeted questions about their disability. Sharing something about yourself can help put the individual at ease and is a good way to lead by example if you're comfortable doing so.
- **Be a vocal ally.** We know that continued self-advocacy can be exhausting, and so it can be refreshing and inspiring to see disability allies speaking out on behalf of the community and their needs.

CASE STUDY

Heathrow Airport: Designing accessibility into complex environments

Learnings shared by **Jenny McLaughlin**, Principal Project Manager for Heathrow, and gathered by our EDI Manager, **Daisy March**.

> It's not adding another thing into what you're doing. It's doing the thing you're doing better.
>
> Jenny McLaughlin

Over the past two years, Heathrow Airport has undertaken a significant programme of work to strengthen its approach to inclusive design. This has included updating its accessibility standards and developing practical guidance for project teams, helping engineers, designers and project managers consider accessibility from the outset of every project rather than responding to barriers after they arise.



Jenny McLaughlin, Principal Project Manager, Heathrow Airport

Speaking with Principal Project Manager, Jenny McLaughlin, it was clear that Heathrow views accessibility as far more than a customer service initiative. Instead, it has become a design principle that influences how infrastructure is planned, built, maintained and experienced by everyone who interacts with the airport.

Jenny explained that one of Heathrow's key ambitions is to create environments that are safe and usable for the widest possible range of people. This means considering not only physical accessibility, but also psychological, sensory and cognitive needs. By embedding these considerations into project governance and decision-making processes, accessibility becomes a routine part of delivering high-quality infrastructure rather than a separate workstream.

A cornerstone of Heathrow's approach is involving people with lived experience in shaping decisions. Alongside its internal disability employee network, Heathrow works closely with its Heathrow Access Advisory Group (HAAG), a panel of disabled people who provide feedback on projects, services and proposed changes across the airport. Importantly, members are paid for their time and expertise, recognising the value of their contribution.

This approach has led to tangible improvements. For example, Heathrow worked with members of the advisory group to redesign its passenger support areas, creating spaces that feel more welcoming and respectful for those requiring assistance during their journey. Rather than simply providing a waiting area, the focus was on creating an experience that supports dignity, comfort and independence.



Technology has also played an important role. Heathrow has collaborated with specialist partners to introduce tools that improve communication and access to information, including solutions that support British Sign Language users and personalised accessibility guidance. The airport is also trialling innovations that give passengers requiring mobility support greater freedom to move through the airport independently, helping them retain more control over their travel experience.

One of the most interesting aspects of Heathrow's work is its adoption of a systems-thinking approach. Rather than focusing solely on physical barriers, project teams are encouraged to consider the relationship between the person, the environment and the task being undertaken. This broader perspective helps identify barriers that might otherwise be missed and creates opportunities to improve both processes and physical spaces.

To support this work, Heathrow has developed a practical evaluation framework known as the Wheel of Considerations. The tool helps teams assess how design decisions affect different groups of people and encourages discussion about inclusion throughout the design process. A key measure within the framework is "agency", the extent to which someone can use a space or service independently, with dignity and without requiring additional support.

Jenny was keen to emphasise that improving accessibility is not about adding another requirement to an already lengthy project checklist. Instead, she sees it as an opportunity to deliver better outcomes by thinking more broadly about who may be affected by a design decision. In her words, it is not about doing something extra; it is about doing the job better.

Reflecting on Heathrow's approach, three key lessons emerged:

Embed accessibility from the start.

Inclusive design is most effective when it is considered at the earliest stages of planning and decision-making, rather than being introduced later as a corrective measure.

Work with people who have lived experience.

Engaging disabled people throughout the design process helps organisations identify barriers, challenge assumptions and create solutions that better meet real-world needs.

Focus on dignity, independence and choice.

Good accessibility is not simply about compliance. It is about enabling people to navigate spaces, services and experiences on their own terms, with as much autonomy as possible.

By considering the needs of both passengers and colleagues from the earliest stages of design, Heathrow is helping to create an airport experience that is more inclusive, independent and welcoming for everyone, whether you're working or travelling.

Finding additional support

Disability can be isolating. The combined impact of factors like the disability tax, a lack of awareness from peers and discriminatory attitudes can all contribute to feelings of 'otherness' and exclusion.

However, we all succeed the most when surrounded by a supportive community of people who understand and hear us. Not only this, but our own lives are enriched by supporting others and listening to their experiences.

That's why building a support network is so important, but it's not always easy to know where to start. Below are some suggestions on where you can begin to grow yours:

- **Join an Employee Resource Group (ERG).** Some organisations will have an internal network for disability inclusion, but if yours doesn't, you could join an external ERG within the sector, for example, the IET's Disability Member Network.
- **Explore online forums on disability inclusion.** Online communities like the IET's EngX platform can be a great way to connect with others across organisations, share experiences and ask questions in a supportive environment.



- **Attend inclusive events and webinars.** Look out for conferences, panel discussions and virtual events focused on accessibility, neurodiversity or disability inclusion in engineering and technology. These could be valuable opportunities to hear lived experiences and build connections with likeminded people, particularly if there's an opportunity to network.
- **Consider mentoring.** Mentoring can provide guidance, confidence and a sense of belonging. Whether you're looking for support or you're able to support others, these relationships can be incredibly powerful, and everyone brings their own unique skills, value and experiences to the table.
- **Reach out to a charity.** Our benevolent fund, Foothold, offers disability support in a number of forms to IET members and their families, including financial help, counselling and carer guidance. For non-members, there are charities like Scope which has an active online community, and Disability Rights UK which is led by and for disabled people.

Remember that building a support network doesn't need to happen all at once, it can take time to find the right fit for you. Often, these connections start with a single conversation, a shared experience, or joining a community where you feel heard. Putting yourself out there can be intimidating, but collective voices are extremely powerful in driving real change, and can certainly make us feel less alone in our experiences.

Navigating Engineering and Technology work environments

As an engineer or technologist, your role may require you to work in a range of different environments, and where you are may change from day-to-day. This unfamiliarity can add an additional level of anxiety for someone who is disabled.

Some environments you may encounter include the following:

- **office spaces**
- **hybrid and remote environments**
- **on-site locations**
- **laboratories and technical floors**
- **external travel.**



Here are a few tips on anticipating the unexpected and safely navigating through these environments.

- **Create and share a 'guide to me'.**
  Put together a document that explains the type of challenges you tend to experience at work, and include what helps overcome or reduce these. Although this may take some time to create, it can be used again and again to easily share your requirements with others, removing the need to continually repeat or explain yourself to new colleagues.
- **Read accessibility information before you go.**
  Some organisations may have an accessibility guide already available, but even if they don't, they are required to make reasonable adjustments to help enable you to carry out the job. If accessibility information isn't readily available, you can reach out to the facilities or HR team to request this.
- **Ask AI to identify potential challenges on your route.**
  Adding the details of your planned route, along with information about your physical requirements, into an AI search engine can help give you an insight into barriers you may encounter, so you can better plan to manage them.

Key built environment considerations

Engineering and technology environments can be varied, and sometimes unpredictable. As a result, there could be a range of key accessibility considerations that apply in your workplace, which may differ from day-to-day.

Here is an overview of some key considerations to make when planning and designing a space that you want to work for colleagues with differing needs.

Physical accessibility

- Is there step-free access throughout the building, including entrances, circulation routes and emergency exits?
- Are there accessible parking and drop-off points located close to entrances?
- Does the building have automatic or easy-to-operate doors?
- Are there accessible toilets and changing facilities available and working correctly?
- Are there height-adjustable desks and workstations?
- Are the meeting rooms accessible? Could they exclude someone unintendedly?
- Are there working lifts that are easy to locate and use, with tactile buttons and audible announcements?
- Are the foot-traffic routes clear and obstacle-free?

Sensory accessibility

- Adjustable lighting where possible.
- Reduction of glare and flicker from lighting.
- Quiet workspaces and concentration areas.
- Acoustic treatment to reduce background noise and echo.
- Spaces that allow individuals to control their environment where possible, for example, temperature controls.
- Use of calming colour schemes and avoidance of visually overwhelming patterns.

This aligns strongly with the approaches described by AtkinsRéalis below in relation to quiet workspaces, adjustable lighting, welfare rooms and biophilic design.

Neuroinclusive design

- Varied work settings to accommodate different working styles.
- Quiet rooms or low-stimulation environments.
- Clearly defined spaces for collaboration and focused work.
- Consistent layouts and clear wayfinding.
- Predictable environments that minimise unnecessary uncertainty.
- Spaces for decompression or sensory regulation.

Wayfinding and navigation

- Consistent signage throughout the building.
- Good colour contrast on signs and wayfinding systems.
- Tactile and accessible navigation information where appropriate.
- Clear landmarks and visual cues.
- Logical layouts that reduce cognitive load.

Welfare and wellbeing

- Multi-purpose welfare rooms.
- Prayer and reflection spaces.
- Rest and recovery spaces.
- Spaces that support people with long-term health conditions, fatigue, chronic pain or hidden disabilities.

Digital and hybrid accessibility

Increasingly, the workplace extends beyond the physical building.

- Accessible room booking systems.
- Hearing loop technology.
- High-quality video conferencing facilities.
- Accessible digital signage.
- Consistent accessibility standards across workplace technology.

CASE STUDY

AtkinsRéalis: making disability inclusion *'business as usual'*

Insights shared by **Rebecca Leadbeater**, Co-Lead Neurodiversity Network, and **Adam Lawrence**, Co-Lead Enable staff network for AtkinsRéalis, gathered by our EDI Manager, **Daisy March**.

> It's not about what people can't do, it's the fact that society is built in the wrong way and it's not that they aren't fitting with society – it's the other way around.
>
> Rebecca Leadbeater

AtkinsRéalis believes that everyone should be able to bring their whole selves to work and have the support they need to succeed. Rather than viewing disability inclusion as a separate initiative, they work to embed it throughout the employee experience, from recruitment and workplace design to employee support networks and project delivery. I spoke to Rebecca Leadbeater, Co-Lead of their Neurodiversity Network and Adam Lawrence, Co-Lead of their Enable staff network, about the work AtkinsRéalis has done to get there.

I wasn't surprised to learn that a key driving force behind this work is the organisation's employee networks, including their Enable Network for colleagues with disabilities and long-term health conditions and their Neurodiversity Network. These communities provide a safe space for employees to share experiences, build connections and support one another, while also helping to shape policies and influence wider organisational change. Colleagues are invited to get involved through online communities, informal discussion groups, online and in-person events, coffee mornings, webinars and surveys.

By creating these spaces for open conversations to occur, they learned that colleagues' relationships with their managers had a significant effect on their experience at work and how comfortable they were to disclose their disability. In response, they created guidance for managers which raised awareness of the challenges relating to disability at work, and reminded them of the wide range of support for both managers and their staff.

They recognise that creating an inclusive workplace starts before someone joins the organisation. As a Disability Confident Leader, AtkinsRéalis encourages candidates to discuss any adjustments they may need throughout the recruitment process. Job adverts are designed to be more inclusive and strengths-focused, and opportunities are promoted through specialist channels such as MyPlus Students' Club, helping to connect with disabled students and graduates.





Rebecca Leadbeater, Co-Lead Neurodiversity Network, AtkinsRéalis and **Adam Lawrence**, Co-Lead Enable staff network, AtkinsRéalis

CASE STUDY **AtkinsRéalis:** making disability inclusion *'business as usual'*

Adam and Rebecca also highlighted that the organisation recognises the important role that working environments play in helping people thrive. Drawing on expertise from its human factors teams, AtkinsRéalis has developed guidance for creating more inclusive office spaces. Features such as quiet work areas, adjustable lighting, welfare rooms, accessible furniture and biophilic design are helping to create environments that work for a wide range of people and needs. Colleagues at AtkinsRéalis can also access assistive technology and request additional digital tools where required to support them in carrying out their roles.

I was impressed to hear that this commitment to inclusion extends beyond its own workforce. Colleagues also work on external projects including accessibility audits across the rail network and work on the Elizabeth Line, helping to improve access, navigation and overall passenger experience for disabled travellers.

In terms of measuring the real impact of their disability inclusion efforts, AtkinsRéalis draws on regular employee surveys, network feedback, disability disclosure data and external accreditations such as Disability Confident and Clear Assured. However, Rebecca and Adam said that some of the most meaningful signs of progress are harder to measure, such as people feeling more confident talking about disability and sharing their experiences at work.

This focus on accessibility is also reflected in AtkinsRéalis' wider societal impact. In 2026, the company announced a partnership with British Wheelchair Basketball, combining engineering expertise with the lived experience of wheelchair athletes to support innovation in inclusive infrastructure and design. The collaboration demonstrates how disability inclusion is not only an internal people agenda, but also a driver of better outcomes for clients, communities and end users. Alongside projects such as rail accessibility audits, inclusive transport design and guidance for SEND learning environments, the partnership highlights AtkinsRéalis' commitment to creating places and spaces that work for everyone.

Reflecting on their experience, I asked Rebecca and Adam to share three key lessons from AtkinsRéalis for organisations looking to improve disability inclusion:

Create opportunities to talk openly about disability and challenge stigma.

To start, try highlighting a disability-related awareness day and sharing resources to introduce the topic and increase understanding.

Build inclusion into everyday decisions and ways of working, rather than treating it as a standalone activity.

It should become a key step within your processes to think; 'am I excluding someone by doing things this way?'

Focus on removing barriers.

Recognise that it is often environments and systems, not individuals, that create challenges.

Through listening to employees, empowering staff networks and continually looking for ways to remove barriers, AtkinsRéalis is demonstrating that disability inclusion works best when it becomes part of an organisation's culture, rather than a separate programme of work.

Raising awareness and building empathy

One of the barriers that arose frequently throughout our research into the experiences of disabled engineers and technologists was the exclusionary or ignorant attitudes of colleagues, and the impact of this on a disabled person. In some cases, hostility or awkwardness developed from fellow team members when reasonable adjustments were implemented, with some viewing this as special treatment.

This led to further feelings of exclusion and difference, and it's important for organisations to address these attitudes in a productive way. As an employer, one of the actions you can take to increase the sense of psychological safety and empathy for disabled colleagues is to speak openly about disability and raise awareness.

This can be done through:

- sharing colleague stories, if they're comfortable doing so,
- inviting external speakers with specific lived experiences or knowledge to share theirs,
- accessibility and empathy workshops,
- inclusive design challenges or hackathons,
- reciprocal mentoring programmes, or
- simply through sharing existing resources on disability widely in your organisation, for example, on awareness days.

The impact of this is that you demonstrate to colleagues that the workplace is a safe place to talk about topics like disability, enabling them to not feel they need to hide or keep discussions of health and wellbeing outside of work.



In our research, one participant described how senior staff members were paired with individuals from minority groups in mutual mentoring like relationships to gain a better understanding of the barriers they face, as well as their value and impact within the organisation.

Another highlighted the impact of a project called 'Stories about me', in which colleagues shared personal stories with their organisations. This helped others to realise that 'everyone's got something going on.'

CASE STUDY

Google: Building accessibility through innovation, partnership and continuous learning

Insights shared by **Christopher Patnoe**, EMEA Accessibility and Disability Inclusion Lead for Google, gathered by our EDI Manager, **Daisy March**.

> Only someone in the community can tell you what's broken. And then they can tell you how they hack it to make it work for them. Our job as technologists is to take that hack and make it broadly applicable.
>
> Christopher Patnoe

Google develops products and services used by billions of people around the world every day, from Android and Chrome to Search, YouTube, Workspace and Pixel devices. With technology playing such a significant role in modern life, accessibility is a critical part of ensuring that everyone can participate fully in the digital world.

When I spoke to Christopher Patnoe, Google's EMEA Accessibility and Disability Inclusion Lead, he was refreshingly honest about the realities of accessibility in such a large organisation. Despite Google's reputation as a leader in the field, Christopher was quick to point out that accessibility is not something an organisation ever fully "solves". Instead, it is a continual process of listening, learning and improving.

At Google, accessibility is thoroughly embedded throughout the product development process. Dedicated accessibility specialists work alongside product teams, while disabled employees and external users are involved in everything from early-stage concept development and co-design sessions through to user testing and product refinement. For more complex or innovative products, disabled users are often brought in at the earliest stages to help shape solutions before development begins.

Google regularly works with external communities, gathers feedback from disabled users and provides dedicated support channels for customers with disabilities. This creates a feedback loop that allows products to evolve as people's needs and expectations change.



Something that I was particularly impressed by during our conversation was the extent to which accessibility innovation is driven by lived experience. Christopher shared several examples of products that originated from disabled employees and their families. One of these was Live Transcribe, a speech-to-text application that began life during a Google hackathon, led by Dmitri, a deaf software engineer.

Another was Guided Frame, a Pixel feature that helps blind and low-vision users take photographs independently, notifying users when the subject matter is within frame. The idea originated from a Google employee whose blind son wanted to take skateboard selfies in the same way as his friends. Through ongoing collaboration with disabled users, the technology has continued to evolve and improve over time. These examples demonstrate a wider principle at Google: accessibility is not viewed as a niche requirement but as a source of innovation and inspiration – it's about always asking "what's next?".

Christopher also highlighted how many accessibility features ultimately benefit a much broader audience. Live Caption on the Chrome Browser and Android Operating System, for example, was originally developed to support deaf and hard-of-hearing users, but it is now used by people in noisy environments, language learners and neurodivergent users also.

Google also invests heavily in building accessibility knowledge internally. New employees working in product-related roles are introduced to accessibility concepts early on, while more specialised training is delivered through the internal Alphabet Accessibility Academy. The Academy provides role-specific learning pathways for engineers, researchers, designers, product managers and other professionals, helping teams understand how accessibility relates directly to their work.

Alongside formal training, Google runs annual events such as Accessibility and Disability Innovation Week, creating opportunities for employees around the world to learn more about disability, accessibility and inclusive design. Christopher noted that one of the challenges is keeping accessibility visible enough to remain a priority, without overwhelming people with information.

Rather than focusing solely on compliance metrics or usage statistics, Google recognises the importance of individual stories and lived experiences. In a company whose products reach billions of users, even a seemingly small improvement can have a meaningful impact on millions of people. At the same time, he acknowledged that raising awareness remains one of the greatest challenges, requiring constant communication and engagement across a large and diverse organisation.

Reflecting on Google's approach, three key lessons emerged:

Design with disabled people, not for them.

Involving people with lived experience throughout the design process leads to more meaningful, effective and innovative solutions.

View accessibility as a driver of innovation rather than a compliance exercise.

Many of the most impactful technologies arise from solving barriers experienced by disabled users and often go on to benefit a much wider audience.

Accept that accessibility is never finished.

User needs evolve, technology changes and new barriers emerge. Successful organisations treat accessibility as an ongoing process of improvement rather than a one-off project.

It was refreshing to learn that even a leader in innovation like Google doesn't feel it has all the answers. However, they recognise the value of including diverse perspectives in all stages of product development, and the importance of putting human experience at the heart of innovation.

Assistive technology

The world of assistive technology is rapidly evolving – which is exciting, but can mean it's hard to keep up with what's available out there to support you or your team. Below are some examples of existing technology used to support accessibility, and the types of disabilities they can support.

Assistive Technology	Examples	Supports Which Disabilities	How It Helps
Screen readers	NVDA, JAWS, VoiceOver	Visual impairments	Reads code, documentation and user interface elements aloud, enabling navigation of development environments without sight
Voice recognition/ dictation	Dragon NaturallySpeaking, Windows Speech-to-Text, Apple Dictation	Physical disabilities, chronic pain, repetitive strain injuries	Enables hands-free coding, documentation and communication, reducing reliance on keyboards and mouse
Magnification & visual enhancements	ZoomText, built-in on-screen magnifiers, high contrast modes	Low vision, visual processing conditions	Enlarges and enhances on-screen content, making code and interfaces easier to read
Alternative input devices	Ergonomic keyboards, trackballs, eye-tracking systems, switch controls	Mobility impairments, limb differences	Provides alternative ways to interact with systems when standard input devices are difficult to use
Captioning & transcription tools	Microsoft Teams captions, Zoom live captions, Otter.ai	Deaf or hard of hearing	Provides real-time captions and transcripts for meetings, stand-ups and technical discussions
Cognitive support tools	Notion, Todoist, Microsoft OneNote, focus timers	Neurodivergent conditions (ADHD, autism, dyslexia)	Supports organisation, task management, memory and focus across complex technical work
Accessible IDE features & plugins	VS Code accessibility extensions, IntelliJ accessibility features	Visual impairments, motor impairments	Improves keyboard navigation, screen reader compatibility and reduces reliance on complex visual layouts
AI-assisted coding tools	GitHub Copilot, AI code completion tools	Cognitive disabilities, fatigue-related conditions	Reduces cognitive load, supports code generation, debugging and repetitive tasks
Remote & cloud-based tools	GitHub, Azure DevOps, remote desktops, cloud IDEs	Mobility impairments, chronic illness, fatigue	Enables flexible working environments, reducing physical and commuting barriers
Customisable workstations	Adjustable desks, multi-monitor setups, adaptive lighting	Physical disabilities, visual conditions, chronic pain	Improves comfort, posture and usability over long working sessions

As with many forms of assistive technology, a lot of these tools benefit a wide range of people, not just those with disabilities. This demonstrates that often, inclusive design is an integral part of 'good' engineering.

CASE STUDY

WeWalk: Designing for inclusion through lived experience

Insights shared by **Gasia Cavusyan**, Community Manager at WeWalk, and gathered by our EDI Manager, **Daisy March**.

> Even if you're an engineer, if you're not a visually impaired person, there's no way that you would understand the difference.
>
> Gasia Cavusyan



WeWalk is an assistive technology company focused on improving mobility and independence for visually impaired people. When I spoke to Gasia Cavusyan, Community Manager from WeWalk, one message came through clearly: the best solutions are created when disabled people are involved in designing them from the very beginning. WeWalk's approach to assistive technology is rooted in lived experience, ensuring that the people who will ultimately use the product help shape its development every step of the way.

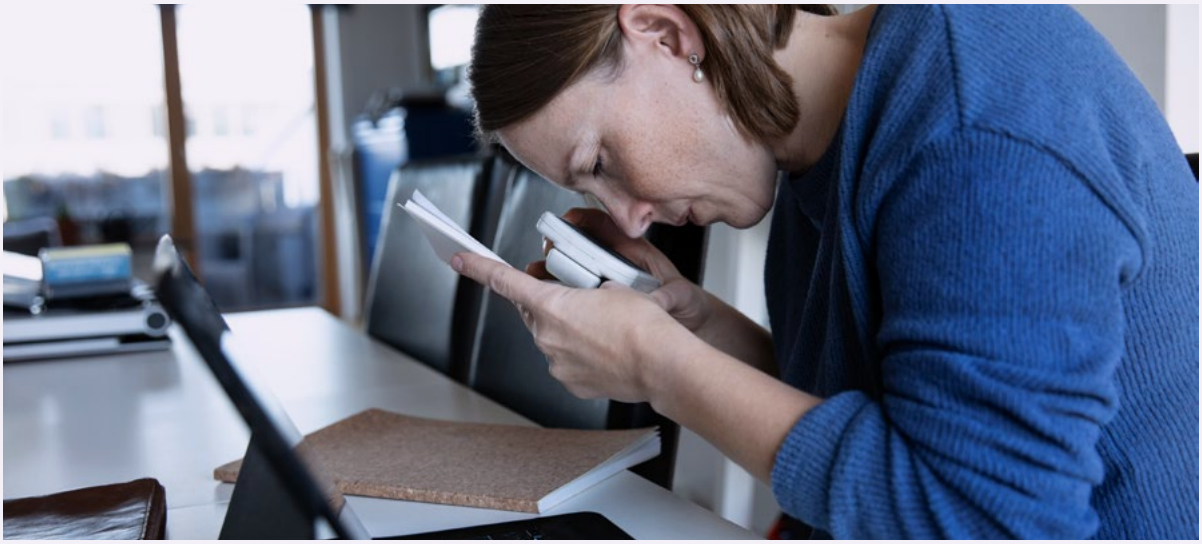
Founded by individuals with lived experience of visual impairment, the organisation was created in response to the challenges of navigating the world using multiple separate tools, such as a white cane, smartphone and personal belongings. Rather than replacing the traditional white cane, WeWalk set out to enhance it.

The result is the WeWalk Smart Cane, which combines the familiarity of a traditional white cane with modern technology. Features such as obstacle detection help users identify hazards at head and chest height, while smartphone connectivity allows people to access navigation guidance directly through the cane without needing to hold a phone.

The device also includes a built-in light and AI-powered functionality, enabling users to ask questions such as "Where am I?" and receive accurate information in real time.

What stood out most during our conversation was WeWalk's commitment to listening to its community. Gasia explained that the organisation designs with users rather than for them, continually gathering feedback and using it to improve the product. For example, an earlier version of the cane used a touchpad interface, but this was replaced with physical buttons after users found the digital screen difficult to use. Feedback has also influenced improvements to weather resistance, weight and ergonomics, ensuring the device works effectively in unpredictable, real-world conditions.

CASE STUDY **WeWalk:** Designing for inclusion through lived experience



Inclusion is not only reflected in WeWalk's products but also in its workplace culture. Disabled people are represented at senior levels within the organisation, including among its founders and leadership team. Gasia highlighted the importance of lived experience in shaping both strategy and innovation, helping to ensure that decisions are grounded in the realities faced by visually impaired people.

WeWalk's commitment to independence extends beyond the Smart Cane itself. Services such as WeAssist connect users with trained agents through their smartphone camera, providing real-time support when needed. Through partnerships with other organisations, WeWalk is also helping to expand access to inclusive technology and support.

However, Gasia also spoke about the challenges that remain. Access to assistive technology can vary significantly depending on where someone lives, and funding remains a barrier for many people. While some countries provide financial support for assistive devices, access in the UK can be more limited, meaning that innovative technologies are not always available to those who could benefit most from them.

Reflecting on WeWalk's journey, Gasia shared three key lessons:

Design with disabled people, not for them.

Involving users throughout development leads to more accessible and effective solutions.

Listen and adapt.

Small changes informed by user feedback can make a significant difference to usability and accessibility.

Challenge assumptions about disability.

Barriers are often created by environments, systems and attitudes, rather than by individuals themselves.

Through its focus on lived experience, continuous collaboration and inclusive design, WeWalk is a brilliant example of what can be achieved when accessibility and innovation sit at the core of what an organisation represents.

Disclaimer

This toolkit was produced by the Institution of Engineering and Technology to provide employers and employees in the engineering and technology sectors general information about disabled people's rights at work and to promote greater accessibility and inclusion across the sectors.

This toolkit provides general guidance and information only.

Nothing in this toolkit constitutes legal or professional advice or should be relied on as such. Seek independent advice about your specific circumstances. The Institution of Engineering and Technology accepts no liability for reliance on the toolkit's contents.

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